INNOVEX

LOGAN FISHING TOOLS

U.S. PRICE BOOK

Version: July 2023

INNOVEX
LOGAN FISHING TOOLS

DOCUMENT
Price Book

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Price Book is only applicable to tools for use in the United States. For pricing outside the United States, contact your local sales representative.

Innovex reserves the right to change or discontinue designs and/or prices without notice.

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Notes

LOGAN SERIES 10 SUCKER ROD OVERSHOTS

Basket Grapple Assembly

Spiral Grapple Assembly

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Logan Series 10 Sucker Rod Overshots

MAXIMUM CATCH SIZE (Spiral)		1-1/16	1-1/4	1-3/8	1-1/2	1-1/2	1-5/8	1-5/8
MAXIMUM CATCH SIZE (Basket)		7/8	1-1/16	1-3/16	1-5/16	1-5/16	1-7/16	1-7/16
OVERSHOT O.D.		1-9/16	1.43	1-21/32	1-25/32	1-29/32	1-29/32	2-5/16
TYPE		FS	SH	SH	SH	SH	SH	FS
STANDARD TOP CONNECTION		**3/4 Rod**	**3/4 Rod**	**3/4 Rod**	**3/4 Rod**	**3/4 Rod**	**3/4 Rod**	**7/8 Rod**
COMPLETE ASSEMBLY	**Logan Part No.**	**110-156-A**	**110-143-D**	**110-166-D**	**110-178-D**	**110-190-D**	**110-191-D**	**110-231-A**
	Bowen No.	9790	17985	16490	13940	9990	9340	9880
	Price	...	...	...	...	...	...	...

SPIRAL COMPONENT PARTS

TOP SUB	**Logan Part No.**	**B1000**	**B1001**	**B10015**	**B1002**	**B1004**	**B1004**	**B1004**
	Bowen No.	9791	17986	16491	13941	9341	9341	9341
	Price	$491	$491	$491	$451	$547	$547	$547
BOWL	**Logan Part No.**	**B2000**	**B2001**	**B20015**	**B2002**	**B2003**	**B2004**	**B2005**
	Bowen No.	9792	17987	16492	13942	9991	9342	9881
	Price	*	*	$1,014	$934	*	$1,134	$1,199
SPIRAL GRAPPLE	**Logan Part No.**	**B3000**	**B3001**	**B30015**	**B3002**	**B3003**	**B3004**	**B3004**
	Bowen No.	9793	17988	16493	13943	9992	9343	9343
	Standard Price	$434	$434	$434	$399	$434	$484	$484
	Nitralloy Price	*	*	$726	$715	*	$869	$869
CONTROL GUIDE	**Logan Part No.**	**B4000**	**B4001**	**B40015**	**B4002**	**B4003**	**B4004**	**B4005**
	Bowen No.	9796	17989	16496	13945	9993	9349	9883
	Price	*	*	$291	$266	*	$325	$367
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
GUIDE (CUTLIPPED)	**Logan Part No.**	**...**	**...**	**B80015**	**...**	**B4003**	**...**	**...**
	Bowen No. ...	...	16496	...	9993	...	...	
	Price	...	...	$291	...	*	...	...

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**B5000**	**B5001**	**B50015**	**B5002**	**B5003**	**B5004**	**B5004**
	Bowen No.	9793	17988	16493	13943	9992	9343	9343
	Standard Price	$630	$630	$632	$580	$630	$704	$704
	Nitralloy Price	*	*	$1,127	$1,038	*	$1,256	$1,256
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B6000**	**B6001**	**B60015**	**B6002**	**B6003**	**B6004**	**B6005**
	Bowen No.	9794	18003	16494	13947	9993	9344	153338
	Price	*	*	$167	$154	*	$186	$167
PLAIN GUIDE	**Logan Part No.**	**B7000**	**B7001**	**B70015**	**B7002**	**B7003**	**B7004**	**B7005**
	Bowen No.	9795	18004	16498	13944	9994	9345	9882
	Price	*	*	$218	$203	*	$251	$251

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all pulling torsional and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

Logan Series 10 Sucker Rod Overshots

MAXIMUM CATCH SIZE (Spiral)		1-9/16	1-3/4	1-3/4	1-13/16	1-13/16	1-15/16	2
MAXIMUM CATCH SIZE (Basket)		1-3/8	1-9/16	1-7/16	1-5/8	1-5/8	1-3/4	1-13/16
OVERSHOT O.D.		1-27/32	2-1/16	2-1/16	2-1/8	2-5/16	2-1/4	2-5/16
TYPE		SH	SH	SH	SH	SFS	SH	SH
STANDARD TOP CONNECTION		5/8 Rod	5/8 Rod	7/8 Rod	7/8 Rod	7/8 Rod	7/8 Rod	7/8 Rod
COMPLETE ASSEMBLY	**Logan Part No.**	**110-184-D**	**110-206-D**	**110-207-D**	**110-213-D**	**110-231-C**	**110-225-D**	**110-231-D**
	Bowen No.	36423	54178**	156309	27765	11480	16070	9400
	Price	...	*	*	...	...	...	...

SPIRAL COMPONENT PARTS

TOP SUB	**Logan Part No.**	**B10051**	**B10053**	**B10054**	**B10052**	**B1006**	**B1007**	**B1008**
	Bowen No.	36424	54179**	156310	27766	11481	16071	9401
	Price	$386	*	*	$638	$642	$632	$591
BOWL	**Logan Part No.**	**B20051**	**B20053**	**B20054**	**B20052**	**B2006**	**B2007**	**B2008**
	Bowen No.	36425	54180**	156311	27767	11482	16072	9402
	Price	$1,005	*	*	$1,038	$1,038	$1,025	$950
SPIRAL GRAPPLE	**Logan Part No.**	**B30051**	**B30053**	**B30054**	**B30052**	**B3006**	**B3007**	**B3008**
	Bowen No.	36436	54181	156312	27768	11483	16073	9403
	Standard Price	$417	*	*	$531	$531	$526	$425
	Nitralloy Price	$747	*	...	$979	$979	$905	$765
CONTROL GUIDE	**Logan Part No.**	**B40051**	**B40053**	**B40054**	**B40052**	**B4006**	**B4007**	**B4008**
	Bowen No.	36427	54184	156313	27764	11484	16076	9406
	Price	$242	*	*	$366	$375	$368	$344
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
GUIDE (CUT LIPPED)	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**B50051**	**B50053**	**B50054**	**B50052**	**B5006**	**B5007**	**B5008**
	Bowen No.	36436	54181	156312*	27768	11483	16073	9403
	Standard Price	$607	*	*	$710	$711	$702	$620
	Nitralloy Price	$1,082	*	*	$1,265	$1,270	$1,255	$1,167
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B60051**	**B60053**	**B60053**	**B60052**	**B6006**	**B6007**	**B6008**
	Bowen No.	36437	54182	54182	27763	11485	16074	9405
	Price	$142	*	*	$218	$218	$217	$298
PLAIN GUIDE	**Logan Part No.**	**B70051**	**B70053**	**B70054**	**B70052**	**B7006**	**B7007**	**B7008**
	Bowen No.	36426	54183	156333	27769	11486	16075	9404
	Price	$181	*	*	$241	$241	$241	$221

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all pulling torsional and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

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Logan Series 10 Sucker Rod Overshots

MAXIMUM CATCH SIZE (Spiral)		2	2-3/8
MAXIMUM CATCH SIZE (Basket)		1-13/16	2-3/16
OVERSHOT O.D.		2-7/8	2-27/32
TYPE		FS	SH
STANDARD TOP CONNECTION		7/8 Rod	7/8 Rod
COMPLETE ASSEMBLY	**Logan Part No.**	**110-287-A**	**110-284-D**
	Bowen No.	9530	15860
	Price	*	...

SPIRAL COMPONENT PARTS

TOP SUB	**Logan Part No.**	**B1009**	**B1010**
	Bowen No.	9531	15863
	Price	*	$1,052
BOWL	**Logan Part No.**	**B2009**	**B2010**
	Bowen No.	9532	15861
	Price	*	$1,796
SPIRAL GRAPPLE	**Logan Part No.**	**B3008**	**B3010**
	Bowen No.	9403	9872
	Standard Price	*	$751
	Nitralloy Price	*	$1,388
CONTROL GUIDE	**Logan Part No.**	**B4009**	**...**
	Bowen No.	9535	...
	Price	*	...
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**...**	**B8000**
	Bowen No.	...	9873
	Price	...	$249
GUIDE (CUTLIPPED)	**Logan Part No.**	**...**	**B8001**
	Bowen No.	...	15862
	Price	...	$367

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**B5008**	**B5010**
	Bowen No.	9403	9872
	Standard Price	$620	$954
	Nitralloy Price	$1,167	$1,709
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B6008**	**B6010**
	Bowen No.	9405	9873
	Price	*	$367
PLAIN GUIDE	**Logan Part No.**	**B7009**	**B7010**
	Bowen No.	9533	15862
	Price	*	$268

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Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

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B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

LOGAN SERIES 20 SUCKER ROD OVERSHOTS

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Logan Series 20 Sucker Rod Overshots

MAXIMUM CATCH SIZE (Basket)		7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	1-13/16
OVERSHOT O.D.		1-1/4	1-3/8	1-5/8	1-3/4	1-29/32	2-1/4	2-5/16
TYPE		SH	SH	SH	SH	SH	SH	SH
STANDARD TOP CONNECTION		5/8 Rod	5/8 Rod	5/8 Rod	3/4 Rod	3/4 Rod	7/8 Rod	7/8 Rod
COMPLETE ASSEMBLY	**Logan Part No.**	**120-125-D**	**120-138-D**	**120-163-D**	**120-175-D**	**120-191-D**	**120-225-D**	**120-231-D**
	Bowen No.	17315	25780	28760	18355	11555	47464	17438
	Price						*	

BASKET COMPONENT PARTS

TOP SUB	**Logan Part No.**	**B1011**	**B1012**	**B1013**	**B1014**	**B1004**	**B1007**	**B1008**
	Bowen No.	17316	25781	28761	18356	9341	16071	9401
	Price	$801	$528	$948	$610	$547	*	$591
BOWL	**Logan Part No.**	**B2011**	**B2012**	**B2013**	**B2014**	**B2015**	**B20155**	**B2016**
	Bowen No.	17317	25782	28762	18357	11556	47465	17439
	Price	$907	$998	$1,130	$1,086	$985	*	$980
BASKET GRAPPLE	**Logan Part No.**	**B3011**	**B3012**	**B3013**	**B3014**	**B3015**	**B30155**	**B3016**
	Bowen No.	17318	25783	28763	18358	11557	47466	17440
	Standard Price	$861	$965	$657	$944	$649	*	$680
	Nitralloy Price	$1,179	$1,179	$1,179	$1,164	$1,085	*	$1,220
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B4011**	**B4012**	**B4013**	**B4014**	**B4015**	**B40155**	**B4016**
	Bowen No.	17319	25784	28764	18359	11558	47467	17441
	Price	$228	$228	$228	$225	$225	*	$238
OVERSIZED GUIDES	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**B5016**
	Bowen No.	...	...	...	...	...	...	22276
	Price	...	...	...	...	...	...	*
GUIDE PINS	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**B6016**
	Bowen No.	...	...	...	...	...	...	14876
	Price	...	...	...	...	...	...	$14

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** Available upon request.*

Special Notes:

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(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all pulling torsional and jarring strain
B = XFS Extra Full Strength – For extreme abuse
C = SFS Semi Full Strength – Maximum strength for special hole conditions
D = SH Slim Hole – For heavy pulling strains only
E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number
(2) Size and type of connection for Top Sub
(3) Size and type of fish to be caught
(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

Logan Series 20 Sucker Rod Overshots

MAXIMUM CATCH SIZE (Basket)		2-1/8	2-1/8	2-3/8	2-1/2			
OVERSHOT O.D.		2-25/32	2-7/8	3-1/8	3-1/4			
TYPE		SH	FS	SH	FS			
STANDARD TOP CONNECTION		7/8 Rod	2-3/8 Tbg	2-3/8 Tbg	2-3/8 Tbg			
COMPLETE ASSEMBLY	**Logan Part No.**	**120-278-D**	**120-287-A**	**120-313-D**	**120-325-A**			
	Bowen No.	18305	20170	20645	22270			
	Price		*	*	*			

BASKET COMPONENT PARTS

TOP SUB	**Logan Part No.**	**B1017**	**B1018**	**B1019**	**B1020**			
	Bowen No.	18306	20172	20646	22271			
	Price	$797	*	*	*			
BOWL	**Logan Part No.**	**B2017**	**B2018**	**B2019**	**B2020**			
	Bowen No.	18307	20171	20647	22272			
	Price	$1,367	*	*	*			
BASKET GRAPPLE	**Logan Part No.**	**B3017**	**B3017**	**B3019**	**B3020**			
	Bowen No.	18308	18308	20648	22273			
	Standard Price	$873	*	*	*			
	Nitralloy Price	$1,346	*	*	*			
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B4017**	**B4017**	**B4019**	**B4020**			
	Bowen No.	18309	18309	20649	22274			
	Price	$265	*	*	*			
OVERSIZED GUIDES	**Logan Part No.**	**...**	**B5018**	**...**	**B5020**			
	Bowen No.	...	20173	...	22275			
	Price	...	*	...	*			
GUIDE PINS	**Logan Part No.**	**...**	**B6018**	**...**	**B6020**			
	Bowen No.	...	20174	...	20651			
	Price	...	*	...	*			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all pulling torsional and jarring strain
B = XFS Extra Full Strength – For extreme abuse
C = SFS Semi Full Strength – Maximum strength for special hole conditions
D = SH Slim Hole – For heavy pulling strains only
E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number
(2) Size and type of connection for Top Sub
(3) Size and type of fish to be caught
(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

Notes

LOGAN HYDRAULIC RELEASE OVERSHOTS

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Logan Hydraulic Release Overshots

MAXIMUM CATCH (IN)		N/A	4-1/4	6-3/8
OVERSHOT O.D. (IN)		4-11/16	5-3/4	8-1/8
STANDARD CONNECTIONS		CUSTOMER SPECIFIED CONNECTIONS		
TYPE		HR150	HR150	HR150
COMPLETE ASSEMBLY	**Logan Part No.**	**HR180-469-000**	**HR180-575-002**	**HR180-813-002**
	Price	*	*	*

COMPONENTS

TOP SUB	**Logan Part No.**	**N/A**	**HR1035-001**	**HR1059-001**
	Price	*	*	*
MAIN PISTON	**Logan Part No.**	**N/A**	**HR5035-001**	**HR5059-001**
	Price	*	*	*
RELEASE PISTON	**Logan Part No.**	**N/A**	**HR6035-001**	**HR6059-001**
	Price	*	*	*
SPRING SEAT	**Logan Part No.**	**N/A**	**HR10035-001**	**HR10059-001**
	Price	*	*	*
SPRING	**Logan Part No.**	**N/A**	**HR4035-001**	**HR4059-001**
	Price	*	*	*
BOWL	**Logan Part No.**	**N/A**	**HR2035-001**	**HR2059-001**
	Price	*	*	*
BASKET GRAPPLE	**Logan Part No.**	**N/A**	**HR7035-112**	**HR7059-160**
	Price	*	*	*
STANDARD GUIDE	**Logan Part No.**	**N/A**	**A3035**	**A3054**
	Price	*	*	*
PISTON SPRING	**Logan Part No.**	**N/A**	**HR4035**	**HR4054**
	Price	*	*	*
BASKET GRAPPLE RETAINER SCREWS	**Logan Part No.**	**N/A**	**HR9035-001**	**HR9035-001**
	Price	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**N/A**	**A9035-112**	**HR9059-160**
	Price	*	*	*
GUIDE	**Logan Part No.**	**N/A**	**A3035**	**A3059**
	Price	*	*	*
MAIN PISTON SEAL (I.D.) Logan Part No.	**N/A**	**568334**	**568344**	
	Price	*	*	*
MAIN PISTON SEAL (O.D.)	**Logan Part No.**	**N/A**	**568340**	**568430**
	Price	*	*	*
RELEASE PISTON SEAL (I.D.)	**Logan Part No.**	**N/A**	**568334**	**568344**
	Price	*	*	*

STRENGTH DATA

TENSILE STRENGTH @ YIELD (LBS)	N/A	673,632	1,000,063
BASKET GRAPPLE STRENGTH (LBS)	N/A	379,064	549,907
TORSIONAL YIELD (FT/LBS)	N/A	22,673	40,470
RECOMMENDED MAKE UP TORQUE (FT/LBS)	N/A	5,668	10,100
MAXIMUM MAKE UP TORQUE (FT/LBS)	N/A	11,000	20,200

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** Available upon request.*
Special Notes:
(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).
(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.
(3) Grapples are available in 1/16" intervals.
(4) Grapple price may increase when ordering non-standard catch sizes.
(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.
(6) Add 20% for left-hand application.
(7) Additional cost may be incurred for premium connections.

Logan Coding
A = FS Full Strength – For all pulling torsional and jarring strain
B = XFS Extra Full Strength – For extreme abuse
C = SFS Semi Full Strength – Maximum strength for special hole conditions
D = SH Slim Hole – For heavy pulling strains only
E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:
(1) Complete assembly or part number
(2) Size and type of connection for Top Sub
(3) Size and type of fish to be caught
(4) O.D., if other than standard

Recommended Spare Parts:
(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.
(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.
(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

LOGAN SERIES 70 SHORT CATCH OVERSHOTS

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Logan Series 70 Short Catch Overshots

MAXIMUM CATCH SIZE (Basket)		1-5/8	2-1/2	2-5/8	3-1/16	3-1/16	3-1/16	3-3/8
OVERSHOT O.D.		2-5/16	3-5/8	3-3/4	3-15/16	4-5/8	4-1/8	4-3/8
TYPE		SH	SH	SH	SH	FS	SH	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**170-231-D**	**170-363-D**	**170-375-D**	**170-394-D**	**170-463-A**	**170-413-D**	**170-438-D**
	Bowen No.	38506	17615	13535	63892	11290	10434	C-11023
	Price	*	$4,927	$4,964	*	$5,596	$5,554	$6,186
TOP SUB	**Logan Part No.**	**C1000**	**C1001**	**C1002**	**C10025**	**C1003**	**C1004**	**C10045**
	Bowen No.	38507	17616	13536	63893	11295	10435	A-11024
	Price	*	$1,163	$1,117	*	$1,262	$1,204	$1,208
BOWL	**Logan Part No.**	**C2000**	**C2001**	**C2002**	**C20025**	**C2003**	**C2004**	**C20045**
	Bowen No.	38508	17617	13537	63894	11291	10436	B-11025
	Price	*	$2,215	$2,350	*	$2,697	$2,704	$3,255
BASKET GRAPPLE	**Logan Part No.**	**C3000**	**C3001**	**C3002**	**C30025**	**C3003**	**C3004**	**C30045**
	Bowen No.	38509	17618	13538	63895	11292	10437	B-11026
	Standard Price	*	$1,219	$1,164	*	$1,298	$1,303	$1,385
	Nitralloy Price		$2,215	$2,126	*	$2,354	$2,352	$2,515
BASKET GRAPPLE CONTROL	**Logan Part No.**	**C4000**	**C4001**	**C4002**	**C40025**	**C4003**	**C4004**	**C40045**
	Bowen No.	38510	17619	13539	63896	11294	10438	A-11027
	Price	*	$331	$331	*	$339	$343	$339

MAXIMUM CATCH SIZE (Basket)		3-21/32	3-21/32	3-3/4	3-3/4	4-1/4	4-3/4	5-1/4
OVERSHOT O.D.		4-11/16	5-5/8	4-3/4	5-1/2	5-3/4	5-7/8	6-1/4
TYPE		SH	FS	SH	FS	FS	SH	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**170-468-D**	**170-563-A**	**170-475-D**	**170-550-A**	**170-575-A**	**170-587-D**	**170-625-D**
	Bowen No.	10543	11297	12645	12785	13065	10560	14805
	Price	$5,893	*	*	$5,905	$6,723	$8,211	$7,582
TOP SUB	**Logan Part No.**	**C1005**	**C1006**	**C1005**	**C1008**	**C1009**	**C1010**	**C10105**
	Bowen No.	10544	11298	10544	12786	13066	10561	14806
	Price	$1,153	*	*	$1,227	$1,625	$1,919	$1,866
BOWL	**Logan Part No.**	**C2005**	**C2006**	**C2007**	**C2008**	**C2009**	**C2010**	**C20105**
	Bowen No.	10545	11299	12646	12787	13067	10562	14807
	Price	$2,994	*	*	$2,958	$3,063	$3,812	$3,509
BASKET GRAPPLE	**Logan Part No.**	**C3005**	**C3006**	**C3007**	**C3008**	**C3009**	**C3010**	**C30105**
	Bowen No.	10546	11300	12647	12788	13068	10563	14808
	Standard Price	$1,407	*	*	$1,388	$1,646	$2,010	$1,799
	Nitralloy Price	*	*	*	*	$2,975	$3,605	$3,242
BASKET GRAPPLE CONTROL	**Logan Part No.**	**C4005**	**C4006**	**C4007**	**C4008**	**C4009**	**C4010**	**C40105**
	Bowen No.	10547	11301	12648	12789	13069	10564	14809
	Price	$339	*	*	$336	$390	$470	$408

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all pulling torsional and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

Logan Series 70 Short Catch Overshots

MAXIMUM CATCH SIZE (Basket)		4-3/4	6	6-1/4	6-1/2	7	7-3/4	8
OVERSHOT O.D.		6-5/8	7-5/8	7-7/8	8-14	8-1/2	9-1/4	9-3/4
TYPE		FS	FS	FS	FS	FS	FS	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**170-663-A**	**170-763-A**	**170-787-A**	**170-825-A**	**170-850-A**	**170-925-A**	**170-975-A**
	Bowen No.	11303	11630	16975	38939	20050	25030	20060
	Price	*	$9,667	*	$10,363	$10,757	*	*
TOP SUB	**Logan Part No.**	**C1011**	**C1012**	**C1013**	**C1014**	**C1015**	**C1016**	**C1017**
	Bowen No.	11304	11631	16976	38940	20051	25031	20061
	Price	*	$2,547	*	$2,820	$2,798	*	*
BOWL	**Logan Part No.**	**C2011**	**C2012**	**C2013**	**C2014**	**C2015**	**C2016**	**C2017**
	Bowen No.	11305	11632	16977	38941	20052	25032	20062
	Price	*	$4,286	*	$5,013	$4,998	*	*
BASKET GRAPPLE	**Logan Part No.**	**C3011**	**C3012**	**C3013**	**C3014**	**C3015**	**C3016**	**C3017**
	Bowen No.	11306	11633	16978	38942	20053	25033	20063
	Standard Price	*	$2,290	*	$1,940	$2,371	*	*
	Nitralloy Price		$4,144		$4,386	$4,246	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**C4011**	**C4012**	**C4013**	**C4014**	**C4015**	**C4016**	**C4017**
	Bowen No.	11307	11634	16979	38943	20054	250034	20064
	Price	*	$545	*	$589	$590	*	*

MAXIMUM CATCH SIZE (Basket)		8-1/4	9	13-1/2				
OVERSHOT O.D.		10	11-1/4	16				
TYPE		FS	FS	FS				
COMPLETE ASSEMBLY	**Logan Part No.**	**170-1000-A**	**170-1125-A**	**170-1600-A**				
	Bowen No.	...	33878	...				
,	Price	*	$16,813	*				
TOP SUB	**Logan Part No.**	**C10175**	**C1018**	**C1019**				
	Bowen No.	33879	...					
	Price	*	$6,189	*				
BOWL	**Logan Part No.**	**C20175**	**C2018**	**C2019**				
	Bowen No.	33880	...					
	Price	*	$7,054	*				
BASKET GRAPPLE	**Logan Part No.**	**C30175**	**C3018**	**C3019**				
	Bowen No.	...	33581	...				
	Standard Price	*	$2,710	*				
	Nitralloy Price	*	$6,189	*				
BASKET GRAPPLE CONTROL	**Logan Part No.**	**C40175**	**C4018**	**C4019**				
	Bowen No.	...	33882	...				
	Price	*	$861	*				

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** Available upon request.*

Special Notes:

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(2) For oversize Top Subs, Bowls, or Guides, add 20% to the price for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(3) Grapples are available in 1/16" intervals.

(4) Grapple price may increase when ordering non-standard catch sizes.

(5) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(6) Add 20% for left-hand application.

(7) Additional cost may be incurred for premium connections.

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral Parts: 3 Packers, 2 Grapples for each Catch Size and 1 Control.

(2) Basket Parts: 2 Grapples, 2 Mill Control Packers for each Catch Size.

(3) Mill Control Packers: 3 Inner Seals for each Catch Size and 3 Outer Seals.

Notes

LOGAN SERIES 150 OVERSHOTS

Spiral Grapple with Spiral Grapple Control and Type A Packer

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LOGAN SERIES 150 OVERSHOTS

Basket Grapple with Basket Grapple Control

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LOGAN SERIES 150 OVERSHOTS

Basket Grapple with Mill Control Packer

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		2	2-1/8	2-3/8	2-3/8	2-3/8	2-1/2	2-1/2
MAXIMUM CATCH SIZE (Basket)		1-3/4	1-3/4	2	1-7/8	1-7/8	2	2
OVERSHOT O.D.		2-5/16	2-5/8	3-1/8	3-1/2	4-1/8	3-3/8	3-5/8
TYPE		SH	SH	XSH	FS	FS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-231-D**	**150-263-D**	**150-313-E**	**150-350-A**	**150-414-A**	**150-338-D**	**150-363-A**
	Bowen No.	B-8919	C-10199	9305	C-4741	1443	C-4623	C-5080
	Price				*			*
TOP SUB	**Logan Part No.**	**A0950**	**A1000**	**A1001**	**A1002**	**A10025**	**A1003**	**A1004**
	Bowen No.	A-8920	A-10200	9311	B-4742	1445	A-5083	A-5081
	Price	$994	$1,055	$1,088	*	$1,271	$1,243	*
BOWL	**Logan Part No.**	**A1950**	**A2000**	**A2001**	**A2002**	**A20025**	**A2003**	**A2004**
	Bowen No.	B-8921	B-10201	9306	B-4743	1446	B-5088	B-5082
	Price	$2,118	$1,951	$1,951	*	$2,038	$2,118	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**B7008**	**A3000**	**A3001**	**A3002**	**A30025**	**A3003**	**A3004**
	Bowen No.	9404	A-10206	9312	A-4745	1450	A-5093	A-5087
	Price	$655	$606	$606	*	$606	$657	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4950**	**A4000**	**A4001**	**A4002**	**A40025**	**A4003**	**A4004**
	Bowen No.	9407	B-10202	9309	L-1453	1453	B-5089	B-3395
	Price	$68	$63	$63	*	$68	$68	*
SPIRAL GRAPPLE	**Logan Part No.**	**B3008**	**A5000**	**A5001**	**A5002**	**A50025**	**A5003**	**A5004**
	Bowen No.	9403	B-10204	9307	B-782	1448	B-5091	B-5085
	Standard Price	$425	$435	$525	*	$564	$570	*
	Nitralloy Price	$767	$510	$945	*	$1,014	$1,028	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6950**	**A6000**	**A6001**	**A6002**	**A60025**	**A6003**	**A6004**
	Bowen No.	9405	A-10205	9308	B-783	1449	A-5092	A-5086
	Price	$207	$300	$207	*	$253	$226	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**B5008**	**A7000**	**A7001**	**A7002**	**A70025**	**A7003**	**A7004**
	Bowen No.	9403	B-10204	9307	B-782	1448	B-5091	B-5085
	Standard Price	$620	$638	$695	*	$728	$755	*
	Nitralloy Price	$1,167	$835	$1,254	*	$1,312	$1,365	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**B6008**	**A8000**	**A8001**	**A8002**	**A80025**	**A8003**	**A8004**
	Bowen No.	9405	A-10205	9308	B-783	1449	A-5092	A-5086
	Price	$298	$278	$278	*	$277	$302	*
MILL CONTROL PACKER	**Logan Part No.**	**A9950**	**A9000**	**A9001**	**A9002**	**A90025**	**A9003**	**A9004**
	Bowen No.	9407M	B-10202-R	9309-R	L-1453-R	1453-R	B-5089-R	B-3395-R
	Price	$540	$378	$378	*	$397	$411	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

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B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		2-7/8	3-1/16	3-1/8	2-7/8	2-7/8	3-1/16	3-1/16
MAXIMUM CATCH SIZE (Basket)		2-1/2	2-11/16	2-5/8	2-3/8	2-3/8	2-9/16	2-9/16
OVERSHOT O.D.		3-5/8	3-3/4	3-7/8	3-3/4	4	3-15/16	4-3/16
TYPE		XSH	SH	SH	SH	FS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-363-E**	**150-375-D**	**150-388-D**	**150-376-D**	**150-400-A**	**150-393-D**	**150-419-A**
	Bowen No.	9270	37585	C-1835	C-1827	C-4736	C-5101	C-5098
	Price					*	*	*
TOP SUB	**Logan Part No.**	**A1005**	**A10055**	**A10056**	**A10057**	**A1006**	**A1007**	**A1008**
	Bowen No.	9276	37586	A-1842	A-1834	A-4737	A-5102	A-5099
	Price	$1,170	$1,172	$1,197	$1,168	*	*	*
BOWL	**Logan Part No.**	**A2005**	**A20055**	**A20056**	**A20057**	**A2006**	**A2007**	**A2008**
	Bowen No.	9271	37587	B-1836	B-1828	B-4738	B-5103	B-5100
	Price	$2,398	$2,398	$2,318	$2,318	*	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3005**	**A30055**	**A30056**	**A30057**	**A3006**	**A3007**	**A3008**
	Bowen No.	9275	37592	A-1841	A-1833	A-4740	A-3598	A-4405
	Price	$606	$606	$606	$606	*	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4005**	**A40055**	**A40056**	**A40057**	**A4006**	**A4007**	**A4008**
	Bowen No.	8550	37588	B-1839	A-1831	L-809	B-3594	L-7090
	Price	$75	$88	$88	$88	*	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5005**	**A50055**	**A50056**	**A50057**	**A5006**	**A5007**	**A5008**
	Bowen No.	9272	37590	B-1837	A-1829	M-805	B-3596	B-4403
	Standard Price	$543	$556	$556	$580	*	*	*
	Nitralloy Price	$981	$994	$994	$1,045	*	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6005**	**A60055**	**A60056**	**A60057**	**A6006**	**A6007**	**A6008**
	Bowen No.	9273	37591	A-1838	A-1830	M-806	B-3597	B-4403
	Price	$209	$222	$210	$210	*	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7005**	**A70055**	**A70056**	**A70057**	**A7006**	**A7007**	**A7008**
	Bowen No.	9272	37590	B-1837	A-1829	M-805	B-3596	B-4403
	Standard Price	$777	$739	$777	$812	*	*	*
	Nitralloy Price	$1,396	$1,330	$1,396	$1,462	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8005**	**A80055**	**A80056**	**A80057**	**A8006**	**A8007**	**A8008**
	Bowen No.	9273	37591	A-1838	A-1830	M-806	B-3597	B-4404
	Price	$278	$299	$298	$278	*	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9005**	**A90055**	**A90056**	**A90057**	**A9006**	**A9007**	**A9008**
	Bowen No.	8550-R	37588-R	B-1839-R	A-1831-R	L-809-RS	B-3594-R	L-7090-R
	Price	$378	$408	$408	$397	*	*	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		3-1/8	3-1/8	3-1/8	3-1/8	3-1/4	3-1/4
MAXIMUM CATCH SIZE (Basket)		2-5/8	2-5/8	2-5/8	2-5/8	2-3/4	2-3/4
OVERSHOT O.D.		4	4-1/8	4-1/8	4-1/4	4-1/8	4-3/8
TYPE		SH	FS	FS	FS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-400-D**	**150-413-A**	**150-412-A**	**150-425-A**	**150-413-D**	**150-438-A**
	Bowen No.	C-5104	9105	8220	C-4822	C-5115	C-5112
	Price	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**A1009**	**A1010**	**A10105**	**A1011**	**A1012**	**A1013**
	Bowen No.	A-5105	9106	8221	A-4823	A-5116	A-5113
	Price	*	$1,268	$1,268	*	*	*
BOWL	**Logan Part No.**	**A2009**	**A2010**	**A20105**	**A2011**	**A2012**	**A2013**
	Bowen No.	B-5106	9107	8223	B-4824	B-5117	B-5114
	Price	*	$2,398	$2,500	*	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3009**	**A3010**	**A3010**	**A3011**	**A3012**	**A3013**
	Bowen No.	A-5111	1746	1746	A-793	A-5122	A-3207
	Price	*	$617	$617	*	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4009**	**A4010**	**A4010**	**A4011**	**A4012**	**A4013**
	Bowen No.	B-5107	809	809	L-7090	B-5118	L-1517
	Price	*	$88	$88	*	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5009**	**A5010**	**A5010**	**A5011**	**A5012**	**A5013**
	Bowen No.	B-5109	1741	1741	B-791	B-5120	B-3205
	Standard Price	*	$589	$589	*	*	*
	Nitralloy Price	*	$980	$980	*	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6009**	**A6010**	**A6010**	**A6011**	**A6012**	**A6013**
	Bowen No.	A-5110	1747	1747	B-792	A-5121	B-3206
	Price	*	$338	$338	*	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7009**	**A7010**	**A7010**	**A7011**	**A7012**	**A7013**
	Bowen No.	B-5109	1741	1741	B-791	B-5120	B-3205
	Standard Price	*	$777	$777	*	*	*
	Nitralloy Price	*	$1,394	$1,394	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8009**	**A8010**	**A8010**	**A8011**	**A8012**	**A8013**
	Bowen No.	B-5110	1747	1747	B-792	A-5121	B-3206
	Price	*	$298	$298	*	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9009**	**A9010**	**A9010**	**A9011**	**A9012**	**A9013**
	Bowen No.	B-5107-R	809-R	809-R	L-7090-R	B-5118-R	L-1517-R
	Price	*	$408	$408	*	*	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		3-3/8	3-3/8	3-3/8	3-3/8	3-1/2	3-1/2	3-21/32
MAXIMUM CATCH SIZE (Basket)		2-7/8	2-7/8	2-7/8	2-7/8	2-7/8	2-7/8	3-1/8
OVERSHOT O.D.		3-7/8	4-1/4	4-3/8	4-1/2	4-3/8	4-13/16	4-1/2
TYPE		XSH	SH	FS	FS	SH	FS	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-388-E**	**150-425-D**	**150-4375-A**	**150-450-A**	**150-438-D**	**150-482-A**	**150-450-D**
	Bowen No.	21300	C-5126	9635	C-5123	C-4619	C-4732	17201
	Price				*			*
TOP SUB	**Logan Part No.**	**A10135**	**A1014**	**A10145**	**A1015**	**A1016**	**A1017**	**A10175**
	Bowen No.	21301	A-5127	9636	A-5124	A-4620	A-4733	17202
	Price	$1,197	$1,268	$1,342	*	$1,345	$1,342	*
BOWL	**Logan Part No.**	**A20135**	**A2014**	**A20145**	**A2015**	**A2016**	**A2017**	**A20175**
	Bowen No.	21302	B-5128	9637	B-5125	B-4621	B-4734	17203
	Price	$2,480	$2,587	$2,587	*	$2,480	$2,587	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A30135**	**A3014**	**A30145**	**A3015**	**A3016**	**A3017**	**A30175**
	Bowen No.	21307	A-4629	4197	A-3361	A-4622	A-4735	17204
	Price	$618	$615	$615	*	$618	$742	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A40135**	**A4014**	**A40145**	**A4015**	**A4016**	**A4017**	**A4018**
	Bowen No.	21303	B-4625	4185	L-6515	L-7065	L-168	L-6665
	Price	$88	$88	$88	*	$88	$88	*
SPIRAL GRAPPLE	**Logan Part No.**	**A50135**	**A5014**	**A50145**	**A5015**	**A5016**	**A5017**	**A5018**
	Bowen No.	21305	B-4627	4195	B-3359	B-3607	M-164	B-4339
	Standard Price	$596	$621	$621	*	$566	$621	*
	Nitralloy Price	$1,069	$1,119	$1,117	*	$1,015	$1,115	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A60135**	**A6014**	**A60145**	**A6015**	**A6016**	**A6017**	**A6018**
	Bowen No.	21306	B-4628	4196	B-3360	B-3608	M-185	B-4340
	Price	$210	$210	$210	*	$210	$210	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A70135**	**A7014**	**A70145**	**A7015**	**A7016**	**A7017**	**A7018**
	Bowen No.	21305	B-4627	4195	B-3359	B-3607	M-164	B-4339
	Standard Price	$833	$871	$872	*	$792	$872	*
	Nitralloy Price	$1,505	$1,565	$1,565	*	$1,430	$1,565	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A80135**	**A8014**	**A80145**	**A8015**	**A8016**	**A8017**	**A8018**
	Bowen No.	21306	B-4628	4196	B-3360	B-3608	M-185	B-4340
	Price	$298	$298	$298	*	$296	$298	*
MILL CONTROL PACKER	**Logan Part No.**	**A90135**	**A9014**	**A90145**	**A9015**	**A9016**	**A9017**	**A9018**
	Bowen No.	21303-R	B-4625-R	4185-R	L-6515-R	L-7065-R	L-168-R	L-6665-R
	Price	$451	$471	$471	*	$451	$471	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		3-21/32	3-21/32	3-21/32	3-3/4	3-3/4	3-13/16	3-3/4
MAXIMUM CATCH SIZE (Basket)		3-1/8	3.220	3-1/8	3-7/32	3-1/4	3-5/16	3-1/8
OVERSHOT O.D.		4-9/16	4-11/16	5	4-5/8	4-11/16	4-7/16	5-1/8
TYPE		SH	SFS	FS	SH	SFS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-456-D**	**150-469-C**	**150-500-A**	**150-463-D**	**150-468-C**	**150-444-D**	**150-513-A**
	Bowen No.	C-5151	9109	C-5148	C-5129	9120	C-9773	C-4686
	Price			*			*	*
TOP SUB	**Logan Part No.**	**A1018**	**A1019**	**A1020**	**A1021**	**A1019**	**A10217**	**A1022**
	Bowen No.	A-5152	9110	A-5149	A-5130	9110	A-9774	A-4687
	Price	$1,507	$1,386	*	$1,507	$1,386	*	*
BOWL	**Logan Part No.**	**A2018**	**A2019**	**A2020**	**A2021**	**A20215**	**A20217**	**A2022**
	Bowen No.	B-5153	9111	B-5150	B-5131	9121	B-9775	B-4688
	Price	$2,638	$2,480	*	$2,638	$2,480	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3018**	**A3019**	**A3020**	**A3021**	**A30215**	**A30217**	**A3022**
	Bowen No.	A-4341	6667	A-4412	A-5135	9125	A-9779	A-816
	Price	$742	$683	*	$742	$683	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4018**	**A4019**	**A4020**	**A4021**	**A40215**	**A40217**	**A4022**
	Bowen No.	L-6665	6665	B-3219	B-5538	9122	L-6163	A-811
	Price	$94	$131	*	$93	$88	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5018**	**A5019**	**A5020**	**A5021**	**A50215**	**A50217**	**A5022**
	Bowen No.	B-4339	6662	B-4410	B-5133	9123	B-9777	B-814
	Standard Price	$731	$639	*	$731	$671	*	*
	Nitralloy Price	$1,317	$1,150	*	$1,317	$1,209	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6018**	**A6019**	**A6020**	**A6021**	**A60215**	**A60217**	**A6022**
	Bowen No.	B-4340	6674	B-4411	A-5134	9124	A-9778	A-815
	Price	$233	$272	*	$231	$210	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7018**	**A7019**	**A7020**	**A7021**	**A70215**	**A70217**	**A7022**
	Bowen No.	B-4339	6662	B-4410	B-5133	9123	B-9777	B-814
	Standard Price	$1,018	$892	*	$1,018	$937	*	*
	Nitralloy Price	$1,860	$1,626	*	$1,860	$1,711	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8018**	**A8019**	**A8020**	**A8021**	**A80215**	**A80217**	**A8022**
	Bowen No.	B-4340	6674	B-4411	A-5134	9124	A-9778	A-815
	Price	$326	$299	*	$302	$298	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9018**	**A9019**	**A9020**	**A9021**	**A90215**	**A90217**	**A9022**
	Bowen No.	L-6665-R	6665-R	B-3219-R	B-5538-R	9122-R	L-6163-R	811-R
	Price	$532	$488	*	$532	$489	*	*

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** Available upon request.*

Special Notes:

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(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		3-7/8	3-7/8	4	4	4-1/8	4-1/8	4-1/4
MAXIMUM CATCH SIZE (Basket)		3-1/4	3-3/8	3-1/2	3-3/8	3-5/8	3-1/2	3-3/4
OVERSHOT O.D.		5-1/4	4-5/8	4-7/8	5-5/16	5	5-7/16	5-1/8
TYPE		FS	SH	SH	FS	SH	FS	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-525-A**	**150-462-D**	**150-488-D**	**150-531-A**	**150-500-D**	**150-544-A**	**150-513-D**
	Bowen No.	9515	C-6230	C-5154	C-5142	C-5428	C-5425	C-5162
	Price	*			*	*	*	
TOP SUB	**Logan Part No.**	**A1023**	**A10235**	**A1024**	**A1025**	**A1026**	**A1027**	**A1028**
	Bowen No.	9516	A-6231	A-5155	A-5143	A-5429	A-5426	A-5163
	Price	*	$1,563	$1,525	*	*	*	...
BOWL	**Logan Part No.**	**A2023**	**A20235**	**A2024**	**A2025**	**A2026**	**A2027**	**A2028**
	Bowen No.	9517	B-6232	B-5156	B-5144	B-5430	B-5427	B-5164
	Price	*	$2,882	$2,883	*	*	*	...
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3023**	**A30235**	**A3024**	**A3025**	**A3026**	**A3027**	**A3028**
	Bowen No.	876	A-6236	A-5161	A-1507	B-4899	B-1999	A-4676
	Price	*	$683	$845	*	*	*	...

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4023**	**A40235**	**A4024**	**A4025**	**A4026**	**A4027**	**A40285**
	Bowen No.	856	A-1707	B-5157	B-1508	B-4895	L-1867	B-4672
	Price	$134	$136	$136	*	*	*	...
SPIRAL GRAPPLE	**Logan Part No.**	**A5023**	**A50235**	**A5024**	**A5025**	**A5026**	**A5027**	**A50285**
	Bowen No.	859	B-6234	B-5159	B-1505	B-4897	B-1997	B-4674
	Standard Price	$749	$749	$780	*	*	*	$812
	Nitralloy Price	$1,345	$1,346	$1,396	*	*	*	...
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6023**	**A60235**	**A6024**	**A6025**	**A6026**	**A6027**	**A60285**
	Bowen No.	875	A-6235	B-5160	A-1506	B-4898	A-1998	B-4675
	Price	$210	$273	$354	*	*	*	...

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7023**	**A70235**	**A7024**	**A7025**	**A7026**	**A7027**	**A70285**
	Bowen No.	859	B-6234	B-5159	B-1505	B-4897	B-1997	B-4674
	Standard Price	$1,042	$1,041	$1,086	*	*	*	$1,134
	Nitralloy Price	$1,878	$1,878	$1,946	*	*	*	...
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8023**	**A80235**	**A8024**	**A8025**	**A8026**	**A8027**	**A80285**
	Bowen No.	875	A-6235	B-5160	A-1506	B-4898	A-1998	B-4675
	Price	$296	$299	$326	*	*	*	...
MILL CONTROL PACKER	**Logan Part No.**	**A9023**	**A90235**	**A9024**	**A9025**	**A9026**	**A9027**	**A90285**
	Bowen No.	856-R	60947R	B-5157-R	A-1508-R	B-4895-R	L-1867-R	B-4672-R
	Price	$549	$549	$570	*	*	*	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		4-1/4	4-1/4	4-1/4	4-1/2	4-1/2	4-5/8	4-5/8
MAXIMUM CATCH SIZE (Basket)		3-3/4	3-11/16	3-11/16	3-7/8	3-7/8	4-1/8	4-1/8
OVERSHOT O.D.		5-1/8	5-9/16	5-9/16	5-3/8	5-13/16	5-1/2	5-5/8
TYPE		SH	FS	FS	SH	FS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-512-D**	**150-556-A**	**150-555-A**	**150-538-D**	**150-581-A**	**150-550-D**	**150-563-A**
	Bowen No.	4716	5896	C-4819	C-5165	C-4814	C-4969	5698
	Price	*		*	*	*	*	
TOP SUB	**Logan Part No.**	**A10285**	**A1029**	**A10295**	**A1030**	**A1031**	**A10315**	**A1032**
	Bowen No.	4718	5897	A-4820	A-5166	A-4815	A-4970	5699
	Price	*	$2,085	*	*	*	*	$2,085
BOWL	**Logan Part No.**	**A20285**	**A2029**	**A20295**	**A2030**	**A2031**	**A20315**	**A2032**
	Bowen No.	4717	5898	B-4821	B-5167	B-4816	B-4971	5700
	Price	*	$3,044	*	*	*	*	$3,237
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A30285**	**A3029**	**A30295**	**A3030**	**A3031**	**A30315**	**A3032**
	Bowen No.	4719	187	L-187	B-2491	B-1989	M-1138	1143
	Price	*	$1,046	*	*	*	*	$1,046

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A40285**	**A4029**	**A4029**	**A4030**	**A4031**	**A4032**	**A4032**
	Bowen No.	4672	169	169	B-2487	B-2199-1	1140	1140
	Price	*	$136	$136	*	*	$136	$136
SPIRAL GRAPPLE	**Logan Part No.**	**A50285**	**A5029**	**A5029**	**A5030**	**A5031**	**A5032**	**A5032**
	Bowen No.	4674	165	165	B-2489	B-1987	1135	1135
	Standard Price	*	$843	$843	*	*	$899	$899
	Nitralloy Price	*	$1,519	$1,519	*	*	$1,622	$1,622
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A60285**	**A6029**	**A6029**	**A6030**	**A6031**	**A6032**	**A6032**
	Bowen No.	4675	186	186	B-2490	B-1988	1137	1137
	Price	*	$243	$243	*	*	$258	$258

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A70285**	**A7029**	**A7029**	**A7030**	**A7031**	**A7032**	**A7032**
	Bowen No.	4674	165	165	B-2489	B-1987	1135	1135
	Standard Price	*	$1,179	$1,180	*	*	$1,268	$1,268
	Nitralloy Price	*	$2,118	$2,124	*	*	$2,184	$2,184
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A80285**	**A8029**	**A8029**	**A8030**	**A8031**	**A8032**	**A8032**
	Bowen No.	4675	186	186	B-2490	B-1988	1137	1137
	Price	*	$328	$328	*	*	$363	$363
MILL CONTROL PACKER	**Logan Part No.**	**A90285**	**A9029**	**A9029**	**A9030**	**A9031**	**A9032**	**A9032**
	Bowen No.	4672-R	169-R	169-R	B-2487-R	B-2199-1R	1140-R	1140-R
	Price	*	$572	$572	$*	*	$582	$582

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		4-5/8	4-3/4	4-3/4	4-3/4	4-7/8	4-7/8	4-7/8
MAXIMUM CATCH SIZE (Basket)		4	4-1/4	4-1/4	4-1/8	4-1/4	4-1/4	4-1/4
OVERSHOT O.D.		5-15/16	5-5/8	5-3/4	6-1/16	5-3/4	6-1/8	6-3/16
TYPE		FS	SH	FS	FS	SH	FS	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-594-A**	**150-563-D**	**150-575-A**	**150-606-A**	**150-575-D**	**150-613-A**	**150-619-A**
	Bowen No.	5737	C-5168	8975	C-4829	C-7096	912	C-7093
	Price	*					*	*
TOP SUB	**Logan Part No.**	**A1033**	**A1034**	**A1035**	**A1036**	**A1037**	**A10375**	**A1038**
	Bowen No.	5738	A-5169	8976	A-4830	A-7097	908	A-7094
	Price	*	$1,918	$1,918	$2,092	$2,316	*	*
BOWL	**Logan Part No.**	**A2033**	**A2034**	**A2035**	**A2036**	**A2037**	**A20375**	**A2038**
	Bowen No.	5735	B-5170	8977	B-4831	B-7098	905	B-7095
	Price	*	$2,978	$2,978	$3,111	$3,282	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3033**	**A3034**	**A3035**	**A3036**	**A3037**	**A30375**	**A3038**
	Bowen No.	192	B-2203	6121	B-2366	A-6391	1186	A-2459
	Price	*	$964	$964	$1,004	$964	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4033**	**A4034**	**A4035**	**A4036**	**A4037**	**A40375**	**A4038**
	Bowen No.	195	B-2199	6114	B-2362	B-6387	1189	B-2455
	Price	...	$123	$123	$130	$134	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5033**	**A5034**	**A5035**	**A5036**	**A5037**	**A50375**	**A5038**
	Bowen No.	196	B-2201	6112	B-2364	B-6389	1182	B-2457
	Standard Price	...	$827	$787	$864	$887	*	*
	Nitralloy Price	...	$1,492	$1,418	$1,558	$1,603	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6033**	**A6034**	**A6035**	**A6036**	**A6037**	**A60375**	**A6038**
	Bowen No.	193	B-2202	6113	B-2365	A-6390	1187	B-2458
	Price	...	$237	$235	$237	$237	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7033**	**A7034**	**A7035**	**A7036**	**A7037**	**A70375**	**A7038**
	Bowen No.	196	B-2201	6112	B-2364	B-6389	1182	B-2457
	Standard Price	...	$1,167	$1,109	$1,221	$1,263	*	*
	Nitralloy Price	...	$2,005	$1,909	$2,200	$2,103	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8033**	**A8034**	**A8035**	**A8036**	**A8037**	**A80375**	**A8038**
	Bowen No.	*	B-2202	6113	B-2365	A-6390	1187	B-2458
	Price	$283	$331	$331	$408	$331	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9033**	**A9034**	**A9035**	**A9036**	**A9037**	**A90375**	**A9038**
	Bowen No.	195-R	B-2199-R	6114-R	B-2362-R	B-6387-R	1189-R	B-2455-R
	Price	...	$708	$708	$708	$708	*	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		5	5	5	5-1/8	5-1/4	5-3/8	5-1/2
MAXIMUM CATCH SIZE (Basket)		4-1/2	4-3/8	4-1/4	4-5/8	4-5/8	4-3/4	4-7/8
OVERSHOT O.D.		5-7/8	6-1/8	6-5/8	5-3/4	6-3/8	6-1/2	6-5/8
TYPE		SH	SFS	FS	SH	SH	SH	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-588-D**	**150-612-C**	**150-663-A**	**150-576-D**	**150-638-D**	**150-650-D**	**150-663-D**
	Bowen No.	C-5171	7787	C-4825	C-11823	6655	4773	8625
	Price			*			*	
TOP SUB	**Logan Part No.**	**A1039**	**A10395**	**A1040**	**A10402**	**A10405**	**A10407**	**A1041**
	Bowen No.	A-5172	7789	B-4826	A-11824	6656	4774	8626
	Price	$1,984	$2,278	*	$2,085	$2,349	*	$2,651
BOWL	**Logan Part No.**	**A2039**	**A20395**	**A2040**	**A20402**	**A20405**	**A20407**	**A2041**
	Bowen No.	B-5173	7788	B-4827	B-11825	4503	9205	8617
	Price	$3,142	$3,415	*	$3,534	$3,534	*	$3,663
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3039**	**A30395**	**A3040**	**A30402**	**A30405**	**A30407**	**A3041**
	Bowen No.	B-4371	5946	L-1074	A-11830	4504	4775	8621
	Price	$1,082	$1,089	*	$1,046	$1,046	*	$1,234

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4039**	**A40395**	**A4040**	**A40402**	**A40405**	**A40407**	**A4041**
	Bowen No.	L-5950	5950	L-4505	B-11826	4505	9209	8618
	Price	$140	$152	*	$152	$152	*	$152
SPIRAL GRAPPLE	**Logan Part No.**	**A5039**	**A50395**	**A5040**	**A50402**	**A50405**	**A50407**	**A5041**
	Bowen No.	B-4369	5942	M-1071	B-11828	4498	9207	8619
	Standard Price	$851	$925	*	$965	$965	*	$1,012
	Nitralloy Price	$1,545	$1,682	*	$1,739	$1,739	*	$1,815
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6039**	**A60395**	**A6040**	**A60402**	**A60405**	**A60407**	**A6041**
	Bowen No.	B-4370	5944	M-1072	A-11829	4499	9208	8620
	Price	$420	$258	*	$302	$302	*	$302

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7039**	**A70395**	**A7040**	**A70402**	**A70405**	**A70407**	**A7041**
	Bowen No.	B-4369	5942	M-1071	B-11828	4498	9207	8619
	Standard Price	$1,208	$1,316	*	$1,355	$1,355	*	$1,416
	Nitralloy Price	$2,194	$2,390	*	$2,459	$2,459	*	$2,567
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8039**	**A80395**	**A8040**	**A80402**	**A80405**	**A80407**	**A8041**
	Bowen No.	B-4370	5944	M-1072	A-11829	4499	9208	8620
	Price	$331	$363	*	$410	$410	*	$410
MILL CONTROL PACKER	**Logan Part No.**	**A9039**	**A90395**	**A9040**	**A90402**	**A90405**	**A90407**	**A9041**
	Bowen No.	L-5950-R	5950-R	M-4505-RS	11826-R	4505-R	9209-R	L-8618-R
	Price	$542	$589	*	$606	$606	*	$642

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** Available upon request.*

Special Notes:

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(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase pwhen ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		5-1/2	5-3/4	5-3/4	6	6-1/8	6-1/8	6-1/4
MAXIMUM CATCH SIZE (Basket)		4-3/4	5-1/8	5	5-1/4	5-1/2	5-3/8	5-5/8
OVERSHOT O.D.		7-1/8	6-7/8	7-3/8	7-5/8	7-1/4	7-3/4	7-3/8
TYPE		FS	SH	FS	FS	SH	FS	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-713-A**	**150-688-D**	**150-738-A**	**150-763-A**	**150-725-D**	**150-775-A**	**150-738-D**
	Bowen No.	C-5176	8978	C-4689	7572	C-5206	C-5204	9692
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**A1042**	**A1043**	**A1044**	**A1045**	**A1046**	**A1047**	**A1048**
	Bowen No.	A-5177	8979	A-4690	7573	A-5207	A-5205	9693
	Price	*	*	*	*	*	*	$2,892
BOWL	**Logan Part No.**	**A2042**	**A2043**	**A2044**	**A2045**	**A2046**	**A2047**	**A2048**
	Bowen No.	B-2791	8980	B-3522	7574	B-5208	B-4218	9694
	Price	*	*	*	*	*	*	$3,764
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3042**	**A3043**	**A3044**	**A3045**	**A3046**	**A3047**	**A3048**
	Bowen No.	A-761	6701	L-120	218	A-5213	A-2065	9691
	Price	*	*	*	*	*	*	$1,272

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4042**	**A4043**	**A4044**	**A4045**	**A4046**	**A4047**	**A4048**
	Bowen No.	A-756	6697	L-110	223	B-5209	L-1642	9689
	Price	*	*	*	*	*	*	$159
SPIRAL GRAPPLE	**Logan Part No.**	**A5042**	**A5043**	**A5044**	**A5045**	**A5046**	**A5047**	**A5048**
	Bowen No.	B-759	6699	M-104	220	B-5211	B-2063	9687
	Standard Price	*	*	*	*	*	*	$1,020
	Nitralloy Price	*	*	*	*	*	*	$1,873
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6042**	**A6043**	**A6044**	**A6045**	**A6046**	**A6047**	**A6048**
	Bowen No.	B-760	6700	L-130	219	A-5212	B-2064	9688
	Price	*	*	*	*	*	*	$331

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7042**	**A7043**	**A7044**	**A7045**	**A7046**	**A7047**	**A7048**
	Bowen No.	B-759	6699	M-104	220	B-5211	B-2063	9687
	Standard Price	*	*	*	*	*	*	$1,433
	Nitralloy Price	*	*	*	*	*	*	$2,597
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8042**	**A8043**	**A8044**	**A8045**	**A8046**	**A8047**	**A8048**
	Bowen No.	B-760	6700	L-130	219	A-5212	B-2064	9688
	Price	*	*	*	*	*	*	$404
MILL CONTROL PACKER	**Logan Part No.**	**A9042**	**A9043**	**A9044**	**A9045**	**A9046**	**A9047**	**A9048**
	Bowen No.	A-756-R	6697-R	L-110-R	223-R	B-5209-R	L-1642-R	9689-R
	Price	*	*	*	$632	*	*	$664

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		6-1/4	6-1/4	6-1/4	6-3/8	6-3/8	6-1/2
MAXIMUM CATCH SIZE (Basket)		5-9/16	5-9/16	5-1/2	5-3/4	5-5/8	5-7/8
OVERSHOT O.D.		7-5/8	7-5/8	7-7/8	7-1/2	7-3/4	7-5/8
TYPE		SFS	SFS	FS	SH	SFS	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-762-C**	**150-763-C**	**150-788-A**	**150-750-D**	**150-775-C**	**150-763-D**
	Bowen No.	1873	8741	C-2108	9009	9163	9860
	Price	*	*		*	*	
TOP SUB	**Logan Part No.**	**A10485**	**A1049**	**A1050**	**A1051**	**A1052**	**A1053**
	Bowen No.	118	8742	B-2106	9010	9165	9861
	Price	*	*	$3,185	*	*	$3,283
BOWL	**Logan Part No.**	**A20485**	**A2049**	**A2050**	**A2051**	**A2052**	**A2053**
	Bowen No.	1875	1641	B-2109	9011	9164	9862
	Price	*	*	$3,764	*	*	$4,284
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3049**	**A3049**	**A3050**	**A3051**	**A3052**	**A3053**
	Bowen No.	5525	5525	A-2075	9007	5506	9867
	Price	$1,448	$1,448	$1,393	*	*	$1,448

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4049**	**A4049**	**A4050**	**A4051**	**A4052**	**A4053**
	Bowen No.	1642	1642	L-1680	9005	5508	9865
	Price	$175	$175	$161	*	*	$175
SPIRAL GRAPPLE	**Logan Part No.**	**A5049**	**A5049**	**A5050**	**A5051**	**A5052**	**A5053**
	Bowen No.	1644	1644	B-2073	9003	5503	9863
	Standard Price	$1,107	$1,107	$1,020	*	*	$1,151
	Nitralloy Price	$2,034	$2,034	$1,873	*	*	$2,092
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6049**	**A6049**	**A6050**	**A6051**	**A6052**	**A6053**
	Bowen No.	1645	1645	A-2074	9004	5504	9864
	Price	$363	$363	$331	*	*	$363

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7049**	**A7049**	**A7050**	**A7051**	**A7052**	**A7053**
	Bowen No.	1644	1644	B-2073	9003	5503	9863
	Standard Price	$1,561	$1,561	$1,434	*	*	$1,619
	Nitralloy Price	$2,834	$2,834	$2,604	*	*	$2,914
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8049**	**A8049**	**A8050**	**A8051**	**A8052**	**A8053**
	Bowen No.	1645	1645	A-2074	9004	5504	9864
	Price	$439	$439	$404	*	*	$439
MILL CONTROL PACKER	**Logan Part No.**	**A9049**	**A9049**	**A9050**	**A9051**	**A9052**	**A9053**
	Bowen No.	1642-R	1642-R	L-1680-R	9005-R	5508-R	9865-R
	Price	$695	$695	$643	*	*	$731

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** Available upon request.*

Special Notes:

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(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

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C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		6-1/2	6-5/8	6-5/8	6-3/4	6-3/4	6-7/8	7
MAXIMUM CATCH SIZE (Basket)		5-3/4	6	5-7/8	6-1/8	6	6-1/4	6-3/8
OVERSHOT O.D.		8-1/8	7-3/4	8-1/4	7-7/8	8-3/8	8	8-1/8
TYPE		FS	SH	FS	SH	FS	SH	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-813-A**	**150-775-D**	**150-825-A**	**150-788-D**	**150-838-A**	**150-800-D**	**150-814-D**
	Bowen No.	C-5342	4785	C-3032	C-5222	275	N-8995	
	Price		*				*	*
TOP SUB	**Logan Part No.**	**A1054**	**A1055**	**A1056**	**A1057**	**A1058**	**A10587**	**A10590**
	Bowen No.	A-5343	9133	A-3033	A-5223	276	L-8996	
	Price	$3,453	*	$4,098	$3,461	$3,859	*	*
BOWL	**Logan Part No.**	**A2054**	**A2055**	**A2056**	**A2057**	**A2058**	**A20587**	**A20590**
	Bowen No.	B-3711	9134	B-3034	B-5224	277	M-8997	
	Price	$3,940	*	$4,486	$4,486	$4,462	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3054**	**A3055**	**A3056**	**A3057**	**A3058**	**A30587**	**A3059**
	Bowen No.	A-2376	9139	A-1818	A-5229	205	L-8989	9226
	Price	$1,463	*	$1,589	$1,516	$1,528	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4054**	**A4055**	**A4056**	**A4057**	**A4058**	**A40587**	**A4059**
	Bowen No.	2372	9136	A-1814	B-5225	207	L-8985	9224
	Price	$161	*	$174	$174	$174	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5054**	**A5055**	**A5056**	**A5057**	**A5058**	**A50587**	**A5059**
	Bowen No.	B-2374	9137	N-84	B-5227	209	M-8987	9222
	Standard Price	$1,061	*	$1,179	$1,179	$1,133	*	*
	Nitralloy Price	$1,925	*	$2,124	$2,124	*	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6054**	**A6055**	**A6056**	**A6057**	**A6058**	**A60587**	**A6059**
	Bowen No.	B-2375	9138	M-89	A-5228	208	M-8988	9223
	Price	$420	*	$390	$390	$363	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7054**	**A7055**	**A7056**	**A7057**	**A7058**	**A70587**	**A7059**
	Bowen No.	B-2374	9137	N-84	B-5227	209	M-8987	9222
	Standard Price	$1,489	*	$1,669	$1,669	$1,603	*	*
	Nitralloy Price	$2,679	*	$2,995	$2,991	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8054**	**A8055**	**A8056**	**A8057**	**A8058**	**A80587**	**A8059**
	Bowen No.	B-2375	9138	M-89	A-5228	208	M-8988	9223
	Price	$404	*	$530	$530	$487	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9054**	**A9055**	**A9056**	**A9057**	**A9058**	**A90587**	**A9059**
	Bowen No.	L-6635-R	9136-R	A-1814-R	B-5225-R	207-R	L-8985-R	9224-R
	Price	$671	*	$737	$739	$708	*	*

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** Available upon request.*

Special Notes:

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(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

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E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		7	7	7	7	7-1/8	7-1/4	7-1/4
MAXIMUM CATCH SIZE (Basket)		6-3/8	6-1/4	6-3/8	6-1/4	6-1/2	6-5/8	6-1/2
OVERSHOT O.D.		8-1/8	8-1/8	8-3/8	8-5/8	8-1/4	8-3/8	8-7/8
TYPE		SH	SH	SH	FS	SH	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-813-D**	**150-812-D**	**150-837-D**	**150-863-A**	**150-825-D**	**150-838-D**	**150-888-A**
	Bowen No.	9217	C-3263	17208	C-4817	9570	C-5354	C-5352
	Price		*	*	*	*		*
TOP SUB	**Logan Part No.**	**A1059**	**A10595**	**A1058**	**A1060**	**A10605**	**A1061**	**A1062**
	Bowen No.	9218	A-3033	276	B-4818	9544	A-5355	A-5353
	Price	$3,362	*	*	*	*	$4,203	*
BOWL	**Logan Part No.**	**A2059**	**A20595**	**A20598**	**A2060**	**A20605**	**A2061**	**A2062**
	Bowen No.	9219	B-3264	17209	B-3819	9571	B-5356	M-1026-1
	Price	$4,387	*	*	*	*	$4,839	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3059**	**A30595**	**A3059**	**A3060**	**A30605**	**A3061**	**A3062**
	Bowen No.	9226	A-3269	9226	M-121	4792	A-5361	M-1029
	Price	$1,463	*	*	*	*	$1,667	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4059**	**A40595**	**A4059**	**A4060**	**A40605**	**A4061**	**A4062**
	Bowen No.	L-9224	L-6310	9224	L-111	9231	B-5357	L-1025
	Price	$167	*	$166	*	*	$181	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5059**	**A50595**	**A5059**	**A5060**	**A50605**	**A5061**	**A5062**
	Bowen No.	9222	B-3267	9222	N-105	9229	B-5359	M-1027
	Standard Price	$1,127	*	*	*	*	$1,243	*
	Nitralloy Price	$2,032	*	*	*	*	$2,249	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6059**	**A60595**	**A6059**	**A6060**	**A60605**	**A6061**	**A6062**
	Bowen No.	9223	B-3268	9223	M-131	9230	B-5360	M-1031
	Price	$363	*	*	*	*	$409	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7059**	**A70595**	**A7059**	**A7060**	**A70605**	**A7061**	**A7062**
	Bowen No.	9222	B-3267	9222	N-105	9229	B-5359	M-1027
	Standard Price	$1,565	*	*	*	*	$1,748	*
	Nitralloy Price	$2,815	*	*	*	*	$3,172	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8059**	**A80595**	**A8059**	**A8060**	**A80605**	**A8061**	**A8062**
	Bowen No.	9223	B-3268	9223	M-131	9230	B-5360	M-1031
	Price	$488	*	*	*	*	$568	*
MILL CONTROL PACKER	**Logan Part No.**	**A9059**	**A90595**	**A9059**	**A9060**	**A90605**	**A9061**	**A9062**
	Bowen No.	9224-R	L-6310R	9224-R	L-111-R	9231-R	B-5357-R	L-1025-R
	Price	$702	*	*	*	*	$785	*

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Special Notes:

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(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

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E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		7-3/8	7-3/8	7-1/2	7-1/2	7-5/8	7-3/4
MAXIMUM CATCH SIZE (Basket)		6-3/4	6-5/8	6-7/8	6-3/4	6-7/8	7-1/8
OVERSHOT O.D.		8-1/2	9	8-5/8	9-1/8	9-1/4	8-7/8
TYPE		SH	FS	SH	FS	FS	SH
COMPLETE ASSEMBLY	**Logan Part No.**	**150-850-D**	**150-900-A**	**150-913-A**	**150-875-D**	**150-762-A**	**150-888-D**
	Bowen No.	4793	C-5230	C-7101	C-7099	C-5241	9850
	Price	*	*	$10,714	$7,132	*	*
TOP SUB	**Logan Part No.**	**A1063**	**A1064**	**A1066**	**A1067**	**A10675**	**A1068**
	Bowen No.	4794	A-5231	A-7100	A-4797	A-5242	9851
	Price	*	*	*	*	*	*
BOWL	**Logan Part No.**	**A2063**	**A2064**	**A2066**	**A2067**	**A20675**	**A2068**
	Bowen No.	9233	B-5232	B-4516	B-9239	B-5243	9852
	Price	*	*	*	*	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3063**	**A3064**	**A3066**	**A3067**	**A30675**	**A3068**
	Bowen No.	4795	A-4158	A-3456	A-4796	A-5248	9857
	Price	*	*	*	*	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4063**	**A4064**	**A4066**	**A4067**	**A40675**	**A4068**
	Bowen No.	9237	B-4154	L-98	9243	B-5244	9855
	Price	*	*	*	*	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5063**	**A5064**	**A5066**	**A5067**	**A50675**	**A5068**
	Bowen No.	9235	C-4156	B-3454	9241	B-5246	9853
	Standard Price	*	*	*	*	*	*
	Nitralloy Price	*	*	*	*	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6063**	**A6064**	**A6066**	**A6067**	**A60675**	**A6068**
	Bowen No.	9236	B-4157	B-3455	9242	B-5247	9854
	Price	*	*	*	*	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7063**	**A7064**	**A7066**	**A7067**	**A70675**	**A7068**
	Bowen No.	9235	C-4156	B-3454	9241	B-5246	9853
	Standard Price	*	*	*	*	*	*
	Nitralloy Price	*	*	*	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8063**	**A8064**	**A8066**	**A8067**	**A80675**	**A8068**
	Bowen No.	9236	B-4157	A-3454	9242	B-5247	9854
	Price	*	*	*	*	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9063**	**A9064**	**A9066**	**A9067**	**A90675**	**A9068**
	Bowen No.	9237-R	B-4154-R	M-98-R5	9243-C	B-5244-R	9855-R
	Price	*	*	*	*	*	*

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(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

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When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

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Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		7-3/4	7-3/4	7-3/4	8	8	8-3/8	8-3/8
MAXIMUM CATCH SIZE (Basket)		7	7	7	7-3/8	7-1/4	7-3/4	7-5/8
OVERSHOT O.D.		8-7/8	9-3/8	9-3/8	9-1/8	9-5/8	9-1/2	10-1/16
TYPE		SH	FS	FS	SH	FS	SH	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-889-D**	**150-937-A**	**150-938-A**	**150-913-D**	**150-963-A**	**150-950-D**	**150-1006-A**
	Bowen No.	C-5257	1665	C-1500	C-5265	264	4834	C-1230
	Price	*	*	*	*			
TOP SUB	**Logan Part No.**	**A1069**	**A10695**	**A1070**	**A1071**	**A1072**	**A1073**	**A1074**
	Bowen No.	A-5258	1666	B-1502	A-5266	265	9063	B-1235
	Price	*	*	*	*	$4,728	$4,902	$6,368
BOWL	**Logan Part No.**	**A2069**	**A20695**	**A2070**	**A2071**	**A2072**	**A2073**	**A2074**
	Bowen No.	B-5259	1283	B-1501	B-5267	266	9062	B-1231
	Price	*	*	*	*	$4,845	$5,917	$5,687
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3069**	**A30695**	**A3070**	**A3071**	**A3072**	**A3073**	**A3074**
	Bowen No.	A-5264	88	M-88	A-5272	240	9059	B-1236
	Price	*	*	*	*	$1,900	$2,032	$2,643

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4069**	**A40695**	**A40695**	**A4071**	**A4072**	**A4073**	**A4074**
	Bowen No.	B-5260	98 & L-98	98 & L-98	B-5268	235	9055	L-1060
	Price	*	*	*	*	$174	$187	$187
SPIRAL GRAPPLE	**Logan Part No.**	**A5069**	**A50695**	**A5070**	**A5071**	**A5072**	**A5073**	**A5074**
	Bowen No.	B-5262	85 & N-85	N-85	B-5270	238	9057	C-1232
	Standard Price	*	*	*	*	$1,209	$1,370	$1,316
	Nitralloy Price	*	*	*	*	$2,194	$2,471	$2,524
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6069**	**A60695**	**A60695**	**A6071**	**A6072**	**A6073**	**A6074**
	Bowen No.	A-5263	100 & M-100	100 & M-100	B-5271	239	9058	B-1233
	Price	*	*	*	*	$393	$484	$447

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7069**	**A70695**	**A7070**	**A7071**	**A7072**	**A7073**	**A7074**
	Bowen No.	B-5262	85 & N-85	N-85	B-5270	238	9057	C-1232
	Standard Price	*	*	*	*	$1,707	$2,227	$2,038
	Nitralloy Price	*	*	*	*	$3,080	$4,019	$3,677
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8069**	**A80695**	**A80695**	**A8071**	**A8072**	**A8073**	**A8074**
	Bowen No.	A-5263	100 & M-100	100 & M-100	B-5271	239	9058	B-1233
	Price	*	*	*	*	$549	$680	$625
MILL CONTROL PACKER	**Logan Part No.**	**A9069**	**A90695**	**A90695**	**A9071**	**A9072**	**A9073**	**A9074**
	Bowen No.	B-5260-R	98-R & L-98-R	98-R & L-98-R	B-5268-R	235-R	9055-R	L-1060-R
	Price	*	*	*	*	$1,131	$1,422	$1,367

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain
B = XFS Extra Full Strength – For extreme abuse
C = SFS Semi Full Strength – Maximum strength for special hole conditions
D = SH Slim Hole – For heavy pulling strains only
E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number
(2) Size and type of connection for Top Sub
(3) Size and type of fish to be caught
(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control
(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		8-1/2	8-1/2	8-7/8	9	9-5/8	9-3/4
MAXIMUM CATCH SIZE (Basket)		7-7/8	7-3/4	8-1/8	8-1/4	8-7/8	9
OVERSHOT O.D.		9-5/8	10-1/8	10-1/2	10-5/8	11-1/4	11-3/8
TYPE		SH	FS	FS	FS	FS	FS
COMPLETE ASSEMBLY	**Logan Part No.**	**150-963-D**	**150-1013-A**	**150-1050-A**	**150-1063-A**	**150-1125-A**	**150-1138-A**
	Bowen No.	C-5284	8960	C-5305	C-5321	C-12822	26255
	Price	*		*			*
TOP SUB	**Logan Part No.**	**A1075**	**A1076**	**A1078**	**A1079**	**A1080**	**A1081**
	Bowen No.	A-5285	8961	A-5306	A-5322	A-12823	26256
	Price	*	$6,938	*	$6,724	$7,423	*
BOWL	**Logan Part No.**	**A2075**	**A2076**	**A2078**	**A2079**	**A2080**	**A2081**
	Bowen No.	B-5286	8962	B-5307	B-5323	B-12824	26257
	Price	*	$5,917	*	$5,874	$6,226	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3075**	**A3076**	**A3078**	**A3079**	**A3080**	**A3081**
	Bowen No.	A-5291	8959	A-5312	A-5328	A-12829	26261
	Price	*	$2,877	*	$2,829	$2,958	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4075**	**A4076**	**A4078**	**A4079**	**A4080**	**A4081**
	Bowen No.	B-5287	8956	B-5308	B-5324	B-12825	26260
	Price	*	$165	*	$154	$172	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5075**	**A5076**	**A5078**	**A5079**	**A5080**	**A5081**
	Bowen No.	B-5289	8957		B-5310	B-5326	26258
	Standard Price	*	$1,370	*	$1,386	$1,652	*
	Nitralloy Price	*	$2,479	*	$2,483	$2,984	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6075**	**A6076**	**A6078**	**A6079**	**A6080**	**A6081**
	Bowen No.	A-5290	8958	B-5311	B-5327	B-12828	26259
	Price	*	$481	*	$451	$570	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7075**	**A7076**	**A7078**	**A7079**	**A7080**	**A7081**
	Bowen No.	B-5289	8957	B-5310	B-5326	B-12827	26258
	Standard Price	*	$2,119	*	$2,262	$2,801	*
	Nitralloy Price	*	$3,832	*	$4,047	$5,048	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8075**	**A8076**	**A8078**	**A8079**	**A8080**	**A8081**
	Bowen No.	B-5290	8958	B-5311	B-5327	B-12828	26259
	Price	*	$678	*	$647	$864	*
MILL CONTROL PACKER	**Logan Part No.**	**A9075**	**A9076**	**A9078**	**A9079**	**A9080**	**A9081**
	Bowen No.	B-5287-R	8956-R	B-5308-R	B-5324-R	B-12825-R	26260-R
	Price	*	$1,422	*	$1,502	$1,772	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

(9) Additional cost may be incurred for premium connections.

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

Logan Series 150 Overshots

MAXIMUM CATCH SIZE (Spiral)		10-1/8	11-1/4	12	14	14-3/4	16-3/4
MAXIMUM CATCH SIZE (Basket)		9-3/8	10-1/2	11-1/4	13-1/4	14	16
OVERSHOT O.D.		11-3/4	12-3/4	13-3/4	16	16-3/4	20-3/4
TYPE		FS	FS	...	...	...	...
COMPLETE ASSEMBLY	**Logan Part No.**	**150-1175-A**	**150-1275-A**	**150-1375**	**150-1600**	**150-1675**	**150-2075**
	Bowen No.	C-5329	15800	33006	68028	64553	31653
	Price				*	*	*
TOP SUB	**Logan Part No.**	**A1082**	**A1083**	**A1084**	**A1085**	**A1086**	**A1087**
	Bowen No.	5330	15801	33007	68029	64554	31654
	Price	$8,199	$9,534	$16,892	*	*	*
BOWL	**Logan Part No.**	**A2082**	**A2083**	**A2084**	**A2085**	**A2086**	**A2087**
	Bowen No.	5331	15802	33008	68030	64555	31655
	Price	$6,539	$8,040	$13,106	*	*	*
STANDARD GUIDE (CUT-LIPPED)	**Logan Part No.**	**A3082**	**A3083**	**A3084**	**A3085**	**A3086**	**A3087**
	Bowen No.	5336	15806	33012	68035	64560	31660
	Price	$3,154	$3,557	$4,396	*	*	*

SPIRAL COMPONENT PARTS

PACKER	**Logan Part No.**	**A4082**	**A4083**	**A4084**	**A4085**	**A4086**	**A4087**
	Bowen No.	B-5332	15805	33011	68031	64556	31656
	Price	$187	$415	$450	*	*	*
SPIRAL GRAPPLE	**Logan Part No.**	**A5082**	**A5083**	**A5084**	**A5085**	**A5086**	**A5087**
	Bowen No.	5334	15803	33009	68033	64558	31658
	Standard Price	$1,805	$2,412	$2,737	*	*	*
	Nitralloy Price	$3,405	$4,165	$5,931	*	*	*
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**A6082**	**A6083**	**A6084**	**A6085**	**A6086**	**A6087**
	Bowen No.	5335	15804	33010	68034	64559	31659
	Price	$632	$915	$929	*	*	*

BASKET COMPONENT PARTS

BASKET GRAPPLE	**Logan Part No.**	**A7082**	**A7083**	**A7084**	**A7085**	**A7086**	**A7087**
	Bowen No.	5334	15803	33009	68033	64558	31658
	Standard Price	$3,042	$4,263	$5,149	*	*	*
	Nitralloy Price	$5,754	$7,313	$6,784	*	*	*
BASKET GRAPPLE CONTROL	**Logan Part No.**	**A8082**	**A8083**	**A8084**	**A8085**	**A8086**	**A8087**
	Bowen No.	5335	15804	33010	68034	64559	31659
	Price	$940	$1,303	$1,476	*	*	*
MILL CONTROL PACKER	**Logan Part No.**	**A9082**	**A9083**	**A9084**	**A9085**	**A9086**	**A9087**
	Bowen No.	5332-R	15805-R	33011-R	68031-R	64556-R	31656-R
	Price	$1,951	$2,697	$3,133	*	*	*

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** Available upon request.*

Special Notes:

(1) Overshot assembly prices are based on the sum of its component parts. (i.e. Top Sub, Bowl, Guide, and optional Spiral or Basket Component Parts).

(2) Spiral Grapple, Basket Grapple, Packer and Mill Control Packer prices may increase when ordering non-standard catch sizes.

(3) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

(4) If Top Sub, Bowl, or Guide is left oversized, add 20% for the first 114" or portion thereof; add an additional 10% for each additional 114" or portion thereof.

(5) For Basket Grapples with Long Catch Stop add 10% to the Basket Grapple price.

(6) For Basket Grapples with Short Catch Stop add 25% to the Basket Grapple price.

(7) For right-hand wickers add 20% to the Grapple price.

(8) For left-hand application add 20%

Logan Coding

A = FS Full Strength – For all torsional pulling and jarring strain

B = XFS Extra Full Strength – For extreme abuse

C = SFS Semi Full Strength – Maximum strength for special hole conditions

D = SH Slim Hole – For heavy pulling strains only

E = XSH Extra Slim Hole – For pick up jobs only

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Size and type of fish to be caught

(4) O.D., if other than standard

Recommended Spare Parts:

(1) Spiral: 2 Grapples, 1 Control

(2) Basket: 2 Grapples, 1 Control

LOGAN SERIES 150 OVERSHOT EXTENSION SUBS

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Logan Series 150 Overshot Extension Subs

		LENGTHS						
EXTENSION SUB OD (INCHES)		**24" Long**	**30" Long**	**36" Long**	**42" Long**	**48" Long**	**54" Long**	**60" Long**
2 to 2-3/8	Price	$1,383	$1,603	$1,804	$2,034	$2,242	$2,407	$2,618
2-1/2 to 2-7/8	Price	$1,538	$1,735	$1,958	$2,227	$2,400	$2,618	$2,867
3 to 3-3/8	Price	$1,613	$1,870	$2,103	$2,352	$2,614	$2,867	$3,109
3-1/2 to 3-7/8	Price	$1,707	$1,979	$2,242	$2,503	$2,754	$3,026	$3,267
4 to 4-3/8	Price	$1,838	$2,118	$2,369	$2,684	$2,967	$3,232	$3,532
4-1/2 to 4-7/8	Price	$1,943	$2,278	$2,542	$2,862	$3,181	$3,498	$3,796
5 to 5-3/8	Price	$2,052	$2,349	$2,651	$3,320	$3,267	$3,594	$3,885
5-1/2 to 5-7/8	Price	$2,349	$2,739	$3,109	$3,461	$3,796	$4,186	$4,589
6 to 6-3/5	Price	$2,615	$3,039	$3,461	$3,848	$4,266	$4,678	$5,065
6-1/2 to 6-7/8	Price	$2,939	$3,313	$3,806	$4,249	$4,637	$5,060	$5,455
7 to 7-3/8	Price	$3,267	$3,806	$4,259	$4,708	$5,137	$5,575	$6,142
7-1/2 to 7-7/8	Price	$3,662	$4,159	$4,607	$5,065	$5,527	$6,123	$6,515
8 to 8-3/8	Price	$4,186	$4,678	$5,258	$5,756	$6,355	$6,710	$7,275
8-1/2 to 8-7/8	Price	$4,602	$5,060	$5,562	$6,127	$6,621	$7,098	$7,803
9 to 9-3/8	Price	$4,936	$5,430	$5,983	$6,583	$7,080	$7,664	$8,123
9-1/2 to 9-7/8	Price	$5,542	$6,127	$6,737	$7,346	$7,891	$8,509	$9,109
10 to 10-3/8	Price	$7,326	$7,962	$8,649	$9,358	$10,082	$10,681	$11,494
10-1/2 to 10-7/8	Price	$7,996	$8,862	$9,551	$10,391	$11,105	$11,848	$12,587
11 to 11-3/8	Price	$8,862	$9,621	$10,451	$11,262	$12,110	$12,906	$13,753
11-1/2 to 11-7/8	Price	$9,551	$10,451	$11,280	$12,320	$13,116	$14,191	$14,972
12 to 12-3/8	Price	$10,262	$11,255	$12,259	$13,182	$14,226	$15,180	$16,226
12-1/2 to 12-7/8	Price	$11,230	$12,261	$13,327	$14,332	$15,427	$16,546	$17,599

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Prices for special lengths are available upon request.

(2) Add 20% for Extension Subs with Stops.

When ordering, please specify:

(1) O.D. and length

(2) Top or bottom extension

(3) For Upper Extension, advise part number for Top Assembly or Assembly

(4) For Lower Extension, advise part number for Guide or Assembly

LOGAN SERIES 150 OVERSHOT OVERSIZED GUIDES

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Logan Series 150 Overshot Oversized Guides

GUIDE OD (INCHES)				GUIDE OD (INCHES)			
	to 4-3/8	Price	$1,076	13	to 13-3/8	Price	$6,555
4-1/2	to 4-7/8	Price	$1,393	13-1/2	to 13-7/8	Price	$6,717
5	to 5-3/8	Price	$1,477	14	to 14-3/8	Price	$7,180
5-1/2	to 5-7/8	Price	$1,721	14-1/2	to 14-7/8	Price	$7,644
6	to 6-3/8	Price	$1,951	15	to 15-3/8	Price	$7,683
6-1/2	to 6-7/8	Price	$2,075	15-1/2	to 15-7/8	Price	$8,627
7	to 7-3/8	Price	$2,103	16	to 16-3/8	Price	$10,241
7-1/2	to 7-7/8	Price	$2,334	16-1/2	to 16-7/8	Price	$10,572
8	to 8-3/8	Price	$2,455	17	to 17-3/8	Price	$11,153
8-1/2	to 8-7/8	Price	$2,725	17-1/2	to 17-7/8	Price	$12,110
9	to 9-3/8	Price	$2,969	18	to 18-3/8	Price	$13,029
9-1/2	to 9-7/8	Price	$3,776	18-1/2	to 18-7/8	Price	$13,767
10	to 10-3/8	Price	$4,081	19	to 19-3/8	Price	$14,828
10-1/2	to 10-7/8	Price	$6,138	19-1/2	to 19-7/8	Price	$15,745
11	to 11-3/8	Price	$6,399	20	to 20-3/8	Price	$20,356
11-1/2	to 11-7/8	Price	$6,419	20-1/2	to 20-7/8	Price	$20,731
12	to 12-3/8	Price	$6,466	21	to 21-7/8	Price	$21,484
12-1/2	to 12-7/8	Price	$6,520	22	to 24	Price	$28,831

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Part number of Overshot Assembly, Standard Guide, or Bowl

(2) O.D. of Guide

LOGAN SERIES 150 OVERSHOT WALLHOOK GUIDES

Innovex reserves the right to change or discontinue designs and/or prices without notice.

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Logan Series 150 Overshot Wallhook Guides

OD (INCHES)		30" Long	36" Long	42" Long	48" Long
5 to 5-3/8	Price	$3,219	$3,726	$4,249	*
5-1/2 to 5-7/8	Price	$3,548	$4,150	$4,678	$5,258
6 to 6-3/8	Price	$3,945	$4,607	$5,149	$5,653
6-1/2 to 6-7/8	Price	$4,284	$4,962	$5,717	*
7 to 7-3/8	Price	$4,626	$5,385	$6,127	$7,681
7-1/2 to 7-7/8	Price	$5,258	$5,983	$6,745	$8,050
8 to 8-3/8	Price	$5,688	$6,568	$7,346	$8,313
8-1/2 to 8-7/8	Price	$6,104	$7,009	$7,944	$8,935
9 to 9-3/8	Price	...	$7,573	$8,545	$9,621
9-1/2 to 9-7/8	Price	...	$8,367	$9,391	$10,467
10 to 10-3/8	Price	...	$9,057	$10,118	$11,494
10-1/2 to 10-7/8	Price	...	$9,358	$10,909	$12,464
11 to 11-3/8	Price	...	$10,486	$12,215	$13,981
11-1/2 to 11-7/8	Price	...	$11,774	$13,683	$15,536
12 to 12-3/8	Price	...	...	$15,253	$17,485
12-1/2 to 12-7/8	Price	...	...	$16,485	$18,782
13 to 13-3/8	Price	...	...	$17,750	$20,279
13-1/2 to 13-7/8	Price	...	...	$19,419	$22,119
14 to 14-3/8	Price	...	...	$20,279	$23,093
14-1/2 to 14-7/8	Price	...	...	$21,235	$24,420
15 to 15-3/8	Price	...	...	$22,776	$25,853
15-1/2 to 15-7/8	Price	...	...	$24,031	$27,181
16 to 16-3/8	Price	...	...	$25,234	$28,595
16-1/2 to 16-7/8	Price	...	...	$26,490	$30,153
17 to 17-3/8	Price	...	...	$27,749	$31,429
17-1/2 to 18	Price	...	...	$28,933	$32,862

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

When ordering, please specify:

(1) Part number of Overshot Assembly, Standard Guide, or Bowl

(2) Length of Wallhook Guide

(3) O.D. if other than standard

LOGAN SERIES 150 OVERSHOT MILL GUIDES

Type A

Type B

Type C

Innovex reserves the right to change or discontinue designs and/or prices without notice.

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Logan Series 150 Overshot Mill Guides

TYPE A — Machine cut carburized teeth to mill burrs off tool joints and drill collars

GUIDE O.D. NOT OVER (inches)	3-1/2	4	4-1/2	5	5-1/2	6	6-1/2
Approximate Length of Guide (inches)	8	8	8	8	8	12	12
Price	$1,354	$1,425	$1,502	$1,590	$1,682	$1,752	$1,855

GUIDE O.D. NOT OVER (inches)	7	7-1/2	8	8-1/2	9	9-1/2	10
Approximate Length of Guide (inches)	12	12	12	16	16	16	16
Price	$1,905	$2,067	$2,327	$2,651	$2,978	$3,334	$3,659

GUIDE O.D. NOT OVER (inches)	10-1/2	11
Approximate Length of Guide (inches)	16	16
Price	$4,069	$4,527

TYPE B — Fluted with end teeth tapered and straight inside teeth to mill over pipe, upset section, or tool joint that the overshot catches

GUIDE O.D. NOT OVER (inches)	4-1/4	5-1/2	6	7	7-1/2	8	8-1/2
Approximate Length of Guide (inches)	8	8	12	12	12	12	16
Price	$2,135	$2,455	$2,679	$2,978	$3,423	$4,018	$4,486

GUIDE O.D. NOT OVER (inches)	9	9-1/2	9-3/4
Approximate Length of Guide (inches)	16	16	16
Price	$4,999	$5,338	$5,606

TYPE C — Tungsten carbide tapered and straight ID to mill over pipe, upset section, or tool joint that the overshot catches

GUIDE O.D. NOT OVER (inches)	3-1/2	4	4-1/2	5	5-1/2	6	6-1/2
Approximate Length of Guide (inches)	8	8	8	8	8	12	12
Price	$2,784	$2,987	$3,166	$3,649	$3,831	$4,224	$4,407

GUIDE O.D. NOT OVER (inches)	7	7-1/2	8	8-1/2	9	9-1/2	10
Approximate Length of Guide (inches)	12	12	12	16	16	16	16
Price	$5,176	$5,914	$6,868	$7,549	$8,184	$9,577	$10,090

GUIDE O.D. NOT OVER (inches)	10-1/2	11	11-3/4
Approximate Length of Guide (inches)	16	16	16
Price	$11,900	$12,744	$13,506

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Mill Guide prices shown are for use on Overshots with the same outside diameter.

(2) An additional fee will apply for Mill Guides with oversized outside diameters.

(3) Prices for Mill Guides not listed here are available upon request.

When ordering, please specify:

(1) Mill Guide O.D. and type

(2) Size of fish to mill over

(3) O.D. if other than standard

(4) Overshot Guide part number

Logan Series 150 Overshot Mill Control Packer Inner Seals

STANDARD – TYPE R

FISH SIZE (inches)		3/4	7/8	1	1-1/8	1-1/4	1-5/16	1.315
	Inner Seal	L13591	L66814	L12470	L12471	L12472	L14187	L12280
	Price	$84	$84	$84	$83	$83	$84	$83

FISH SIZE (inches)		1-1/2	1-5/8–1.660	1-3/4	1-3/4	1-7/8	1.900	2
	Inner Seal	L12281	L11568	L12177	L12177SH	L10803	L218114-1.900	L10804
	Price	$82	$84	$83	$83	$82	$84	$82

FISH SIZE (inches)		2-1/16	2-1/8	2-1/4	2-5/16	2-3/8	2-1/2	2-5/8
	Inner Seal	L218114-66	L10805	L10806	L218114-74	L10807	L10808	L10809
	Price	$84	$82	$82	$84	$104	$82	$82

FISH SIZE (inches)		2.702	2-3/4	2-13/16	2-7/8	2-7/8	2-7/8	2.900
	Inner Seal	L10994	L10810	L218114-90	L10811	L10811-100	L10811SH	L218114-2.900
	Price	$98	$82	$93	$88	$121	$90	$98

FISH SIZE (inches)		3	3-1/16	3-1/8	3-3/16	3.220	3-1/4	3-1/4
	Inner Seal	L10812	L10098	L10813	L218114-102	L218114-3.220	L10814	L10814SH
	Price	$88	$83	$106	$116	$116	$109	$106

FISH SIZE (inches)		3-5/16	3-3/8	3-7/16	3-1/2	3-5/8	3-21/32	3-3/4
	Inner Seal	L218114-106	L10815	L218114-110	L10816	L10817	L218114-130	L10819
	Price	$116	$106	$116	$106	$106	$116	$106

FISH SIZE (inches)		3-3/4	3-13/16	3-7/8	3-15/16	4	4-1/16	4-1/8
	Inner Seal	L10819SH	L218114-122	L10820	L11694	L10821	L218114-130	L10822
	Price	$106	$169	$157	$161	$157	$167	$157

FISH SIZE (inches)		4-1/8	4-1/4	4-1/4	4-3/8	4-1/2	4-5/8	4-5/8
	Inner Seal	L10822SH	L10823	L10823SH	L10824	L10825	L10826	L10826SH
	Price	$161	$157	$161	$157	$157	$157	$160

FISH SIZE (inches)		4-3/4	4-7/8	5	5-1/8	5-1/4	5-3/8	5-1/2
	Inner Seal	L10827	L10828	L10829	L10830	L10831	L10832	L10833
	Price	$157	$167	$167	$167	$167	$167	$167

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: L10811-100 (2-718 catch) inner seal is HNBR material.

When ordering, please specify:

(1) Size of fish

(2) Inner Seal number

Recommended Spare Parts:

(1) 3 Inner Seals

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Logan Series 150 Overshot Mill Control Packer Inner Seals

STANDARD – TYPE R

FISH SIZE (inches)		5-5/8	5-3/4	5-7/8	6	6-1/8	6-1/4	6-3/8
	Inner Seal	L10834	L10835	L10836	L10837	L10838	L10839	L10840
	Price	$1,662	$167	$183	$181	$181	$181	$181

FISH SIZE (inches)		6-1/2	6-5/8	6-3/4	6-7/8	7	7-1/8	7-1/4
	Inner Seal	L10841	L10842	L10843	L10844	L10845	L10846	L10847
	Price	$181	$181	$181	$196	$196	$196	$196

FISH SIZE (inches)		7-3/8	7-1/2	7-5/8	7-3/4	7-7/8	8	8-1/8
	Inner Seal	L10848	L10849	L10850	L10851	L10852	L10853	L10854
	Price	$196	$196	$197	$196	$203	$203	$203

FISH SIZE (inches)		8-1/4	8-3/8	8-1/2	8-5/8	8-3/4	8-7/8	9
	Inner Seal	L10855	L10856	L10857	L10858	L10859	L10860	L10861
	Price	$203	$203	$203	$214	$214	$214	$214

FISH SIZE (inches)		9-1/8	9-1/4	9-3/8	9-1/2	9-5/8	9-3/4	10
	Inner Seal	L10862	L10863	L10864	L12099	L12100	L12101	L12103
	Price	$226	$226	$241	$251	$251	$251	$251

FISH SIZE (inches)		10-1/2	11-1/4	12	12-3/4			
	Inner Seal	L218114-336	L63841	L81071	L81497			
	Price	$399	$441	$685	$752			

PACKOFF PIPE SIZE		1-1/4	1-1/2	2-1/16	2-3/8	2-3/8	2-7/8	2-7/8
PASS UPSET SIZE		1-13/16	1.900	2.330	2-19/32	2-21/32	3-3/32	3-7/32
	Inner Seal	L13366	L13317-999	L13285SH	L11690	L11690	L11691	L11692
	Price	$82	$84	$84	$78	$82	$106	$106

PACKOFF PIPE SIZE		3-1/2	3-1/2	3-1/2	4-1/2	4-1/2		
PASS UPSET SIZE		3-3/4	3-13/16	3-15/16	5	5-1/8		
	Inner Seal	L11693	L11693	L11694	L11695	L11696		
	Price	$161	$161	$161	$166	$166		

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: L10811-100 (2-718 catch) inner seal is HNBR material.

When ordering, please specify:

(1) Size of fish

(2) Inner Seal number

Recommended Spare Parts:

(1) 3 Inner Seals

Logan Series 150 Overshot Mill Control Packer Outer Seals

PACKER	Logan Part No.	A9950	A9000	A9001	A9002	A90025	A9003	A9004
	Bowen No.	9407-M	B-10202-R	9309-R	L-1453-R	1453-R	B-5089-R	B-3395-R
	Outer Seal	568032	568226	568228	568228	568228	568229	568230
	Price	$3	$3	$3	$3	$3	$3	$3

PACKER	Logan Part No.	A9005	A90055	A90056	A90057	A9006	A9007	A9009
	Bowen No.	8550-R	37588-R	B-1839-R	A-1831-R	L-809-RS	B-3594-R	B-5107-R
	Outer Seal	568233	568234	568235	568233	568233	568234	568234
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER	Logan Part No.	A9010	A9011	A9012	A90125	A9013	A90135	A9014
	Bowen No.	809-R	L-7090-R	B-5118-R	1517-R	L-1517-R	21303-R	B-4625-R
	Outer Seal	568234	568235	568235	568236	568236	568236	568237
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER	Logan Part No.	A90145	A9015	A9016	A90165	A9017	A9018	A9019
	Bowen No.	4185-R	L-6515-R	L-7065-R	1253-R	L-168-R	L-6665-R	6665-R
	Outer Seal	568237	568237	568238	568239	568239	568239	568239
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER	Logan Part No.	A9020	A9021	A90215	A90217	A9022	A9023	A90235
	Bowen No.	B-3219-R	B-5538-R	9122-R	L-6163-R	811-R	856-R	60947R
	Outer Seal	568239	568240	568239	568238	568240	568241	568241
	Price	$7	$8	$7	$7	$8	$8	$8

PACKER	Logan Part No.	A9024	A9025	A9026	A9027	A90285	A9029	A9030
	Bowen No.	B-5157-R	A-1508-R	B-4895-R	L-1867-R	B-4672-R	169-R	B-2487-R
	Outer Seal	568242	568243	568242	568243	568244	568244	568246
	Price	$8	$8	$8	$9	$9	$9	$11

PACKER	Logan Part No.	A9031	A9032	A9033	A9034	A9035	A9036	A9037
	Bowen No.	B-2199-1R	1140-R	195-R	B-2199-R	6114-R	B-2362-R	B-6387-R
	Outer Seal	568248	568247	568249	568248	568247	568248	568249
	Price	$708	$708	$708	$708	$708	$708	$708

PACKER	Logan Part No.	A90375	A9038	A9039	A90395	A9040	A90402	A90405
	Bowen No.	1189-R	B-2455-R	L-5950-R	5950-R	M-4505-RS	11826-R	4505-R
	Outer Seal	568250	568249	568250	568250	568252	568251	568252
	Price	$12	$11	$12	$12	$14	$14	$14

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Recommended Spare Parts:

(1) 3 Outer Seals

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Logan Series 150 Overshot Mill Control Packer Outer Seals

PACKER	Logan Part No.	A90407	A9041	A9042	A9043	A9044	A9045	A9046
	Bowen No.	9209-R	L-8618-R	A-756-R	6697-R	L-110-R	223-R	B-5209-R
	Outer Seal	568252	568253	568254	568255	568359	568437	568259
	Price	$16	$17	$17	$17	$19	$19	$19

PACKER	Logan Part No.	A9047	A90618	A9049	A90495	A9050	A9051	A9052
	Bowen No.	L-1642-R	9689-R	1642-R	1680-R	L-1680-R	9005-R	5508-R
	Outer Seal	568259	568258	568259	568438	568438	568259	568260
	Price	$19	$19	$19	$19	$19	$19	$19

PACKER	Logan Part No.	A9053	A9054	A9055	A90555	A9056	A9057	A9058
	Bowen No.	9865-R	L-6635-R	9136-R	1634-R	A-1814-R	B-5225-R	207-R
	Outer Seal	568259	568439	568260	568260	568260	568261	568261
	Price	$19	$19	$19	$19	$19	$19	$19

PACKER	Logan Part No.	A90587	A9059	A90595	A9060	A90605	A9061	A9062
	Bowen No.	L-8985-R	9224-R	L-6310-R	L-111-R	9231-R	B-5357-R	L-1025-R
	Outer Seal	568261	568261	568262	568441	568262	568263	568263
	Price	$19	$19	$19	$20	$19	$20	$20

PACKER	Logan Part No.	A9063	A9064	A9065	A9066	A9067	A90675	A9068
	Bowen No.	9237-R	B-4154-R	B-7104-R	M-98-RS	9243-R	B-5244-R	9855-R
	Outer Seal	568263	568263	568264	568264	568263	568264	568264
	Price	$20	$20	$20	$20	$20	$20	$20

PACKER	Logan Part No.	A9069	A90695	A9070	A9071	A9072	A9073	A9074
	Bowen No.	B-5260-R	98-R	L-98-R	B-5268-R	235-R	9055-R	L-1060-R
	Outer Seal	568265	568265	568265	568266	568369	568267	568268
	Price	$21	$21	$21	$21	$26	$26	$26

PACKER	Logan Part No.	A9075	A9076	A9077	A9078	A9079	A9080	A9081
	Bowen No.	B-5287-R	8956-R	B-5300-R	B-5308-R	B-5324-R	B-12825-R	26260-R
	Outer Seal	568266	568268	568269	568270	568269	568271	568273
	Price	$21	$26	$26	$28	$26	$28	$28

PACKER	Logan Part No.	A9082	A9083	A9084	A9085	A9086	A9087
	Bowen No.	5332-R	15805-R	33011-R	68031-R	64556-R	31656-R
	Outer Seal	568274	568451	568453	568279	568458	568463
	Price	$28	$44	$52	$55	$90	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Recommended Spare Parts:

(1) 3 Inner Seals

Logan Type E Mill Control Packers

PACKER NUMBER	Logan Part No.	A9950E	A9000E	A9001E	A9002E	A90025E	A9003E	A9004E
	Bowen No.	9407-E	B-10202-E	9309-E	L-1453-E	1453-E	B-5089-E	B-3395-E
	Price	$564	$564	$564	$564	$564	$771	$566
	Outer Seal	568032	568226	568228	568228	568228	568229	568230
	Price	$3	$3	$3	$3	$3	$3	$3

PACKER NUMBER	Logan Part No.	A9005E	A90055E	A90056E	A90057E	A9006E	A9007E	A9009E
	Bowen No.	8550-E	37588-E	B-1839-E	A-1831-E	L-809-ES	B-3594-E	B-5107-E
	Price	$564	$625	$625	$566	$621	$625	$625
	Outer Seal	568233	568234	568235	568233	568233	568234	568234
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER NUMBER	Logan Part No.	A9010E	A9011E	A9012E	A90125E	A9013E	A90135E	A9014E
	Bowen No.	809-E	L-7090-E	B-5118-E	1517-E	L-1517-E	21303-E	B-4625-E
	Price	$621	$625	$583	$625	$625	$682	$682
	Outer Seal	568234	568235	568235	568236	568236	568236	568237
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER NUMBER	Logan Part No.	A90145E	A9015E	A9016E	A90165E	A9017E	A9018E	A9019E
	Bowen No.	4185-E	L-6515-E	L-7065-E	1253-E	L-168-E	L-6665-E	6665-E
	Price	$682	$682	$724	$682	$682	$724	$723
	Outer Seal	568237	568237	568238	568239	568239	568239	568239
	Price	$7	$7	$7	$7	$7	$7	$7

PACKER NUMBER	Logan Part No.	A9020E	A9021E	A90215E	A90217E	A9022E	A9023E	A90235E
	Bowen No.	B-3219-E	B-5538-E	9122-E	L-6163-E	811-E	856-E	60947E
	Price	$724	$724	$723	$724	$724	$767	$767
	Outer Seal	568239	568240	568239	568238	568240	568241	568241
	Price	$7	$8	$7	$7	$8	$8	$8

PACKER NUMBER	Logan Part No.	A9024E	A9025E	A9026E	A9027E	A90285E	A9029E	A9030E
	Bowen No.	B-5157-E	A-1508-E	B-4895-E	L-1867-E	B-4672-E	169-E	B-2487-E
	Price	$767	$892	$771	$771	$771	$776	$794
	Outer Seal	568242	568243	568242	568243	568244	568244	568246
	Price	$8	$9	$8	$9	$9	$9	$11

PACKER NUMBER	Logan Part No.	A9031E	A9032E	A9033E	A9034E	A9035E	A9036E	A9037E
	Bowen No.	B-2199-1E	1140-E	195-E	B-2199-E	6114-E	B-2362-E	B-6387-E
	Price	$803	$827	$803	$803	$802	$803	$845
	Outer Seal	568248	568247	568249	568248	568247	568248	568249
	Price	$12	$12	$12	$12	$12	$12	$12

PACKER NUMBER	Logan Part No.	A90375E	A9038E	A9039E	A90395E	A9040E	A90402E	A90405E
	Bowen No.	1189-E	B-2455-E	L-5950-E	5950-E	M-4505-ES	11826-E	4505-E
	Price	$845	$845	$845	$844	$858	$858	$858
	Outer Seal	568250	568249	568250	568250	568252	568251	568252
	Price	$12	$12	$12	$12	$16	$14	$16

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Catch Size

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Logan Type E Mill Control Packers

PACKER NUMBER	Logan Part No.	A90407E	A9041E	A9042E	A9043E	A9044E	A9045E	A9046E
	Bowen No.	9209-E	L-8618-E	A-756-E	6697-E	L-110-E	223-E	B-5209-E
	Price	$884	$884	$884	$912	$1,042	$944	$962
	Outer Seal	568252	568253	568254	568255	568359	568437	568259
	Price	$16	$17	$17	$17	$19	$19	$19

PACKER NUMBER	Logan Part No.	A9047E	A9048E	A9049E	A90495E	A9050E	A9051E	A9052E
	Bowen No.	L-1642-E	9689-E	1642-E	1680-E	L-1680-E	9005-E	5508-E
	Price	$962	$960	$962	$962	$898	$996	$996
	Outer Seal	568259	568258	568259	568438	568438	568259	568260
	Price	$19	$19	$19	$19	$19	$19	$19

PACKER NUMBER	Logan Part No.	A9053E	A9054E	A9055E	A90555E	A9056E	A9057E	A9058E
	Bowen No.	9865-E	L-6635-E	9136-E	1634-E	A-1814-E	B-5225-E	207-E
	Price	$996	$994	$1,007	$1,008	$1,008	$1,018	$1,020
	Outer Seal	568259	568439	568260	568260	568260	568261	568261
	Price	$19	$19	$19	$19	$19	$19	$19

PACKER NUMBER	Logan Part No.	A90587E	A9059E	A90595E	A9060E	A90605E	A9061E	A9062E
	Bowen No.	L-8985-E	9224-E	L-6310-E	L-111-E	9231-E	B-5357-E	L-1025-E
	Price	$1,042	$1,041	$1,042	$1,042	$1,095	$1,095	$1,095
	Outer Seal	568261	568261	568262	568441	568262	568263	568263
	Price	$19	$19	$19	$20	$19	$20	$20

PACKER NUMBER	Logan Part No.	A9063E	A9064E	A9065E	A9066E	A9067E	A90675E	A9068E
	Bowen No.	9237-E	B-4154-E	B-7104-E	M-98-ES	9243-E	B-5244-E	9855-E
	Price	$1,401	$1,401	$1,401	$1,505	$1,505	$1,505	$1,505
	Outer Seal	568263	568263	568264	568264	568263	568264	568264
	Price	$20	$20	$20	$20	$20	$20	$20

PACKER NUMBER	Logan Part No.	A9069E	A90695E	A9070E	A9071E	A9072E	A9073E	A9074E
	Bowen No.	B-5260-E	98-E	L-98-E	B-5268-E	235-E	9055-E	L-1060-E
	Price	$1,505	$1,505	$1,505	$1,742	$1,742	$1,957	$1,957
	Outer Seal	568265	568265	568265	568266	568369	568267	568268
	Price	$21	$21	$21	$22	$26	$26	$26

PACKER NUMBER	Logan Part No.	A9075E	A9076E	A9077E	A9078E	A9079E	A9080E	A9081E
	Bowen No.	B-5287-E	8956-E	B-5300-E	B-5308-E	B-5324-E	B-12825-E	26260-E
	Price	$1,963	$1,963	$2,124	$2,255	$2,255	$2,685	$2,729
	Outer Seal	568266	568268	568269	568270	568269	568271	568273
	Price	$21	$26	$26	$28	$26	$28	$28

PACKER NUMBER	Logan Part No.	A9082E	A9083E	A9084E	A9085E	A9086E	A9087E
	Bowen No.	5332-E	15805-E	33011-E	68031-E	64556-E	31656-E
	Price	$2,972	$4,113	...	...	...	...
	Outer Seal	568274	568451	568453	568457	568458	568463
	Price	$28	$44	$52	$59	$90	*

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When ordering, please specify:

(1) Catch Size

LOGAN SERIES 150 OVERSHOT HIGH PRESSURE PACK-OFF ASSEMBLIES

Packer Assembly
Four (4) Required
(U.S. Patent 6-425-615)

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Logan Series 150 Overshot High Pressure Pack-off Assemblies

FOR USE WITH:								
OVERSHOT ASSEMBLY	**Logan Part No.**	**150-413-A**	**150-413-D**	**150-438-A**	**150-425-D**	**150-4375-A**	**150-450-A**	**150-438-D**
	Bowen No.	9105	C5115	C5112	C5126	9635	C5123	C4619
COMPLETE ASSEMBLY	**Logan Part No.**	**800-249**	**800-252**	**800-254**	**800-256**	**800-257**	**800-258**	**800-259**
	Price	$5,485	$5,532	$5,532	$5,604	$5,604	$5,895	$6,250
BUSHING	**Logan Part No.**	**HPP1010**	**HPP1012**	**HPP1013**	**HPP1014**	**HPP10145**	**HPP1015**	**HPP1016**
	Price	$194	$2,006	$2,006	$2,076	$2,076	$2,076	$1,929
PACKER *	**Logan Part No.**	**HPP4010**	**HPP4012**	**HPP4013**	**HPP4014**	**HPP40145**	**HPP4015**	**HPP4016**
	No. Req'd	4	4	4	4	4	4	4
	Price	$657	$657	$657	$657	$657	$762	$906
GUIDE RING	**Logan Part No.**	**GR1010**	**GR1012**	**GR1013**	**GR1014**	**GR10145**	**GR1015**	**GR1016**
	Price	$451	$386	$386	$386	$386	$386	$386

** Includes O-ring, Inner Seal, and Retainer Ring*

FOR USE WITH:						
OVERSHOT ASSEMBLY	**Logan Part No.**	**150-482-A**	**150-456-D**	**150-469-C**	**150-575-A**	**150-813-D**
	Bowen No.	C4732	C5151	9109	8975	9217
COMPLETE ASSEMBLY	**Logan Part No.**	**800-260**	**800-262**	**800-263**	**800-284**	**800-316**
	Price	$5,895	$6,136	$6,121	$6,674	$9,378
BUSHING	**Logan Part No.**	**HPP1017**	**HPP1018**	**HPP1019**	**HPP1035**	**HPP1059**
	Price	$2,078	$2,078	$2,075	$2,903	$4,586
PACKER *	**Logan Part No.**	**HPP4017**	**HPP4018**	**HPP4019**	**HPP4035**	**HPP4059**
	No. Req'd	4	4	4	4	4
	Price	$906	$906	$906	$906	$1,199
GUIDE RING	**Logan Part No.**	**GR1017**	**GR1018**	**GR1019**	**GR1035**	**GR1059**
	Price	$386	$386	$386	$421	$421

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Includes O-Ring, Inner Seal, and Retainer Ring*

Special Notes:

(1) Above High Pressure Pack-off Assemblies are used between the Top Sub and Bowl.

(2) High Pressure Pack-off Assemblies for use between the Bowl and Guide are available upon request.

(3) High Pressure Pack-off Assemblies for Overshots not listed are available upon request.

When ordering, please specify:

(1) Overshot Assembly to be used with

(2) O.D. of tubing or pipe size to pack-off

Logan Hollow Mill Extensions & Hollow Mill Inserts

Overshot	OD Overshot Assy. Part	No Hollow Mill Extension	Hollow Mill Insert
3-7/8	150-388-D	AN30056	AP30056
4-1/8	150-413-A	AN3010	AP3010
4-11/16	150-469-C	AN3019	AP3019
4-1/16	150-468-C	AN30215	AP30215
5-9/16	150-556-A	AN3029	AP3029
5-5/8	150-563-D	AN3034	AP3034
5-3/4	150-575-A	AN3035	AP3035
6-3/8	150-638-D	AN30405	AP30405
7-5/8	150-738-D	AN3048	AP3048
8-1/8	150-813-A	AN3054	AP3054
10-1/8	150-1013-A	AN3076	AP3076
11-3/4	150-1175-A	AN3082	AP3082

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Special Notes:

(1) Additional Hollow Mill Extensions and Hollow Mill Inserts are available upon request.

When ordering, please specify:

(1) Your Overshot Assembly part number

(2) Hollow Mill Extension Length 18", 24" or 36" (Standard 18")

(3) Hollow Mill Insert Tubing size

(4) If you require the Hollow Mill Blank or dressed with Tungsten Carbide

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LOGAN SERIES 160 SIDE DOOR OVERSHOTS

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Logan Series 160 Side Door Overshots

MAXIMUM CATCH SIZE (Spiral)		2-3/8	2-3/8	3-1/8	3-21/32			
MAXIMUM CATCH SIZE (Basket)		1-7/8	1-7/8	2-5/8	3-1/8			
OVERSHOT O.D.		4-1/2	4-1/2	4-11/16	5-1/2			
COMPLETE ASSEMBLY	**Logan Part No.**	**160-450**	**160-451**	**160-469**	**160-550**			
	Bowen No.	6400	9985	9965	9920			
	Price	*	*	*	*			

COMPONENT PARTS

BOWL	**Logan Part No.**	**AK1003**	**AK1004**	**AK1005**	**AK1006**			
	Bowen No.	6401	9986	9966	9921			
	Price	*	*	*	$23,245			
ROLLER	**Logan Part No.**	**AK2003**	**AK2003**	**AK2004**	**AK2005**			
	Bowen No.	6456	6456	9967	9922			
	Price	*	*	*	$214			
ROLLER PIN	**Logan Part No.**	**AK3003**	**AK3003**	**AK3004**	**AK3005**			
	Bowen No.	6457	6457	9968	9923			
	Price	*	*	*	$133			
ROLLER PIN SCREW	**Logan Part No.**	**AK4000**	**AK4000**	**AK4000**	**AK4001**			
	Bowen No.	9568	9568	9568	9924			
	Price	*	*	*	$2			
SHEAR RING	**Logan Part No.**	**AK5003**	**AK5003**	**AK5004**	**AK5005**			
	Bowen No.	6422	6422	9970	9925			
	Price	*	*	*	$399			
SHEAR RING SCREW	**Logan Part No.**	**AK6003**	**AK6003**	**AK6004**	**AK6004**			
(2 req'd)	Bowen No.	25220	25220	9906	9906			
	Price	*	*	$35	$35			
SPIRAL GRAPPLE	**Logan Part No.**	**A50025**	**A50025**	**A5010**	**A5019**			
	Bowen No.	1448	1448	1741	6662			
	Standard Price	$564	$564	$589	$671			
	Nitralloy Price	$1,015	$1,015	$980	$1,210			
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**AK8002**	**AK8002**	**AK8003**	**AK8004**			
	Bowen No.	6403	6403	9973	9927			
	Price	*	*	*	$650			
CONTROL SCREW	**Logan Part No.**	**AK9003**	**AK9003**	**AK9004**	**AK9004**			
(2 req'd)	Bowen No.	6459	6459	9928	9928			
	Price	*	*	$2	$2			
TOP SUB *(see Note 1)*	**Logan Part No.**	**AK10000**	**...**	**...**	**...**			
	Bowen No.	7243, 7244	...	...	...			
	Price (Each)	...	...	...	...			
SIDE DOOR SCREW	**Logan Part No.**	**AK4000**	**AK9001**	**Q3012**	**Q3012**			
	Bowen No.	9568	9933	9558	9558			
	No. Req'd	4	4	4	4			
	Price	*	*	$2	$2			
BASKET GRAPPLE	**Logan Part No.**	**AK12002**	**AK12002**	**AK12003**	**AK12004**			
	Bowen No.	6402	6402	9972	9934			
	Standard Price	*	*	*	$1,067			
	Nitralloy Price	*	*	*	$1,930			
BASKET GRAPPLE CONTROL	**Logan Part No.**	**AK13002**	**AK13002**	**AK13003**	**AK13004**			
	Bowen No.	6403	6403	9973	9927			
	Price	*	*	*	$715			

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** Available upon request.*

Special Notes:

(1) Assembly number 160-450 (6400) has a straight thread top connection in bowl and requires special Top Subs. Price includes Top Subs.

(2) Overshot assembly price can be determined by adding each component item associated with the complete assembly (i.e. Bowl, Roller, Roller Pin, Roller Pin Screw, Shear Ring, Shear Ring Screw, Side Door Screw, and optional Spiral or Basket Component Parts).

(3) Spiral Grapple and Basket Grapple prices may increase when ordering non-standard catch sizes.

(4) A minimum quantity of two Spiral Grapples is required when ordering non-standard catch sizes.

Recommended Spare Parts:

(1) 2 Grapples for each size, Basket and Spiral

(2) 2 Grapple Controls for each size

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LOGAN LEAD IMPRESSION BLOCKS

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Logan Lead Impression Blocks

SIZE (O.D. OF LEAD)		1	1-5/8	1-3/4	2-1/8	2-1/4	2-3/4	3
COMPLETE ASSEMBLY	**Logan Part No.**	**100-100**	**100-163**	**100-175**	**100-213**	**100-225**	**100-275**	**100-300**
WATERCOURSE SIZE		None	None	None	None	None	None	1/2
	Price	$1,030	$1,136	$1,180	$1,209	$1,295	$1,432	$1,566

SIZE (O.D. OF LEAD)		3-1/4	3-1/2	3-3/4	4	4-1/4	4-1/2	4-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**100-325**	**100-350**	**100-375**	**100-400**	**100-425**	**100-450**	**100-475**
WATERCOURSE SIZE		1/2	1/2	1/2	1/2	1/2	3/4	3/4
	Price	$1,672	$1,772	$1,842	$1,906	$1,991	$2,075	$2,099

SIZE (O.D. OF LEAD)		5	5-1/4	5-1/2	5-3/4	6	6-1/4	6-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**100-500**	**100-525**	**100-550**	**100-575**	**100-600**	**100-625**	**100-650**
WATERCOURSE SIZE		3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Price	$2,188	$2,245	$2,297	$2,415	$2,542	$2,667	$2,801

SIZE (O.D. OF LEAD)		6-3/4	7	7-1/4	7-1/2	7-3/4	8	8-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**100-675**	**100-700**	**100-725**	**100-750**	**100-775**	**100-800**	**100-825**
WATERCOURSE SIZE		3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Price	$2,936	$3,294	$3,419	$3,516	$3,604	$3,677	$3,990

SIZE (O.D. OF LEAD)		8-1/2	8-3/4	9	9-1/4	9-1/2	9-3/4	10
COMPLETE ASSEMBLY	**Logan Part No.**	**100-850**	**100-875**	**100-900**	**100-925**	**100-950**	**100-975**	**100-1000**
WATERCOURSE SIZE		3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Price	$4,304	$4,618	$5,058	$5,239	$5,523	$5,851	$6,136

SIZE (O.D. OF LEAD)		10-1/4	10-1/2	10-3/4	11	11-1/4	11-1/2	11-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**100-1025**	**100-1050**	**100-1075**	**100-1100**	**100-1125**	**100-1150**	**100-1175**
WATERCOURSE SIZE		3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Price	$6,406	$6,642	$6,896	$7,148	$7,369	$7,595	$7,816

SIZE (O.D. OF LEAD)		12	12-1/4					
COMPLETE ASSEMBLY	**Logan Part No.**	**100-1200**	**100-1225**					
WATERCOURSE SIZE		3/4	3/4					
	Price	$8,057	$8,414					

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Additional sizes available upon request.

(2) All Logan Impression Blocks are furnished with metal lead protectors.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) Lead O.D.

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LOGAN ROTARY DIE COLLARS

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Logan Rotary Die Collars

COMPLETE ASSEMBLY	Logan Part No.	102-166	102-181	102-191	102-231	102-344	102-368	102-419
NOMINAL SIZE		3/4 Pipe	1 Pipe	1 Upset	1-1/4 Pipe	2-3/8 Pipe	2-3/8 Upset	2-3/8 API Reg
TO CATCH		1.050	1.315	1.469	1.660	2-3/8	2-21/32	3-1/8
TOTAL LENGTH		8	17	15	12	24	24	24
O.D.		1.660	1-13/16	1-29/32	2-5/16	3-7/16	3-11/16	4-3/16
DIAMETER OF LARGEST WICKER		1-3/16	1-1/2	1-5/8	1-7/8	2-9/16	2-13/16	3-5/16
DIAMETER OF SMALLEST WICKER		7/8	1	1-1/8	1-3/8	1-3/4	2	2-1/2
TYPE A WITH PLAIN OR LIPPED BOTTOM	Price	$1,766	$1,861	$2,511	$2,306	$2,621	$2,621	$2,814
TYPE A WITH CARBURIZED MILL TEETH	Price	$2,103	$2,199	$2,693	$2,642	$2,962	$3,012	$3,248
TYPE B LESS GUIDE	Price	...	...	...	...	$2,962	$3,012	$3,248
GUIDE (STANDARD O.D.) WITH PLAIN OR LIPPED BOTTOM	Price	...	...	...	...	$583	$580	$602
WITH CARBURIZED MILL TEETH	Price	...	...	...	...	$1,591	$1,674	$1,768
ADDITIONAL LENGTH PRICE PER INCH	Price	$134	$227	$214	$227	$227	$227	$227

COMPLETE ASSEMBLY	Logan Part No.	102-444	102-400	102-438	102-488	102-525	102-475	102-506
NOMINAL SIZE		2-3/8 API IF	2-7/8 Pipe	2-7/8 Upset	2-7/8 API Reg	2-7/8 API IF	3-1/2 Pipe	3-1/2 Upset
TO CATCH		3-3/8	2-7/8	3-7/32	3-3/4	4-1/8	3-1/2	3-13/16
TOTAL LENGTH		24	24	24	24	24	32	32
O.D.		4-7/16	4	4-3/8	4-7/8	5-1/4	4-3/4	5-1/16
DIAMETER OF LARGEST WICKER		3-9/16	3-1/16	3-7/16	3-15/16	4-5/16	3-3/4	4-1/16
DIAMETER OF SMALLEST WICKER		2-3/4	2-1/4	2-5/8	3-1/8	3-1/2	2-5/8	2-15/16
TYPE A WITH PLAIN OR LIPPED BOTTOM	Price	$2,909	$2,602	$2,909	$3,386	$2 ,381	$3,972	$4,377
TYPE A WITH CARBURIZED MILL TEETH	Price	$3,283	$3,171	$3,283	$3,631	$4,285	$4,711	$5,176
TYPE B LESS GUIDE	Price	$3,283	$3,171	$3,283	$3,872	$4,158	$4,412	$5,048
GUIDE (STANDARD O.D.) WITH PLAIN OR LIPPED BOTTOM	Price	$602	$583	$602	$845	$899	$705	$899
WITH CARBURIZED MILL TEETH	Price	$1,768	$1,674	$1,768	$2,056	$2,181	$2,056	$2,181
ADDITIONAL LENGTH PRICE PER INCH	Price	$227	$227	$227	$227	$227	$249	$249

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Special Notes:

(1) Prices shown represent specific details listed per assembly. An additional charge will apply for any modification to the I.D, O.D., length, and1or catch range.

(2) For left-hand application add 20%.

When ordering, please specify:

(1) Name and number of part

(2) Connection

(3) Type and size of guide if required

(4) O.D. if other than standard

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Logan Rotary Die Collars

COMPLETE ASSEMBLY	Logan Part No.	102-550	102-588	102-600	102-588	102-638	102-688	102-713
NOMINAL SIZE		3-1/2 API Reg	3-1/2 API FH	3-1/2 API IF	4-1/2 Pipe	4-1/2 Upset	4-1/2 API Reg	4-1/2 API FH
TO CATCH		4-1/4	4-5/8	4-3/4	4-1/2	5	5-1/2	5-3/4
TOTAL LENGTH		32	32	32	36	36	36	36
O.D.		5-1/2	5-7/8	6	5-7/8	6-3/8	6-7/8	7-1/8
DIAMETER OF LARGEST WICKER		4-1/2	4-7/8	5	4-3/4	5-1/4	5-3/4	6
DIAMETER OF SMALLEST WICKER		3-3/8	3-3/4	3-7/8	3-3/8	3-7/8	4-3/8	4-5/8
TYPE A WITH PLAIN OR LIPPED BOTTOM	Price	$4,701	$5,131	$5,245	$5,720	$6,242	$6,988	$6,563
TYPE A WITH CARBURIZED MILL TEETH	Price	$5,447	$5,940	$6,021	$6,514	$6,989	$7,835	$7,376
TYPE B LESS GUIDE	Price	$5,210	$5,734	$5,923	$6,372	$6,834	$7,598	$7,835
GUIDE (STANDARD O.D.) WITH PLAIN OR LIPPED BOTTOM	Price	$960	$1,051	$1,051	$1,051	$1,082	$1,209	$1,273
WITH CARBURIZED MILL TEETH	Price							
ADDITIONAL LENGTH PRICE PER INCH	Price	$275	$275	$275	$275	$275	$275	$275

COMPLETE ASSEMBLY	Logan Part No.	102-750	102-706	102-756	102-825	102-850	102-888	102-813
NOMINAL SIZE		4-1/2 API IF	5-9/16 Pipe	5-9/16 Upset	5-9/16 API Reg	5-9/16 API FH	5-9/16 API IF	6-5/8 Pipe
TO CATCH		6-1/8	5-9/16	6-1/16	6-3/4	7	7-3/8	6-5/8
TOTAL LENGTH		36	42	42	42	42	42	42
O.D.		7-1/2	7-1/16	7-9/16	8-1/4	8-1/2	8-7/8	8-1/8
DIAMETER OF LARGEST WICKER		6-3/8	5-13/16	6-5/16	7	7-1/4	7-5/8	6-7/8
DIAMETER OF SMALLEST WICKER		5	3-15/16	4-7/16	5-1/8	5-3/8	5-3/4	5
TYPE A WITH PLAIN OR LIPPED BOTTOM	Price	$7,498	$8,724	$9,390	$10,377	$10,851	$11,763	$10,308
TYPE A WITH CARBURIZED MILL TEETH	Price	$8,364	$9,826	$10,400	$11,578	$11,895	$13,093	$11,578
TYPE B LESS GUIDE	Price	$8,189	$9,443	$9,906	$10,990	$115,774	$12,535	$10,990
GUIDE (STANDARD O.D.) WITH PLAIN OR LIPPED BOTTOM	Price	$1,372	$1,273	$1,431	$1,425	$1,502	$1,626	$1,425
WITH CARBURIZED MILL TEETH	Price							
ADDITIONAL LENGTH PRICE PER INCH	Price	$275	$275	$346	$447	$447	$447	$447

COMPLETE ASSEMBLY	Logan Part No.	102-863	102-925	102-950	102-1000	102-1075	102-1363	
NOMINAL SIZE		6-5/8 Upset	6-5/8 API Reg	6-5/8 API FH	6-5/8 API IF	6-5/8 API Reg	6-5/8 API Reg	
TO CATCH		7-1/8	7-3/4	8	8-1/2	8-5/8	10-3/4	
TOTAL LENGTH		42	42	42	42	42	46	
O.D.		8-5/8	9-1/4	9-1/2	10	10-3/4	13-5/8	
DIAMETER OF LARGEST WICKER		7-3/8	8	8-1/4	8-3/4	9-3/4	12	
DIAMETER OF SMALLEST WICKER		5-1/2	6-1/8	6-3/8	6-7/8	7-7/8	10	
TYPE A WITH PLAIN OR LIPPED BOTTOM	Price	$11,478	$12,439	$12,428	$14,664	$16,054	$29,328	
TYPE A WITH CARBURIZED MILL TEETH	Price	$12,884	$13,523	$16,676	$16,260	$17,614	$31,516	
TYPE B LESS GUIDE	Price	$12,279	$13,267	$13,872	$15,671	$17,103	$31,104	
GUIDE (STANDARD O.D.) WITH PLAIN OR LIPPED BOTTOM	Price	$1,735	$1,882	$1,993	$2,184	$3,012	$4,842	
WITH CARBURIZED MILL TEETH	Price							
ADDITIONAL LENGTH PRICE PER INCH	Price	$447	$495	$491	$591	$644	$944	

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Prices shown represent specific details listed per assembly. An additional charge will apply for any modification to the I.D, O.D., length, and1or catch range.

(2) For left-hand application add 20%.

When ordering, please specify:

(1) Name and number of part

(2) Connection

(3) Type and size of guide if required

(4) O.D. if other than standard

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Logan/HE "PRS" Packer Milling and Retrieving Tool

CASING SIZES (INCHES)	2-7/8"-3-1/2"	4"-5"	5-1/2"-7"	7"-9-5/8"	9-5/8"-13-3/8"
STANDARD PIN CONN.	1-13/16 WFJ (NS) Box	2-3/8 API Reg. Pin API Reg. Pin	2-7/8 API Reg. Pin	3-1/2 API Reg. Pin	4-1/2 API Reg. Pin
COMPLETE ASSEMBLY SHORT SHOE DRESSED:					
PART NUMBER	15012	15014	15016	15018	15020
Req'd	1	1	1	1	1
COMPLETE ASSEMBLY LONG SHOE DRESSED:					
PART NUMBER	*	15015	15017	15019	15021
Req'd	*	1	1	1	1
Price	*	*	*	*	*

Logan/HE Packer Retriever Spear

NOMINAL SIZE (INCHES)	1-1/4"	1-13/16"	2"	2-1/2"	3"
Tool O.D.	**1-3/16"**	**1-3/4"**	**2-3/8"**	**2-3/4"**	**3-1/2"**
Tool I.D.	1/4"	3/8"	3/8"	5/8"	3/4"
Standard Pin Conn.	Optional	1-13/16 WFJ-OS	1-1/4" API Reg.	2-3/8 WFJ	2-3/8" API Reg.
COMPLETE ASSEMBLY:					
Part Number	14079	14080	14081	14082	14083
Price	*	*	*	*	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Price and Delivery Upon Request

(2) When ordering larger sizes, please specify Slip catch size and make, model and I.D. of Packer to be caught.

(3) Complete assembly includes smallest catch slip available. When ordering larger sizes, please specify slip catrch size diesired and make, model and I.D. of Packer to be caught. Box and Pin connection must be specified on Assembly 14079. Non-Standard threads on other assemblies must be specified. Recommended spare parts: Ons Slip for each size.

LOGAN FULL CIRCLE RELEASING SPEARS

Optional Nuts

Bullnose Type Nut | Sidehill Type Nut | Sub Type Nut

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Logan Full Circle Releasing Spears

NOMINAL SIZE		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
RECOMMENDED CATCHING RANGE *		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
OD SMALLEST SLIPS RETRACTED		1-29/32	2-5/16	2-13/16	3-5/16			
EXPANSION SLIPS OVER SAFETY RING		11/32	3/8	13/32	15/32			
SLIP ENGAGEMENT AREA (SQ IN)		59	87	115	136			
COMPLETE ASSEMBLY	**Logan Part No.**	**204-001**	**204-003 ††**	**204-005**	**204-007**			
	Bowen No.	6693	6684	6701	6710			
	Price	$12,425	$14,936	$17,220	*			
TOP SUB	**Logan Part No.**	**AV1001**	**AV1003**	**AV1005**	**AV1007**			
(Includes Protector)	Bowen No.	5858	5774	6702	5839			
	Price	$1,879	$2,046	$2,212	*			
PROTECTOR	**Logan Part No.**	**AV2001**	**AV2003**	**AV2005**	**AV2007**			
	Bowen No.	5858-1	5774-1	6702-1	5839-1			
	Price	$294	$308	$352	*			
BODY	**Logan Part No.**	**AV3001**	**AV3003**	**AV3005**	**AV3007**			
	Bowen No.	6694	6685	6703	6711			
	Price	$3,116	$4,290	$4,971	*			
SLIP	**Logan Part No.**	**AV4001**	**AV4003**	**AV4005**	**AV4007**			
(Includes Fingers)	Bowen No.	6695	6686	6704	6712			
	No. Req'd	3	3	3	3			
	Price Each	$1,189	$1,364	$1,701	*			
UNITIZER	**Logan Part No.**	**AV5001**	**AV5003**	**AV5005**	**...**			
	Bowen No.	6696	6687	A6705	...			
	Price	$1,125	$1,298	$1,463	...			
FRICTION RETAINER	**Logan Part No.**	**AV6001**	**AV6003**	**AV6005**	**...**			
(Includes Springs)	Bowen No.	6697F	6688F	A6706F	...			
	Price	$821	$924	$970	...			
FRICTION RETAINER SCREWS	**Logan Part No.**	**AV7000**	**AV7000**	**R4000**	**...**			
	Bowen No.	6423	6423	23508	...			
	No. Req'd	4	4	4	...			
	Price	$24	$24	*	...			
FRICTION RETAINER SPRINGS	**Logan Part No.**	**AV8000**	**AV8001**	**AV8002**	**...**			
	Bowen No.	8951	8945	A8952	...			
	No. Req'd	8	10	12	...			
	Price	$84	$22	$58	...			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** Weight of Drill Pipe and1or Tubing to be specified by client.*

†† 204-003 dressed for 2-7/8" 8.7 lb tubing will not go in completely. The Top Sub is 3-5/8" and will not fit into tubing.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of top connection

(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size

(2) 1 Safety Ring for each size

(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger

(4) 1 Stop

Logan Full Circle Releasing Spears

NOMINAL SIZE		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
RECOMMENDED CATCHING RANGE *		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
OD SMALLEST SLIPS RETRACTED		1-29/32	2-5/16	2-13/16	3-5/16			
EXPANSION SLIPS OVER SAFETY RING		11/32	3/8	13/32	15/32			
SLIP ENGAGEMENT AREA (SQ IN)		59	87	115	136			
COMPLETE ASSEMBLY	**Logan Part No.**	**204-001**	**204-003**	**204-005**	**204-007**			
	Bowen No.	6693	6684	6701	6710			
FRICTION BLOCK ASSY.	**Logan Part No.**	**...**	**...**	**...**	**AV90001**			
Consists of:	Bowen No.	...	...	...	14901			
	Price	...	...	...	*			
UNITIZER	**Logan Part No.**	**...**	**...**	**...**	**AV10001**			
	Bowen No.	...	...	...	14902			
	Price	...	...	...	*			
RETAINER SET	**Logan Part No.**	**...**	**...**	**...**	**AV11001**			
(2 pieces)	Bowen No.	...	...	...	14903			
	Price Per Set	...	...	...	*			
FRICTION BLOCK	**Logan Part No.**	**...**	**...**	**...**	**AV12001**			
	Bowen No.	...	...	...	14904			
	No. Req'd	...	...	...	2			
	Price	...	...	...	*			
RETAINER SCREW	**Logan Part No.**	**...**	**...**	**...**	**AV13001**			
	Bowen No.	...	...	...	23108			
	No. Req'd	...	...	...	4			
	Price	...	...	...	*			
OUTER BLOCK SPRING	**Logan Part No.**	**...**	**...**	**...**	**AV14001**			
	Bowen No.	...	...	...	14919			
	No. Req'd	...	...	...	4			
	Price							
INNER BLOCK SPRING	**Logan Part No.**	**...**	**...**	**...**	**AV15001**			
	Bowen No.	...	...	...	14920			
	No. Req'd	...	...	...	4			
	Price	...	...	...	*			
STOP	**Logan Part No.**	**AV16001**	**AV16003**	**AV16005**	**AV16007**			
	Bowen No.	6961	A7452	7647	7654			
	Price	$665	$739	$739	*			
SAFETY RING	**Logan Part No.**	**AV17001**	**AV17003**	**AV17005**	**AV17007**			
	Bowen No.	6545	6424	6707	6539			
	Price	$174	$225	$227	*			
NUT	**Logan Part No.**	**AV18001**	**AV18003**	**AV18005**	**AV18007**			
	Bowen No.	5864	6345	6708	5729			
	Price	$435	$509	$671	*			
NUT SET SCREW	**Logan Part No.**	**AV19000**	**AV19001**	**AV19002**	**AV19004**			
	Bowen No.	23330	17762	23358	23366			
	No. Req'd	2	2	2	2			
	Price	$2	$2	$3	*			

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** Available upon request.*

*** Weight of Drill Pipe and1or Tubing to be specified by client.*

When ordering, please specify:

(1) Complete assembly or part number
(2) Size and type of top connection
(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size
(2) 1 Safety Ring for each size
(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger
(4) 1 Stop

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Logan Full Circle Releasing Spears

NOMINAL SIZE		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
RECOMMENDED CATCHING RANGE		2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg			
OD SMALLEST SLIPS RETRACTED		1-29/32	2-5/16	2-13/16	3-5/16			
EXPANSION SLIPS OVER SAFETY RING		11/32	3/8	13/32	15/32			
SLIP ENGAGEMENT AREA (SQ IN)		59	87	115	136			
COMPLETE ASSEMBLY	**Logan Part No.**	**204-001**	**204-003**	**204-005**	**204-007**			
	Bowen No.	6693	6684	6701	6710			

OPTIONAL COMPONENTS

UNITIZER	**Logan Part No.**	**...**	**...**	**AV20001**				
	Bowen No.	...	...	B6713				
	Price	...	...	*				
FRICTION RETAINER	**Logan Part No.**	**...**	**...**	**AV21001**				
(Includes Springs)	Bowen No.	...	...	6714F				
	Price	...	...	*				
FRICTION RETAINER SCREWS	**Logan Part No.**	**...**	**...**	**AV22000**				
	Bowen No.	...	...	23508				
	No. Req'd	...	...	4				
	Price Each	...	...	*				
FRICTION RETAINER SPRINGS	**Logan Part No.**	**...**	**...**	**AV23000**				
	Bowen No.	...	...	A8953				
	No. Req'd	...	...	12				
	Price Each	...	...	*				
FRICTION BLOCK	**Logan Part No.**	**...**	**...**	**...**				
	Bowen No.	...	...	...				
	Price Each	...	...	...				

OPTIONAL ACCESSORIES

SAFETY RING PACKOFF	**Logan Part No.**	**AV25001**	**AV25003**	**AV25007**				
	Bowen No.	6174	5779	5730				
	Price	*	*	*				
EXTENSION *(3 feet long)*	**Logan Part No.**	**AV26001**	**AV26003**	**AV26007**				
	Bowen No.	5858-6694	577-16685	5839-6711				
	Price	$1,385	$1,545	*				
MILL TYPE NUT	**Logan Part No.**	**AV18001-A**	**AV18003-A**	**AV18007-A**				
	Bowen No.	5864A	6343A	5729A				
	Price	$752	$861	*				
SUB TYPE NUT	**Logan Part No.**	**AV18001-B**	**AV18005-B**	**AV18007-B**				
	Bowen No.	5864B	6708B	5729B				
	Price	$620	$699	*				
SIDEHILL TYPE NUT	**Logan Part No.**	**AV18001-C**	**AV18005-C**	**AV18007-C**				
	Bowen No.	5864C	6708C	5729C				
	Price	$620	$699	*				

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** Available upon request.*

*** Weight of Drill Pipe and1or Tubing to be specified by client.*

When ordering, please specify:

(1) Complete assembly or part number
(2) Size and type of top connection
(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size
(2) 1 Safety Ring for each size
(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger
(4) 1 Stop

Logan Full Circle Releasing Spears

NOMINAL SIZE		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 Csg	9-5/8 Csg		
RECOMMENDED CATCHING RANGE *		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 & 9 Csg	9-5/8 & 10 Csg		
OD SMALLEST SLIPS RETRACTED		4	4-1/2	6-7/16	7-1/4	8-3/16		
EXPANSION SLIPS OVER SAFETY RING		1/2	9/16	5/8	11/16	3/4		
SLIP ENGAGEMENT AREA (SQ IN)		217	265	430	485	580		
COMPLETE ASSEMBLY	**Logan Part No.**	**204-011**	**204-012**	**204-016**	**204-017**	**204-018**		
	Bowen No.	9337	9342	10608	6318	10473		
	Price	*	*	*	*	*		
TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
(Includes Protector)	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
PROTECTOR	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
BODY	**Logan Part No.**	**AV3011**	**AV3012**	**AV3016**	**AV3017**	**AV3018**		
	Bowen No.	C9338	9343	10609	6319	10474		
	Price	*	*	*	*	*		
SLIP	**Logan Part No.**	**AV4011**	**AV4012**	**AV4016**	**AV4017**	**AV4018**		
(Includes Fingers)	Bowen No.	9339	9344	10610	6320	10475		
	No. Req'd	3	4	4	4	4		
	Price Each	*	*	*	*	*		
UNITIZER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
FRICTION RETAINER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
(Includes Springs)	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
FRICTION RETAINER SCREWS	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	No. Req'd	...	...	...	...	...		
	Price	...	...	...	...	...		
FRICTION RETAINER SPRINGS	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	No. Req'd	...	...	...	...	...		
	Price	...	...	...	...	...		

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** Available upon request.*

*** Weight of Drill Pipe and1or Tubing to be specified by client.*

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of top connection

(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size

(2) 1 Safety Ring for each size

(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger

(4) 1 Stop

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Logan Full Circle Releasing Spears

NOMINAL SIZE		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 Csg	9-5/8 Csg		
RECOMMENDED CATCHING RANGE *		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 & 9 Csg	9-5/8 & 10 Csg		
OD SMALLEST SLIPS RETRACTED		4	4-1/2	6-7/16	7-1/4	8-3/16		
EXPANSION SLIPS OVER SAFETY RING		1/2	9/16	5/8	11/16	3/4		
SLIP ENGAGEMENT AREA (SQ IN)		217	265	430	485	580		
COMPLETE ASSEMBLY	**Logan Part No.**	**204-011**	**204-012**	**204-016**	**204-017**	**204-018**		
	Bowen No.	9337	9342	10608	6318	10473		
FRICTION BLOCK ASSEMBLY	**Logan Part No.**	**AV90005**	**AV90006**	**AV90010**	**AV90011**	**AV90012**		
	Bowen No.	14943	14949	14964	14970	14976		
Consists of:	Price	*	*	*	*	*		
UNITIZER	**Logan Part No.**	**AV10005**	**AV10006**	**AV10010**	**AV10011**	**AV10012**		
	Bowen No.	14944	14962	14965	14971	14977		
	Price	*	*	*	*	*		
RETAINER SET	**Logan Part No.**	**AV11005**	**AV11006**	**AV11010**	**AV11011**	**AV11012**		
(2 pieces)	Bowen No.	14945	14841	14966	14972	14978		
	Price Per Set	*	*	*	*	*		
FRICTION BLOCK	**Logan Part No.**	**AV12005**	**AV12006**	**AV12010**	**AV12011**	**AV12012**		
	Bowen No.	14946	14840	14967	14973	14979		
	No. Req'd	2	4	4	4	4		
	Price	*	*	*	*	*		
RETAINER SCREW	**Logan Part No.**	**AV13001**	**AV13001**	**AV13004**	**AV13004**	**AV13004**		
	Bowen No.	25214	25214	25221	25221	25221		
	No. Req'd	4	4	4	4	4		
	Price	*	*	*	*	*		
OUTER BLOCK SPRING	**Logan Part No.**	**AV14005**	**AV14006**	**AV14009**	**AV14010**	**AV14011**		
	Bowen No.	14947	14842	14968	14974	17694		
	No. Req'd	...	4	8	8	12		
	Price	*	*	*	*	*		
INNER BLOCK SPRING	**Logan Part No.**	**AV15005**	**AV15006**	**AV15008**	**AV15009**	**AV15010**		
	Bowen No.	14948	14837	14969	14975	11816		
	No. Req'd	2	4	8	8	12		
	Price	*	*	*	*	*		

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** Weight of Drill Pipe and1or Tubing to be specified by client.*

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of top connection

(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size

(2) 1 Safety Ring for each size

(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger

(4) 1 Stop

Logan Full Circle Releasing Spears

NOMINAL SIZE		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 Csg	9-5/8 Csg		
RECOMMENDED CATCHING RANGE *		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 & 9 Csg	9-5/8 & 10 Csg		
OD SMALLEST SLIPS RETRACTED		4	4-1/2	6-7/16	7-1/4	8-3/16		
EXPANSION SLIPS OVER SAFETY RING		1/2	9/16	5/8	11/16	3/4		
SLIP ENGAGEMENT AREA (SQ IN)		217	265	430	485	580		
COMPLETE ASSEMBLY	**Logan Part No.**	**204-011**	**204-012**	**204-016**	**204-017**	**204-018**		
	Bowen No.	9337	9342	10608	6318	10473		
STOP	**Logan Part No.**	**AV16011**	**AV16009**	**AV16015**	**AV16016**	**AV16018**		
	Bowen No.	A7580	7454	7626	7494	7531		
	Price	*	*	*	*	*		
SAFETY RING	**Logan Part No.**	**AV17011**	**AV17012**	**AV17016**	**AV17017**	**AV17018**		
	Bowen No.	7581	6485	6524	6528	6531		
	Price	*	*	*	*	*		
NUT	**Logan Part No.**	**AV18011**	**AV18012**	**AV18016**	**AV18017**	**AV18018**		
	Bowen No.	7582	6483	6054	6321	6062		
	Price	*	*	*	*	*		
NUT SET SCREW	**Logan Part No.**	**AV19005**	**AV19006**	**AV19007**	**AV19007**	**AV19007**		
	Bowen No.	23368	23379	23386	23386	23386		
	No. Req'd	2	2	2	2	2		
	Price	*	*	*	*	*		

OPTIONAL COMPONENTS

UNITIZER	**Logan Part No.**	**AV20005**	**AV20006**	**AV20010**	**AV20011**	**AV20012**		
	Bowen No.	B9340	9345	10611	7493	10476		
	Price	*	*	*	*	*		
FRICTION RETAINER	**Logan Part No.**	**AV21005**	**AV21006**	**AV21010**	**AV21011**	**AV21012**		
(Includes Springs)	Bowen No.	9341	9346	10612	7495F	B10477		
	Price	*	*	*	*	*		
FRICTION RETAINER SCREWS	**Logan Part No.**	**AV22001**	**AV22001**	**AV22004**	**AV22004**	**AV22004**		
	Bowen No.	25214	25214	25175	25175	25175		
	No. Req'd	4	4	4	4	4		
	Price Each	*	*	*	*	*		
FRICTION RETAINER SPRINGS	**Logan Part No.**	**AV23002**	**AV23002**	**AV23004**	**AV23005**	**AV23005**		
	Bowen No.	10541	10541	10613	8948	8948		
	No. Req'd	14	16	16	14	16		
	Price Each	*	*	*	*	*		
FRICTION BLOCK	**Logan Part No.**	**...**	**...**	**...**	**AV24000**	**...**		
	Bowen No.	...	...	...	15001	...		
	Price Each	...	...	...	*	...		

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(2) Size and type of top connection

(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size

(2) 1 Safety Ring for each size

(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger

(4) 1 Stop

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Logan Full Circle Releasing Spears

NOMINAL SIZE		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 Csg	9-5/8 Csg		
RECOMMENDED CATCHING RANGE *		5 Csg	5-1/2 Csg	7-5/8 Csg	8-5/8 & 9 Csg	9-5/8 & 10 Csg		
OD SMALLEST SLIPS RETRACTED		4	4-1/2	6-7/16	7-1/4	8-3/16		
EXPANSION SLIPS OVER SAFETY RING		1/2	9/16	5/8	11/16	3/4		
SLIP ENGAGEMENT AREA (SQ IN)		217	265	430	485	580		
COMPLETE ASSEMBLY	**Logan Part No.**	**204-011**	**204-012**	**204-016**	**204-017**	**204-018**		
	Bowen No.	9337	9342	10608	6318	10473		

OPTIONAL ACCESSORIES

SAFETY RING PACKOFF	**Logan Part No.**	**AV25011**	**AV25009**	**AV25014**	**AV25016**	**AV25017**		
	Bowen No.	A7583	6484	6055	6529	6063		
	Price	*	*	*	*	*		
EXTENSION *(3 feet long)*	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
MILL TYPE NUT	**Logan Part No.**	**AV18011-A**	**AV18012-A**	**AV18016-A**	**AV18017-A**	**AV18018-A**		
	Bowen No.	7582A	6483A	6054A	6321A	6062A		
	Price	*	*	*	*	*		
SUB TYPE NUT	**Logan Part No.**	**AV18011-B**	**AV18012-B**	**AV18016-B**	**AV18017-B**	**AV18018-B**		
	Bowen No.	7582B	6483B	6054B	6321B	6062B		
	Price	*	*	*	*	*		
SIDEHILL TYPE NUT	**Logan Part No.**	**AV18011-C**	**AV18012-C**	**AV18016-C**	**AV18017-C**	**AV18018-C**		
	Bowen No.	7582C	6483C	6054C	6321C	6062C		
	Price	*	*	*	*	*		

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(2) Size and type of top connection

(3) Size and type of fish to be caught

Recommended Spare Parts:

(1) 2 sets of Slips for each size

(2) 1 Safety Ring for each size

(3) 1 Unitizer and 2 Friction Retainers on 2-3/8" to 3-1/2" Tubing Spears or 2 Friction Block Assemblies on 4" Tubing Spears and larger

(4) 1 Stop

Logan Full Circle Releasing Spears

NOMINAL SIZE		11-3/4 Csg	13-3/8 Csg					
RECOMMENDED CATCHING RANGE *		11-3/4 to 12 Csg	13 to 13-3/8 Csg					
OD SMALLEST SLIPS RETRACTED		10-9/16	12					
EXPANSION SLIPS OVER SAFETY RING		13/16	13/16					
SLIP ENGAGEMENT AREA (SQ IN)		785	890					
COMPLETE ASSEMBLY	**Logan Part No.**	**204-020**	**204-021**					
	Bowen No.	6073	6081					
	Price	*	*					
TOP SUB	**Logan Part No.**	**...**	**...**					
(Includes Protector)	Bowen No.	...	...					
	Price	...	*					
PROTECTOR	**Logan Part No.**	**...**	**...**					
	Bowen No.	...	...					
	Price	...	*					
BODY	**Logan Part No.**	**AV3020**	**AV3021**					
	Bowen No.	6074	6082					
	Price	*	*					
SLIP	**Logan Part No.**	**AV4020**	**AV4021**					
(Includes Fingers)	Bowen No.	6075	6083					
	No. Req'd	6	6					
	Price Each	*	*					
UNITIZER	**Logan Part No.**	**...**	**...**					
	Bowen No.	...	...					
	Price	...	*					
FRICTION RETAINER	**Logan Part No.**	**...**	**...**					
(Includes Springs)	Bowen No.	...	...					
	Price	...	*					
FRICTION RETAINER SCREWS	**Logan Part No.**	**...**	**...**					
	Bowen No.	...	...					
	No. Req'd	...	...					
	Price	...	*					
FRICTION RETAINER SPRINGS	**Logan Part No.**	**...**	**...**					
	Bowen No.	...	...					
	No. Req'd	...	...					
	Price	...	*					

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(4) 1 Stop

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Logan Full Circle Releasing Spears

NOMINAL SIZE		11-3/4 Csg	13-3/8 Csg					
RECOMMENDED CATCHING RANGE *		11-3/4 to 12 Csg	13 to 13-3/8 Csg					
OD SMALLEST SLIPS RETRACTED		10-9/16	12					
EXPANSION SLIPS OVER SAFETY RING		13/16	13/16					
SLIP ENGAGEMENT AREA (SQ IN)		785	890					
COMPLETE ASSEMBLY	**Logan Part No.**	**204-020**	**204-021**					
	Bowen No.	6073	6081					
FRICTION BLOCK ASSEMBLY	**Logan Part No.**	**AV90014**	**AV90015**					
	Bowen No.	14986	14991					
Consists of:	Price	*	*					
UNITIZER	**Logan Part No.**	**AV10014**	**AV10015**					
	Bowen No.	14987	14992					
	Price	*	*					
RETAINER SET	**Logan Part No.**	**AV11014**	**AV11015**					
(2 pieces)	Bowen No.	14988	14993					
	Price Per Set	*	*					
FRICTION BLOCK	**Logan Part No.**	**AV12014**	**AV12015**					
	Bowen No.	14989	14994					
	No. Req'd.	6	6					
	Price	*	*					
RETAINER SCREW	**Logan Part No.**	**AV13004**	**AV13004**					
	Bowen No.	25221	25221					
	No. Req'd	4	4					
	Price	*	*					
OUTER BLOCK SPRING	**Logan Part No.**	**AV14014**	**AV14015**					
	Bowen No.	14990	14996					
	No. Req'd	18	18					
	Price	*	*					
INNER BLOCK SPRING	**Logan Part No.**	**...**	**...**					
	Bowen No.	...	...					
	No. Req'd	...	...					
	Price	...	...					
STOP	**Logan Part No.**	**AV16019**	**AV16020**					
	Bowen No.	7628	7629					
	Price	*	*					
SAFETY RING	**Logan Part No.**	**AV17020**	**AV17021**					
	Bowen No.	6535	6537					
	Price	*	*					
NUT	**Logan Part No.**	**AV18020**	**AV18021**					
	Bowen No.	6079	6087					
	Price	*	*					
NUT SET SCREW	**Logan Part No.**	**AV19008**	**AV19008**					
	Bowen No.	41056	41056					
	No. Req'd	2	2					
	Price	*	*					

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(2) Size and type of top connection
(3) Size and type of fish to be caught

Recommended Spare Parts:

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(2) 1 Safety Ring for each size
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(4) 1 Stop

Logan Full Circle Releasing Spears

NOMINAL SIZE		11-3/4 Csg	13-3/8 Csg					
RECOMMENDED CATCHING RANGE *		11-3/4 to 12 Csg	13 to 13-3/8 Csg					
OD SMALLEST SLIPS RETRACTED		10-9/16	12					
EXPANSION SLIPS OVER SAFETY RING		13/16	13/16					
SLIP ENGAGEMENT AREA (SQ IN)		785	890					
COMPLETE ASSEMBLY	**Logan Part No.**	**204-020**	**204-021**					
	Bowen No.	6073	6081					

OPTIONAL COMPONENTS

UNITIZER	**Logan Part No.**	**AV20014**	**AV20015**					
	Bowen No.	6078	6086					
	Price	*	*					
FRICTION RETAINER	**Logan Part No.**	**AV21014**	**AV21015**					
(Includes Springs)	Bowen No.	6534	6536F					
	Price	*	*					
FRICTION RETAINER SCREWS	**Logan Part No.**	**AV22004**	**AV22004**					
	Bowen No.	25175	25175					
	No. Req'd	4	4					
	Price Each	*	*					
FRICTION RETAINER SPRINGS	**Logan Part No.**	**AV23012**	**AV23013**					
	Bowen No.	9631	8950					
	No. Req'd	18	16					
	Price Each	*	*					
FRICTION BLOCK	**Logan Part No.**	**AV24001**	**AV24002**					
	Bowen No.	15000	14995					
	Price Each	*	*					

OPTIONAL ACCESSORIES

SAFETY RING PACKOFF	**Logan Part No.**	**AV25019**	**AV25020**					
	Bowen No.	6080	6088					
	Price	*	*					
EXTENSION	**Logan Part No.**	**...**	**...**					
(3 feet long)	Bowen No.	...	...					
	Price	...	...					
MILL TYPE NUT	**Logan Part No.**	**AV18020-A**	**AV18021-A**					
	Bowen No.	6079A	6087A					
	Price	*	*					
SUB TYPE NUT	**Logan Part No.**	**AV18020-B**	**AV18021-B**					
	Bowen No.	6079B	6087B					
	Price	*	*					
SIDEHILL TYPE NUT	**Logan Part No.**	**AV18020-C**	**AV18021-C**					
	Bowen No.	6079C	6087C					
	Price	*	*					

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Notes

Logan Full Circle Releasing Spear Skirts

NOMINAL SIZE OF SPEAR		2-3/8	2-7/8	3-1/2	4	4-1/2	5-1/2	6-5/8
SKIRT SIZE (INCHES)								
4 OD	**Logan Part No.**	**AV27000-128**	**AV27001-128**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	4644	4646	...	...	...	...	...
	Price	*	*	...	...	...	...	...
4-1/2 OD	**Loagn Part No.**	**AV27000-144**	**AV27001-144**	**AV27002-144**	**AV27003-144**	**...**	**...**	**...**
	Bowen No.	4645	4647	4649	19446	...	...	...
	Price	*	*	*	*	...	...	...
5 OD	**Logan Part No.**	**...**	**AV27001-160**	**AV27002-160**	**AV27003-160**	**...**	**...**	**...**
	Bowen No.	...	4648	4650	19447	...	...	...
	Price	...	*	*	*	...	...	...
5-1/2 OD	**Logan Part No.**	**...**	**AV27001-176**	**AV27002-176**	**AV27003-176**	**AV27004-176**	**...**	**...**
	Bowen No.	...	4778	4651	19448	4652	...	...
	Price	...	*	*	*	*	...	...
6 OD	**Logan Part No.**	**...**	**...**	**AV27002-192**	**AV27003-192**	**AV27004-192**	**...**	**...**
	Bowen No.	...	...	19441	19449	19454	...	...
	Price	...	...	*	*	*	...	...
6-5/8 OD	**Logan Part No.**	**...**	**...**	**AV27002-212**	**AV27003-212**	**AV27004-212**	**AV27005-212**	**...**
	Bowen No.	...	...	5495	19450	4653	4655	...
	Price	...	...	*	*	*	*	...
7 OD	**Logan Part No.**	**...**	**...**	**AV27002-224**	**AV27003-224**	**AV27004-224**	**AV27005-224**	**...**
	Bowen No.	...	...	5494	19451	4654	5497	...
	Price	...	...	*	*	*	*	...
7-5/8 OD	**Logan Part No.**	**...**	**...**	**AV27002-244**	**AV27003-244**	**AV27004-244**	**AV27005-244**	**AV27006-244**
	Bowen No.	...	...	4772	19452	4864	4656	4658
	Price	...	...	*	*	*	*	*
8-5/8 OD	**Logan Part No.**	**...**	**...**	**AV27002-276**	**AV27003-276**	**AV27004-276**	**AV27005-276**	**AV27006-276**
	Bowen No.	...	...	4773	19453	5496	4657	4659
	Price	...	...	*	*	*	*	*
9-5/8 OD	**Logan Part No.**	**...**	**...**	**AV27002-308**	**...**	**AV27004-308**	**...**	**AV27006-308**
	Bowen No.	...	...	56829	...	39190	...	4661
	Price	...	...	*	...	*	...	*
10-3/4 OD	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

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Logan Full Circle Releasing Spear Skirts

NOMINAL SIZE OF SPEAR		7-5/8
SKIRT SIZE (INCHES)		
4 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
4-1/2 OD	**Loagn Part No.**	**...**
	Bowen No.	...
	Price	...
5 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
5-1/2 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
6 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
6-5/8 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
7 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
7-5/8 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
8-5/8 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
9-5/8 OD	**Logan Part No.**	**...**
	Bowen No.	...
	Price	...
10-3/4 OD	**Logan Part No.**	**AV27007-344**
	Bowen No.	79749
	Price	*

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Logan Full Circle Releasing Spear Guides

NOMINAL SIZE		4	4-1/2	5	5-1/2	6	6-5/8	7
GUIDE SIZE (INCHES)								
5 to 5-7/8	**Logan Part No.**	**AV28000**	**AV28001**	**AV28002**	**...**	**...**	**...**	**...**
	Bowen No.	4662	4663	4664	...	...	...	...
	Price	*	*	*	...	...	...	...
6 to 6-7/8	**Logan Part No.**	**AV28000**	**AV28001**	**AV28002**	**AV28003**	**...**	**...**	**...**
	Bowen No.	4662	4663	4664	4665	...	...	...
	Price	*	*	*	*	...	...	...
7 to 7-7/8	**Logan Part No.**	**...**	**AV28001**	**AV28002**	**AV28003**	**AV28004**	**...**	**...**
	Bowen No.	...	4663	4664	4665	4685	...	...
	Price	...	*	*	*	*	...	...
8 to 8-7/8	**Logan Part No.**	**...**	**AV28001**	**AV28002**	**AV28003**	**AV28004**	**AV28005**	**AV28006**
	Bowen No.	...	4663	4664	4665	4685	4299	3824
	Price	...	*	*	*	*	*	*
9 to 9-7/8	**Logan Part No.**	**...**	**...**	**...**	**AV28003**	**AV28004**	**AV28005**	**AV28006**
	Bowen No.	...	...	...	4665	4685	4299	3824
	Price	...	...	...	*	*	*	*
10 to 10-7/8	**Logan Part No.**	**...**	**...**	**...**	**AV28003**	**AV28004**	**AV28005**	**AV28006**
	Bowen No.	...	...	...	4665	4685	4299	3824
	Price	...	...	...	*	*	*	*
11 to 11-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**AV28005**	**AV28006**
	Bowen No.	...	...	...	...	...	4299	3824
	Price	...	...	...	...	...	*	*
12 to 12-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**AV28006**
	Bowen No.	...	...	...	...	...	...	3824
	Price	...	...	...	...	...	...	*
13 to 13-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**AV28006**
	Bowen No.	...	...	...	...	...	...	3824
	Price	...	...	...	...	...	...	*

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Logan Full Circle Releasing Spear Guides

NOMINAL SIZE		7-5/8	8-5/8	9	9-5/8	10-3/4	11-3/4
GUIDE SIZE (INCHES)							
5 to 5-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
6 to 6-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
7 to 7-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
8 to 8-7/8	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
9 to 9-7/8	**Logan Part No.**	**AV28007**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	4666	...	...	...	...	...
	Price	*	...	...	...	...	...
10 to 10-7/8	**Logan Part No.**	**AV28007**	**AV28008**	**...**	**...**	**...**	**...**
	Bowen No.	4666	4295	...	...	...	...
	Price	*	*	...	...	...	...
11 to 11-7/8	**Logan Part No.**	**AV28007**	**AV28008**	**AV28009**	**AV28010**	**AV28011**	**AV28012**
	Bowen No.	4666	4295	4667	4668	79750	65526
	Price	*	*	*	*	*	*
12 to 12-7/8	**Logan Part No.**	**AV28007**	**AV28008**	**AV28009**	**AV28010**	**...**	**...**
	Bowen No.	4666	4295	4667	4668	...	...
	Price	*	*	*	*	...	...
13 to 13-7/8	**Logan Part No.**	**AV28007**	**AV28008**	**AV28009**	**AV28010**	**...**	**...**
	Bowen No.	4666	4295	4667	4668	...	...
	Price	*	*	*	*	...	...

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Logan Full Circle Slip Range for Drill Pipe and Tubing

FISH SIZE		2-3/8 DP	2-3/8 Tbg	2-7/8 DP	2-7/8 DP	2-7/8 DP	2-7/8 Tbg
WEIGHT (LBS/FT)		4.8, 4.6	4.7, 4.6, 4.0	10.4	8.35	6.45	6.5, 6.4
SPEAR ASSEMBLY	**Logan Part No.**	**204-000**	**204-001**	**204-002**	**204-002**	**204-002**	**204-003**
	Bowen No.	6175	6693	6246	6246	6246	6684
SLIP SIZE STAMPED		2	2-1/32	2-5/32	2-11/32	2-1/2	2-7/16
	Logan Part No.	**AV4000**	**AV4001**	**AV4002**	**AV4002**	**AV4002**	**AV4003**
	Bowen No.	6178	6695	6249	6249	6249	6686
SAFETY RING SIZE STAMPED		1-7/8	1-29/32	2	2-3/16	2-11/32	2-5/16
	Logan Part No.	**AV17000**	**AV17001**	**AV17002**	**AV17002**	**AV17002**	**AV17003**
	Bowen No.	6547	6545	6543	6543	6543	6424
SAFETY RING PACKOFF SIZE STAMPED		1-7/8	1-29/32	2	2-3/16	2-11/32	2-5/16
	Logan Part No.	**AV25000**	**AV25001**	**AV25002**	**AV25002**	**AV25002**	**AV25003**
	Bowen No.	6181	6174	6252	6252	6252	5779

FISH SIZE		3-1/2 DP	3-1/2 DP	3-1/2 DP	3-1/2 DP	3-1/2 Tbg	3-1/2 Tbg	4 DP
WEIGHT (LBS/FT)		15.5	13.3	11.2	8.5	10.2, 9.3, 9.2	7.7	15.7
SPEAR ASSEMBLY	**Logan Part No.**	**204-004**	**204-004**	**204-004**	**204-004**	**204-005**	**204-005**	**204-006**
	Bowen No.	7640	7640	7640	7640	6701	6701	7648
SLIP SIZE STAMPED		2-5/8	2-25/32	2-15/16	3-3/32	2-31/32	3-1/8	3-9/32
	Logan Part No.	**AV4004**	**AV4004**	**AV4004**	**AV4004**	**AV4005**	**AV4005**	**AV4006**
	Bowen No.	C7642	C7642	C7642	C7642	6704	6704	7650
FRICTION BLOCK SIZE STAMPED		...	...	...	...	...	...	...
	Logan Part No.	**...**	**...**	**...**	**...**	**...**	**...**	**AV12000**
	Bowen No.	...	...	...	...	...	...	14934
SAFETY RING SIZE STAMPED		2-7/16	2-19/32	2-3/4	2-29/32	2-13/16	2-15/16	3-3/32
	Logan Part No.	**AV17004**	**AV17004**	**AV17004**	**AV17004**	**AV17005**	**AV17005**	**AV17006**
	Bowen No.	6541	6541	6541	6541	6707	6707	6681
SAFETY RING PACKOFF SIZE STAMPED		2-7/16	2-19/32	2-3/4	2-29/32	2-13/16	2-15/16	3-3/32
	Logan Part No.	**AV25004**	**AV25004**	**AV25004**	**AV25004**	**AV25005**	**AV25005**	**AV25006**
	Bowen No.	6268	6268	6268	6268	6709	6709	6683

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Logan Full Circle Slip Range for Drill Pipe and Tubing

FISH SIZE		4 DP	4 Tbg	4 Tbg	4-1/2 DP	4-1/2 DP	4-1/2 DP	5-1/2 DP
WEIGHT (LBS/FT)		14	11	9.5	20	18.1, 16.6	13.75, 12.75	24.7, 21.9
SPEAR ASSEMBLY	**Logan Part No.**	**204-006**	**204-007**	**204-007**	**204-008**	**204-008**	**204-008**	**204-009**
	Bowen No.	7648	6710	6710	6715	6715	6715	6723
SLIP SIZE STAMPED		3-11/32	3-1/2	3-19/32	3-11/16	3-7/8	4-1/32	4-3/4
	Logan Part No.	**AV4006**	**AV4007**	**AV4007**	**AV4008**	**AV4008**	**AV4008**	**AV4009**
	Bowen No.	7650	6712	6712	6717	6717	6717	6725
FRICTION BLOCK SIZE STAMPED		...	3-1/4	3-1/4	3-5/8	3-5/8	3-5/8	4-3/4
	Logan Part No.	**AV12000**	**AV12001**	**AV12001**	**AV12002**	**AV12002**	**AV12002**	**AV12003**
	Bowen No.	14934	14904	14904	14940	14940	14940	14840
SAFETY RING SIZE STAMPED		3-5/32	3-5/16	3-13/32	3-15/32	3-21/32	3-13/16	4-1/2
	Logan Part No.	**AV17006**	**AV17007**	**AV17007**	**AV17008**	**AV17008**	**AV17008**	**AV17009**
	Bowen No.	6681	6539	6539	6720	6720	6720	6485
SAFETY RING PACKOFF SIZE STAMPED		3-5/32	3 5/16	3-13/32	3-15/32	3 21/32	3-13/16	4-1/2
	Logan Part No.	**AV25006**	**AV25007**	**AV25007**	**AV25008**	**AV25008**	**AV25008**	**AV25009**
	Bowen No.	6683	5730	5730	6722	6722	6722	6484

FISH SIZE		5-1/2 DP	5-1/2 DP	5-1/2 DP				
WEIGHT (LBS/FT)		25.25	22.2	19				
SPEAR ASSEMBLY	**Logan Part No.**	**204-009**	**204-009**	**204-009**				
	Bowen No.	6723	6723	6723				
SLIP SIZE STAMPED		4-3/4	4-7/8	5-1/16				
	Logan Part No.	**AV4009**	**AV4009**	**AV4009**				
	Bowen No.	6725	6725	6725				
FRICTION BLOCK SIZE STAMPED		4-3/4	4-3/4	4-3/4				
	Logan Part No.	**AV12003**	**AV12003**	**AV12003**				
	Bowen No.	14840	14840	14840				
SAFETY RING SIZE STAMPED		4-1/2	4-5/8	4-13/16				
	Logan Part No.	**AV17009**	**AV17009**	**AV17009**				
	Bowen No.	6485	6485	6485				
SAFETY RING PACKOFF SIZE STAMPED		4-1/2	4-5/8	4-13/16				
	Logan Part No.	**AV25009**	**AV25009**	**AV25009**				
	Bowen No.	6484	6484	6484				

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Logan Full Circle Slip Range for Casing

FISH SIZE		4-1/2 Csg	4-1/2 Csg	4-3/4 Csg	5 Csg	5 Csg	5 Csg *	5 Csg
WEIGHT (LBS/FT)		13.5, 11.6	9.5	16	21	18.0, 17.7	15	13.0, 11.5
SPEAR ASSEMBLY	**Logan Part No.**	**204-010**	**204-010**	**204-010**	**204-011**	**204-011**	**204-011**	**204-011**
	Bowen No.	10536	10536	10536	9337	9337	9337	9337
SLIP SIZE STAMPED		4	4-5/32	4-5/32	4-7/32	4-11/32	4-15/32	4-19/32
	Logan Part No.	**AV4010**	**AV4010**	**AV4010**	**AV4011**	**AV4011**	**AV4011**	**AV4011**
	Bowen No.	10538	10538	10538	9339	9339	9339	9339
FRICTION BLOCK SIZE STAMPED		4-1/2	...	4-1/2	4-5/8	...	...	...
	Logan Part No.	**AV12004**	**...**	**AV12004**	**AV12005**	**...**	**...**	**...**
	Bowen No.	14927	...	14927	14946	...	...	...
SAFETY RING SIZE STAMPED		3-25/32	3-15/16	3-15/16	4	4-1/8	4-1/4	4-3/8
	Logan Part No.	**AV17010**	**AV17010**	**AV17010**	**AV17011**	**AV17011**	**AV17011**	**AV17011**
	Bowen No.	6733	6733	6733	7581	7581	7581	7581
SAFETY RING PACKOFF SIZE STAMPED		3-25/32	3-15/16	3-15/16	4	4-1/8	4-1/4	4-3/8
	Logan Part No.	**AV25010**	**AV25010**	**AV25010**	**AV25011**	**AV25011**	**AV25011**	**AV25011**
	Bowen No.	6734	6734	6734	A7583	A7583	A7583	A7583

FISH SIZE		5-1/2 Csg	5-1/2 Csg	5-1/2 Csg	5-3/4 **	5-3/4 **	6 Csg	6 Csg
WEIGHT (LBS/FT)		23	20, 17	15.5, 14, 13	22.5, 19.5	17, 14	23	20, 18
Spear AssEMBLY	**Logan Part No.**	**204-012**	**204-012**	**204-012**	**204-012**	**204-012**	**204-012**	**204-012**
	Bowen No.	9342	9342	9342	9342	9342	9347	9347
SLIP SIZE STAMPED		4-3/4	4-7/8	5-1/16	5-1/16	5-5/16	5-5/16	5-7/16
	Logan Part No.	**AV4012**	**AV4012**	**AV4012**	**AV4012**	**AV4012**	**AV4013**	**AV4013**
	Bowen No.	9344	9344	9344	9344	9344	9349	9349
FRICTION BLOCK SIZE STAMPED		4-3/4	...	...	5-1/16	...	4-3/4	...
	Logan Part No.	**AV12006**	**...**	**...**	**AV12006**	**...**	**AV12007**	**...**
	Bowen No.	14840	...	...	14840	...	14953	...
SAFETY RING SIZE STAMPED		4-1/2	4-5/8	4-13/16	4-13/16	5-1/16	5-1/16	5-3/16
	Logan Part No.	**AV17012**	**AV17012**	**AV17012**	**AV17012**	**AV17012**	**AV17013**	**AV17013**
	Bowen No.	6485	6485	6485	6485	6485	6520	6520
SAFETY RING PACKOFF SIZE STAMPED		4-1/2	4-5/8	4-13/16	4-13/16	5-1/16	5-1/16	5-3/16
	Logan Part No.	**AV25009**	**AV25009**	**AV25009**	**AV25009**	**AV25009**	**AV25012**	**AV25012**
	Bowen No.	6484	6484	6484	6484	6484	6041	6041

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Logan Full Circle Slip Range for Casing

FISH SIZE		11-3/4 Csg	12 Csg	13 Csg	13-3/8 Csg	13-3/8 Csg	16 Csg
		47, 42, 38	40	54, 50, 45, 40	83, 72, 68, 61	54, 48	84, 75, 65, 55
SPEAR ASSEMBLY	**Logan Part No.**	204-020	204-020	204-021	204-021	204-021	204-021
	Bowen No.	6073	6073	6081	6081	6081	6081
SLIP SIZE STAMPED		11-1/8	11-3/8	12-3/8	12-3/8	12-5/8	15-3/16
	Logan Part No.	AV4020	AV4020	AV4021	AV4021	AV4021	AV4021
	Bowen No.	6075	6075	6083	6083	6083	6083
FRICTION BLOCK SIZE STAMPED		...	...	12-1/4	12-1/4	...	15
	Logan Part No.	...	...	AV12015	AV12015	...	AV12015
	Bowen No.	...	...	14994	14994	...	14994
SAFETY RING SIZE STAMPED		10-13/16	11-1/16	12	12	12-1/4	14-13/16
	Logan Part No.	AV17020	AV17020	AV17021	AV17021	AV17021	AV17021
	Bowen No.	6535	6535	6537	6537	6537	6537
SAFETY RING PACK-OFF SIZE STAMPED		10-13/16	11-1/16	12	12	12-1/4	14-13/16
	Logan Part No.	AV25019	AV25019	AV25020	AV25020	AV25020	AV25020
	Bowen No.	6080	6080	6088	6088	6088	6

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Logan Full Circle Slip Range for Casing

FISH SIZE		8-1/8 Csg	8-5/8 Csg	8-5/8 Csg	8-5/8 Csg *	9 Csg	9 Csg	9 Csg
WEIGHT (LBS/FT)		32, 28	49, 44 38, 36	43, 40,	32, 28, 24	55	45	40, 38, 34
SPEAR ASSEMBLY	**Logan Part No.**	**204-016**	**204-017**	**204-017**	**204-017**	**204-017**	**204-017**	**204-017**
	Bowen No.	10608	6318	6318	6318	6318	6318	6318
SLIP SIZE STAMPED		7-7/16	7-9/16	7-13/16	8-1/16	7-13/16	8-1/16	8-5/16
	Logan Part No.	**AV4016**	**AV4017**	**AV4017**	**AV4017**	**AV4017**	**AV4017**	**AV4017**
	Bowen No.	10610	6320	6320	6320	6320	6320	6320
FRICTION BLOCK SIZE STAMPED		...	7-3/4	...	...	7-3/4	...	...
	Logan Part No.	**...**	**AV12011**	**...**	**...**	**AV12011**	**...**	**...**
	Bowen No.	...	14973	...	...	14973	...	...
SAFETY RING SIZE STAMPED		7-3/16	7-1/4	7-1/2	7-3/4	7-1/2	7-3/4	8
	Logan Part No.	**AV17016**	**AV17017**	**AV17017**	**AV17017**	**AV17017**	**AV17017**	**AV17017**
	Bowen No.	6524	6528	6528	6528	6528	6528	6528
SAFETY RING PACKOFF SIZE STAMPED		7-3/16	7-1/4	7-1/2	7-3/4	7-1/2	7-3/4	8
	Logan Part No.	**AV25014**	**AV25016**	**AV25016**	**AV25016**	**AV25016**	**AV25016**	**AV25016**
	Bowen No.	6055	6529	6529	6529	6529	6529	6529

FISH SIZE		9-5/8 Csg	9-5/8 Csg	9-5/8 Csg	10 Csg	10-3/4 Csg	10-3/4 Csg	11-3/4 Csg
WEIGHT (LBS/FT)		58, 47, 53.5	40, 36, 43.5	32.3, 29.3	33 48	55.5, 54, 51, 40.5, 32.75	45.5, 45, 40,	60, 54
SPEAR ASSEMBLY	**Logan Part No.**	**204-018**	**204-018**	**204-018**	**204-018**	**204-019**	**204-019**	**204-020**
	Bowen No.	10473	10473	10473	10473	6067	6067	6073
SLIP SIZE STAMPED		8-1/2	8-13/16	9	9-3/8	9-13/16	10-1/16	10-7/8
	Logan Part No.	**AV4018**	**AV4018**	**AV4018**	**AV4018**	**AV4019**	**AV4019**	**AV4020**
	Bowen No.	10475	10475	10475	10475	6069	6069	6075
FRICTION BLOCK SIZE STAMPED		8-7/8	...	...	8 7/8	10	...	...
	Logan Part No.	**AV12012**	**...**	**...**	**AV12012**	**AV12013**	**...**	**...**
	Bowen No.	14979	...	...	14979	14984	...	...
SAFETY RING SIZE STAMPED		8-3/16	8-1/2	8-11/16	9-1/16	9-1/2	9-3/4	10-9/16
	Logan Part No.	**AV17018**	**AV17018**	**AV17018**	**AV17018**	**AV17019**	**AV17019**	**AV17020**
	Bowen No.	6531	6531	6531	6531	6533	6533	6535
SAFETY RING PACKOFF SIZE STAMPED		8-3/16	8-1/2	8-11/16	9-1/16	9-1/2	9-3/4	10-9/16
	Logan Part No.	**AV25017**	**AV25017**	**AV25017**	**AV25017**	**AV25018**	**AV25018**	**AV25019**
	Bowen No.	6063	6063	6063	6063	6072	6072	6080

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Logan Full Circle Slip Range for Casing

FISH SIZE		11-3/4 Csg	12 Csg	13 Csg	13-3/8 Csg	13-3/8 Csg	16 Csg
WEIGHT (LBS/FT)		47, 42, 38	40	54, 50, 45, 40	83, 72, 68, 61	54, 48	84, 75, 65, 55
SPEAR ASSEMBLY	**Logan Part No.**	**204-020**	**204-020**	**204-021**	**204-021**	**204-021**	**204-021**
	Bowen No.	6073	6073	6081	6081	6081	6081
SLIP SIZE STAMPED		11-1/8	11-3/8	12-3/8	12-3/8	12-5/8	15-3/16
	Logan Part No.	**AV4020**	**AV4020**	**AV4021**	**AV4021**	**AV4021**	**AV4021**
	Bowen No.	6075	6075	6083	6083	6083	6083
FRICTION BLOCK SIZE STAMPED		...	...	12-1/4	12-1/4	...	15
	Logan Part No.	**...**	**...**	**AV12015**	**AV12015**	**...**	**AV12015**
	Bowen No.	...	...	14994	14994	...	14994
SAFETY RING SIZE STAMPED		10-13/16	11-1/16	12	12	12-1/4	14-13/16
	Logan Part No.	**AV17020**	**AV17020**	**AV17021**	**AV17021**	**AV17021**	**AV17021**
	Bowen No.	6535	6535	6537	6537	6537	6537
SAFETY RING PACKOFF SIZE STAMPED		10-13/16	11-1/16	12	12	12-1/4	14-13/16
	Logan Part No.	**AV25019**	**AV25019**	**AV25020**	**AV25020**	**AV25020**	**AV25020**
	Bowen No.	6080	6080	6088	6088	6088	6088

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LOGAN STANDARD RELEASING SPEAR PRINCIPAL DIMENSIONS

SPEAR MANDREL	SPEAR SIZE	CLASS	ID	A	B	SHOULDER TYPE ONLY C	FLUSH TYPE ONLY D	E
F1000	1.050 OD Pipe	Standard	...	1-1/2	4-1/8	6	...	2-3/8
F1001	1.313 OD Pipe	Standard	...	1-5/8	3	3	...	3-5/16
F1002	1.660 OD Tubing	Standard	...	1-13/16	3	3	3-25/32	3-5/16
F1004	1.900 OD Tubing	Standard	...	2-1/2	5	3	7	5-1/16
F1005	2-3/8 OD Drill Pipe	Standard	...	3-1/8	7	3	7	5-29/32
F1007	2-3/8 OD Tubing	Standard	3/8	3-1/8	7	3	7	6-3/4
F1008	2-3/8 OD Tubing	Standard	3/8	3-1/8	7	3	7	9
F1009	2-7/8 OD Tubing	Standard	3/8	3-3/4	7	3	7-1/4	6-3/4
F1010	2-7/8 OD Tubing	Heavy Duty	3/8	3-3/4	7	3	7-1/4	9
F1012	3-1/2 OD Tubing	Standard	1/2	3-3/4	7	3-1/2	10-1/2	12
F1013	3-1/2 OD Drill Pipe	Heavy Duty	1/2	3-3/8	7	3-1/2	10-1/2	9-3/4
F1014	4 OD Tubing	Light Duty	3/4	3-3/4	7-1/2	3	10-3/8	8-1/8
F1015	4 OD Tubing	Standard	3/4	4-1/8	7-1/2	3	10-1/2	12
F1016	4-1/2 OD Tubing	Light Duty	3/4	4-1/2	8	3-1/2	3-3/4	9-3/4
F1017	4-1/2 OD Tubing	Standard	3/4	4-1/2	8	3-1/2	9-1/2	14-1/4
F1018	5 OD Casing	Light Duty	7/8	4-3/8	8	3-1/2	9-1/2	9-3/4
F1019	5 OD Casing	Standard	1	5	8	3-1/2	12	14-1/4
F1022	6 OD Casing	Light Duty	1	6	8	5-1/2	12	13
F1023	6 OD Casing	Standard	1	6	8	5-1/2	12	13
F1024	7 OD Casing	Standard	2	7	10	6-1/2	16-1/2	14-5/8
F1026	7 OD Casing	Heavy Duty	2	7	10	6-1/2	13-1/2	21-3/8
F1029	8-5/8 OD Casing	Standard	2-3/4	8-5/8	14	7	20-7/8	14-5/8
F1030	8-5/8 OD Casing	Heavy Duty	2-3/4	8-5/8	...	...	20-7/8	21-3/8
F1032	9-5/8 OD Casing	Standard	2-13/16	9-5/8	15-3/8	7	20-7/8	14-5/8
F1034	9-5/8 OD Casing	Standard	2-13/16	9-5/8	...	...	20-7/8	21-3/8
F1035	13-3/8 OD Casing	Standard	3-1/2	13-3/8	17-7/8	7	22-3/8	16-7/8

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LOGAN STANDARD RELEASING SPEAR PRINCIPAL DIMENSIONS

SPEAR MANDREL	F	G	H	I	J	SHOULDER TYPE ONLY K	FLUSH TYPE ONLY L	M
F1000	7/8	2-3/8	11/16	9-5/8	15-1/4	...	...	3/16
F1001	1-3/8	2-1/2	15/16	7-11/16	11-13/16	...	...	1/4
F1002	1-3/8	2-1/2	1-1/8	7-11/16	11-13/16	...	...	3/8
F1004	2-1/4	5-5/8	1-3/8	10-5/16	18-11/16	...	...	7/16
F1005	2-1/4	6-17/32	1-11/16	...	...	19-7/16	...	5/8
F1007	2-1/4	6-5/8	1-7/8	12	23-3/8	23-3/8	...	5/8
F1008	2-1/4	6-5/8	1-7/8	14-1/4	25-5/8	22-5/8	...	5/8
F1009	2-1/2	7	2-5/16	12-1/4	23-3/4	21	...	5/8
F1010	2-1/2	7	2-5/16	14-1/2	26	23-1/4	...	5/8
F1012	3-1/2	9	2-13/16	19	31-1/2	32-1/2	...	5/8
F1013	3-5/8	8-1/8	2-1/2	16-5/8	31-1/8	...	...	5/8
F1014	2-1/2	8	3-1/4	13-5/8	26-5/8	26-1/2	...	5/8
F1015	3-1/2	9	3-1/4	18-1/2	31-1/2	31-1/2	...	5/8
F1016	3-1/2	10-3/4	3-5/8	16-3/4	32	32	...	1
F1017	3-1/2	10	3-5/8	21-1/4	35-3/4	33-3/4	...	3/4
F1018	3-1/2	10-5/8	4-1/32	16-3/4	31-7/8	29-7/8	...	13/16
F1019	3-1/2	10-5/8	4-1/32	21-1/4	36-3/8	36-7/8	...	13/16
F1022	3-1/2	12	5	16-3/8	39-3/16	37-11/16	3-5/16	1-1/4
F1023	3-1/2	12	5	16-3/8	...	43	3-5/16	1-1/4
F1024	3-1/2	12-3/4	5-3/4	...	...	40-1/4	3-1/2	1-5/8
F1026	3-1/2	12-3/4	5-3/4	31-3/8	53-3/8	47	3-1/2	1-5/8
F1029	4-1/2	13-3/4	7-1/4	26-1/8	53-7/8	49-1/4	5	1-5/8
F1030	4-1/2	13-3/4	7-1/4	...	...	56	5-3/4	1-5/8
F1032	3-1/2	14	8-1/4	25-1/8	51	49-1/4	6-1/4	1-5/8
F1034	3-1/2	13-3/4	8-1/4	...	...	56	6-1/4	1-5/8
F1035	3-1/2	12	11-3/4	27-3/8	53-3/4	51-1/4	7-3/4	1-5/8

Innovex reserves the right to change or discontinue designs and/or prices without notice.

LOGAN STANDARD RELEASING SPEARS

Spear Assembly with Flush Type Mandrel

Spear Assembly with Shoulder Type Mandrel

Innovex reserves the right to change or discontinue designs and/or prices without notice.

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Logan Standard Releasing Spears

NOMINAL CATCH SIZE O.D.		1.050	1.313	1.660	1.900	2-3/8	2-3/8	2-3/8
SPEAR O.D.		11/16	7/8 NOM	1-1/8	1-3/8	1-11/16	1-7/8	1-7/8
SPEAR I.D.		...	...	...	...	...	3/8	3/8
DUTY CLASS		STD	STD	STD	STD	STD	STD	STD
COMPLETE ASSEMBLY	Logan Part No.	202-001	202-002	202-003	202-004	202-036	202-005	202-006
	Bowen No.	16455	19350	11195	9915	9645	1344	17228
	Price	$3,198	$3,512	$3,557	$3,754	$3,867	$4,068	$5,746

REPLACEMENT PARTS

TOP SUB	Logan Part No.	F1000-A	F1001-A	F1002-A	...	...	...	...
	Bowen No.	16456A	19351A	11196A	...	...	...	...
	Price	$487	$508	$546	...	...	...	...
MANDREL (FLUSH TYPE)	Logan Part No.	F1000	F1001	F1002	F1004	F1005	F1007	F1008
	Bowen No.	16456B	19351B	11196B	9916	9646	1345	17229
	Price	$1,056	$1,056	$1,056	$1,329	$1,369	$1,732	$2,370
GRAPPLE **	Logan Part No.	F3000	F3001	F3002	F3004	F3005	F3007	F3008
	Bowen No.	16457	19352	11197	9917	9647	1348	17230
	Price	**	**	**	**	**	**	**
RELEASE RING	Logan Part No.	F4000	F4001	F4002	F4004	F4005	F4007	F4007
	Bowen No.	16458	19353	11198	9918	9649	1347	1347
	Price	$187	$226	$279	$251	$251	$265	$265
BULL NOSE NUT	Logan Part No.	F5000	F5001	F5002	F5004	F5005	F5007	F5007
	Bowen No.	16459	19354	11199	9919	9648	1346	1346
	Price	$258	$354	$420	$525	$543	$772	$772

OPTIONAL PARTS

MANDREL (SHOULDER TYPE)	Logan Part No.	F1000	F1001	F1002	F1004	F1005	F1007	F1008
	Bowen No.	16456	19351	11196	9916	9646	1345	17229
	Price	$1,608	$1,604	$1,650	$1,889	$1,885	$1,789	$2,987
MANDREL EXTRA LENGTH PER INCH (C & D)	Price	$63	$63	$65	$65	$65	$65	$65

ACCESSORIES

MILL TYPE NUT	Logan Part No.	F5000-A	F5001-A	F5002-A	F5004-A	F5005-A	F5007-A	F5007-A
	Bowen No.	16459-A	19354-A	11199-A	9919-A	9648-A	1346-A	1346-A
	Price	$765	$898	$989	$1,086	$1,088	$1,003	$1,003
SUB TYPE NUT	Logan Part No.	F5000-B	F5001-B	F5002-B	F5004-B	F5005-B	F5007-B	F5007-B
	Bowen No.	16459-B	19354-B	11199-B	9919-B	9648-B	1346-B	1346-B
	Price	$521	$693	$765	$857	$859	$790	$790
SIDE HILL NUT	Logan Part No.	F5000-C	F5001-C	F5002-C	F5004-C	F5005-C	F5007-C	F5007-C
	Bowen No.	16459-C	19354-C	11199-C	9919-C	9648-C	1346-C	1346-C
	Price	$521	$693	$765	$859	$859	$789	$789

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** See Range Chart for weight and oversize Grapple price on page 98.*

Note: Prices shown for the Spear assemblies include Flush-Type Mandrels ("H" O.D.). To price an assembly furnished with a Shoulder-Type Mandrel, subtract the price of the

Flush-Type Mandrel and add the price of the Shoulder-Type Mandrel to the assembly price.

Special Notes:

(1) Assembly prices are with Flush-Type Mandrels.

(2) Oversize shoulders add 10% of Mandrel price for each 114" or portion thereof.

(3) Add 10% to Mandrel (Shoulder-Type) price for skirt thread and cap.

(4) Add 20% for left-hand applications.

When ordering, please specify:

(1) Part number of assembly or component

(2) Size and type of top connection

(3) Size and weight(s) of pipe to catch

(4) Flush or Shoulder-Type Mandrel. (Specify O.D. of Shoulder-Type Mandrel "A" dimension.)

(5) "C" dimension of Shoulder-Type Mandrel if other than standard.

(6) Type of Nut. For Sub Type Nut, specify size and type of pin connection.

Recommended Spare Parts:

(1) 2 Grapples for each catch size

Logan Standard Releasing Spears

NOMINAL CATCH SIZE O.D.		2-7/8	2-7/8	3-1/2	4	4	4-1/2
SPEAR O.D.		2-5/16	2-5/16	2-13/16	3-1/4	3-1/4	3-5/8
SPEAR I.D.		3/8	3/8	1/2	3/4	3/4	3/4
DUTY CLASS		STD	HD	STD	LD	STD	LD
COMPLETE ASSEMBLY	**Logan Part No.**	**202-007**	**202-008**	**202-009**	**202-024**	**202-011**	**202-017**
	Bowen No.	1227	17231	9410	530	9485	13200
	Price	$4,426	$6,053	$6,713	$6,324	$7,175	$6,755

REPLACEMENT PARTS

TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No. ...	...	...	...	...	...	
	Price	...	...	...	...	...	...
MANDREL (FLUSH TYPE)	**Logan Part No.**	**F1009**	**F1010**	**F1012**	**F1014**	**F1015**	**F1016**
	Bowen No.	1231	17232	9411	531	9486	13201
	Price	$1,824	$2,370	$2,492	$2,208	$2,712	$2,429
GRAPPLE *	**Logan Part No.**	**F3009**	**F3010**	**F3012**	**F3014**	**F3015**	**F3016**
	Bowen No.	1230	17233	9412	532	9487	13202
	Price	**	**	**	**	**	**
RELEASE RING	**Logan Part No.**	**F4009**	**F4009**	**F4012**	**F4015**	**F4015**	**F4017**
	Bowen No.	1229	1229	1584	534	534	13183
	Price	$278	$278	$326	$340	$340	$390
BULL NOSE NUT	**Logan Part No.**	**F5009**	**F5009**	**F5012**	**F5014**	**F5015**	**F5017**
	Bowen No.	1228	1228	9413	533	9488	13184
	Price	$906	$906	$1,098	$1,201	$1,192	$1,303

OPTIONAL

MANDREL (SHOULDER TYPE)	**Logan Part No.**	**F1009**	**F1010**	**F1012**	**F1014**	**F1015**	**F1016**
	Bowen No.	1231	17232	9411	531	9486	13201
	Price	$1,884	$3,222	$3,154	$2,917	$3,328	$3,238
MANDREL EXTRA LENGTH PER INCH (C & D)	Price	$69	$75	$78	$78	$78	$87

ACCESSORIES

MILL TYPE NUT	**Logan Part No.**	**F5009-A**	**F5010-A**	**F5012-A**	**F5014-A**	**F5015-A**	**F5017-A**
	Bowen No.	1228-A	1228-A	9413-A	533-A	9488-A	13184-A
	Price	$1,146	$1,146	$1,448	$1,815	$1,693	$2,086
SUB TYPE NUT	**Logan Part No.**	**F5009-B**	**F5009-B**	**F5012-B**	**F5014-B**	**F5015-B**	**F5017-B**
	Bowen No.	1228-B	1228-B	9413-B	533-B	9488-B	13184-B
	Price	$954	$954	$1,335	$1,594	$1,489	$1,676
SIDE HILL NUT	**Logan Part No.**	**F5009-C**	**F5009-C**	**F5012-C**	**F5014-C**	**F5015-C**	**F5017-C**
	Bowen No.	1228-C	1228-C	9413-C	533-C	9488-C	13184-C
	Price	$954	$954	$1,335	$1,594	$1,489	$1,676

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** Available upon request.*

*** See Range Chart for weight and oversize Grapple price on page 98.*

Note: Prices shown for the Spear assemblies include Flush-Type Mandrels ("H" O.D.). To price an assembly furnished with a Shoulder-Type Mandrel, subtract the price of the

Flush-Type Mandrel and add the price of the Shoulder-Type Mandrel to the assembly price.

Special Notes:

(1) Assembly prices are with Flush-Type Mandrels.

(2) Oversize shoulders add 10% of Mandrel price for each 114" or portion thereof.

(3) Add 10% to Mandrel (Shoulder-Type) price for skirt thread and cap.

(4) Add 20% for left-hand applications.

When ordering, please specify:

(1) Part number of assembly or component

(2) Size and type of top connection

(3) Size and weight(s) of pipe to catch

(4) Flush or Shoulder-Type Mandrel. (Specify O.D. of Shoulder-Type Mandrel "A" dimension.)

(5) "C" dimension of Shoulder-Type Mandrel if other than standard.

(6) Type of Nut. For Sub Type Nut, specify size and type of pin connection.

Recommended Spare Parts:

(1) 2 Grapples for each catch size

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Logan Standard Releasing Spears

NOMINAL CATCH SIZE O.D.		4-1/2	5	5	6	6	7	7
SPEAR O.D.		3-5/8	4-1/32	4-1/32	5	5	5-3/4	5-3/4
SPEAR I.D.		3/4	7/8	1	1	1	2	2
DUTY CLASS		STD	LD	STD	LD	STD	STD	HD
COMPLETE ASSEMBLY	**Logan Part No.**	**202-012**	**202-035**	**202-013**	**202-023**	**202-014**	**202-015**	**202-016**
	Bowen No.	17475	1332	9680	9715	17234	9266	17237
	Price	$8,343	$6,927	$7,892	$10,952	$14,022	$13,014	$19,845

REPLACEMENT PARTS

TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No. ...	...	...	...	...	...	...	
	Price	...	...	...	...	...	...	...
MANDREL (FLUSH TYPE)	**Logan Part No.**	**F1017**	**F1018**	**F1019**	**F1022**	**F1023**	**F1024**	**F1026**
	Bowen No.	17476	1333	9681	9716	17235	9267	17238
	Price	$2,987	$2,576	$2,857	$4,167	$5,325	$5,308	$7,414
GRAPPLE *	**Logan Part No.**	**F3017**	**F3018**	**F3019**	**F3022**	**F3023**	**F3024**	**F3026**
	Bowen No.	17477	1334	9682	9717	17236	9268	17239
	Price	**	**	**	**	**	**	**
RELEASE RING	**Logan Part No.**	**F4017**	**F4019**	**F4019**	**F4023**	**F4023**	**F4024**	**F4024**
	Bowen No.	13183	1336	1336	9718	9718	9279	9279
	Price	$390	$367	$367	$665	$665	$712	$712
BULL NOSE NUT	**Logan Part No.**	**F5017**	**F5019**	**F5019**	**F5023**	**F5023**	**F5024**	**F5024**
	Bowen No.	13184	1335	1335	9719	9719	9269	9269
	Price	$1,303	$1,261	$1,261	$1,943	$1,943	$2,318	$2,318

OPTIONAL PARTS

MANDREL (SHOULDER TYPE)	**Logan Part No.**	**F1017**	**F1018**	**F1019**	**F1022**	**F1023**	**F1024**	**F1026**
	Bowen No.	17476	1333	9681	9716	17235	9267	17238
	Price	$4,062	$3,258	$3,876	$5,169	$6,399	$6,281	*
MANDREL EXTRA LENGTH PER INCH (C & D)	Price	$87	$100	$100	$106	$106	$112	$116

ACCESSORIES

MILL TYPE NUT	**Logan Part No.**	**F5017-A**	**F5019-A**	**F5019-A**	**F5023-A**	**F5023-A**	**F5024-A**	**F5024-A**
	Bowen No.	13184-A	1335-A	1335-A	9719-A	9719-A	9269-A	9269-A
	Price	$2,086	$2,137	$2,137	$2,861	$2,861	$3,386	$3,386
SUB TYPE NUT	**Logan Part No.**	**F5017-B**	**F5019-B**	**F5019-B**	**F5023-B**	**F5023-B**	**F5024-B**	**F5024-B**
	Bowen No.	13184-B	1335-B	1335-B	9719-B	9719-B	9269-B	9269-B
	Price	$1,676	$1,693	$1,693	$2,340	$1,737	$2,789	$2,789
SIDE HILL NUT	**Logan Part No.**	**F5017-C**	**F5019-C**	**F5019-C**	**F5023-C**	**F5023-C**	**F5024-C**	**F5024-C**
	Bowen No.	13184-C	1335-C	1335-C	9719-C	9719-C	9269-C	9269-C
	Price	$1,676	$1,693	$1,693	$2,340	$2,340	$2,789	$2,789

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** Available upon request.*

*** See Range Chart for weight and oversize Grapple price on page 98.*

Note: Prices shown for the Spear assemblies include Flush-Type Mandrels ("H" O.D.). To price an assembly furnished with a Shoulder-Type Mandrel, subtract the price of the

Flush-Type Mandrel and add the price of the Shoulder-Type Mandrel to the assembly price.

Special Notes:

(1) Assembly prices are with Flush-Type Mandrels.

(2) Oversize shoulders add 10% of Mandrel price for each 114" or portion thereof.

(3) Add 10% to Mandrel (Shoulder-Type) price for skirt thread and cap.

(4) Add 20% for left-hand applications.

When ordering, please specify:

(1) Part number of assembly or component

(2) Size and type of top connection

(3) Size and weight(s) of pipe to catch

(4) Flush or Shoulder-Type Mandrel. (Specify O.D. of Shoulder-Type Mandrel "A" dimension.)

(5) "C" dimension of Shoulder-Type Mandrel if other than standard.

(6) Type of Nut. For Sub Type Nut, specify size and type of pin connection.

Recommended Spare Parts:

(1) 2 Grapples for each catch size

Logan Standard Releasing Spears

NOMINAL CATCH SIZE O.D.		8-5/8	8-5/8	9-5/8	9-5/8	13-3/8		
SPEAR O.D.		7-1/4	7-1/4	8-1/4	8-1/4	11-3/4		
SPEAR I.D.		2-3/4	2-3/4	2-13/16	2-13/16	3-1/2		
DUTY CLASS		STD	HD	STD	HD	STD		
COMPLETE ASSEMBLY	**Logan Part No.**	**202-025**	**202-018**	**202-019**	**202-020**	**202-021**		
	Bowen No.	9380	17243	9281	17246	27780		
	Price	$17,968	$23,838	$19,860	$29,891	*		

REPLACEMENT PARTS

TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No. ...	...	...	...	...			
	Price	...	...	...	...	...		
MANDREL (FLUSH TYPE)	**Logan Part No.**	**F1029**	**F1030**	**F1032**	**F1034**	**F1035**		
	Bowen No.	9381	17244	9282	17247	27781		
	Price	$7,175	$8,716	$8,636	$14,785	*		
GRAPPLE*	**Logan Part No.**	**F3029**	**F3030**	**F3032**	**F3034**	**F3035**		
	Bowen No.	9382	17245	9283	17248	27782		
	Price	**	**	**	**	*		
RELEASE RING	**Loagn Part No.**	**F4029**	**F4029**	**F4032**	**F4032**	**F4033**		
	Bowen No.	9383	9383	9286	9286	27783		
	Price	$923	$968	$994	$994	*		
BULL NOSE NUT	**Logan Part No.**	**F5029**	**F5029**	**F5032**	**F5032**	**F5033**		
	Bowen No.	9384	9384	9284	9284	27784		
	Price	$3,259	$3,259	$3,493	$3,493	*		

OPTIONAL PARTS

MANDREL (SHOULDER TYPE)	**Logan Part No.**	**F1029**	**F1030**	**F1032**	**F1034**	**F1035**		
	Bowen No.	9381	17244	9282	17247	27781		
	Price	$8,832	$10,971	$15,305	$18,300	*		
MANDREL EXTRA LENGTH PER INCH (C & D)	Price	$195	$214	$227	$249	*		

ACCESSORIES

MILL TYPE NUT	**Logan Part No.**	**F5029-A**	**F5029-A**	**F5032-A**	**F5032-A**	**F5035-A**		
	Bowen No.	9384-A	9384-A	9284-A	9284-A	27784-A		
	Price	$4,696	$4,696	$5,482	$5,482	*		
SUB TYPE NUT	**Logan Part No.**	**F5029-B**	**F5029-B**	**F5032-B**	**F5032-B**	**F5035-B**		
	Bowen No.	9384-B	9384-B	9284-B	9284-B	27784-B		
	Price	$3,981	$3,981	$4,275	$4,275	*		
SIDE HILL NUT	**Logan Part No.**	**F5029-C**	**F5029-C**	**F5032-C**	**F5032-C**	**F5035-C**		
	Bowen No.	9384-C	9384-C	9284-C	9284-C	27784-C		
	Price	$3,981	$3,981	$4,275	$4,275	*		

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** Available upon request.*

*** See Range Chart for weight and oversize Grapple price on page 98.*

Note: Prices shown for the Spear assemblies include Flush-Type Mandrels ("H" O.D.). To price an assembly furnished with a Shoulder-Type Mandrel, subtract the price of the

Flush-Type Mandrel and add the price of the Shoulder-Type Mandrel to the assembly price.

Special Notes:

(1) Assembly prices are with Flush-Type Mandrels.

(2) Oversize shoulders add 10% of Mandrel price for each 114" or portion thereof.

(3) Add 10% to Mandrel (Shoulder-Type) price for skirt thread and cap.

(4) Add 20% for left-hand applications.

When ordering, please specify:

(1) Part number of assembly or component

(2) Size and type of top connection

(3) Size and weight(s) of pipe to catch

(4) Flush or Shoulder-Type Mandrel. (Specify O.D. of Shoulder-Type Mandrel "A" dimension.)

(5) "C" dimension of Shoulder-Type Mandrel if other than standard.

(6) Type of Nut. For Sub Type Nut, specify size and type of pin connection.

Recommended Spare Parts:

(1) 2 Grapples for each catch size

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LOGAN SEGMENTED SPEAR GRAPPLE ASSEMBLIES

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Logan Segmented Spear Grapple Assemblies

ASSEMBLES TO SPEAR	Logan Part No.			202-025				202-018	
	Bowen No.			9380				17243	
CATCH SIZE (PIPE SIZE)		10-3/4	11-3/4	12-3/4	13-3/8	10-3/4	11-3/4	12-3/4	13-3/8
PIPE WEIGHT		32.75	38.00	45.45	48.00	32.75	38.00	45.45	48.60
		48.00	54.00	66.72	68.00	48.00	54.00	66.72	68.00
		40.00	47.00	...	61.00	40.00	47.00	...	61.00
		55.50	60.00	...	85.00	55.50	60.00	...	85.00
COMPLETE ASSEMBLY	Logan Part No.			205-000				205-001	
	Bowen No.			9382				17245	
	Price	$15,874	$17,012	$17,716	$16,910	$23,714	$24,671	$27,925	$26,641
GRAPPLE BODY	Logan Part No.			F3029-A				F3030-A	
	Bowen No.			9382-A				17245-A	
	Price			$8,873				$12,623	
GRAPPLE SEGMENT	Logan Part No.			F3029-B				F3030-B	
(8 per set)	Bowen No.			9382-B				17245-B	
	Price	$6,345	$7,429	$8,092	$8,901	$8,739	$9,506	$10,404	$11,194
SEGMENT SCREW	Logan Part No.			T3000				T3000	
(16 req'd)	Bowen No.			12198				12198	
	Price			$3				$3	
RETAINER RING	Logan Part No.			T4000				T4000	
(2 req'd)	Bowen No.			56855				56855	
	Price			$411				$411	
RETAINER RING SCREW	Logan Part No.			T5000				T5000	
(4 req'd)	Bowen No.			23535				23535	
	Price			$3				$3	
RETAINER RING SCREW	Logan Part No.			T6000				T6000	
SPACER *(4 req'd)*	Bowen No.			56979				56979	
	Price			$12				$12	

ASSEMBLES TO SPEAR	Logan Part No.			202-019					202-020		
	Bowen No.			9281					17246		
CATCH SIZE (PIPE SIZE)		13-3/8	14	16	18-5/8	20	13-3/8	14	16	18-5/8	20
PIPE WEIGHT		48.00	42.00	55.00	90.00	90.00	48.00	42.00	55.00	...	90.00
		68.00	57.00	65.00	106.50	94.00	68.00	57.00	65.00	...	94.00
		61.00	...	84.00	...	106.00	61.00	...	84.00	...	133.00
		85.00	...	109.00	...	133.00	85.00	...	...	...	...
COMPLETE ASSEMBLY	Logan Part No.			205-002					205-003		
	Bowen No.			9283					17248		
	Price	$17,811	$18,668	$19,217	$29,447	$29,447	$25,463	$25,463	$30,040	$45,865	$45,865
GRAPPLE BODY	Logan Part No.			F3032-A					F3034-A		
	Bowen No.			9283-A					17248-A		
	Price			$8,940					$16,022		
GRAPPLE SEGMENT	Logan Part No.			F3032-B					F3034-B		
(8 per set)	Bowen No.			9283-B					17248-B		
	Price	$8,421	$10,380	$10,380	$20,581	$20,581	$10,520	$11,241	$15,064	$28,815	$28,890
SEGMENT SCREW	Logan Part No.			T3001					T3001		
(16 req'd)	Bowen No.			23020					23020		
	Price			$9					$9		
RETAINER RING	Logan Part No.			T4001					T4001		
(2 req'd)	Bowen No.			56409					56409		
	Price			$409					$409		
RETAINER RING SCREW	Logan Part No.			T5001					T5001		
(4 req'd)	Bowen No.			56813					56813		
	Price			$3					$3		
RETAINER RING SCREW	Logan Part No.			T6000					T6000		
SPACER *(4 req'd)*	Bowen No.			56979					56979		
	Price			$12					$12		

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Logan Segmented Spear Grapple Assemblies

ASSEMBLES TO SPEAR	**Logan Part No.**		**202-021**	
	Bowen No.		27780	
CATCH SIZE (PIPE SIZE)		16	18-5/8	20
PIPE WEIGHT		55.00	...	90.00
		65.00	...	94.00
		84.00	...	133.00
COMPLETE ASSEMBLY	**Logan Part No.**		**205-004**	
	Bowen No.		27782	
	Price	*	*	*
GRAPPLE BODY	**Logan Part No.**		**F3035-A**	
	Bowen No.		27782A	
	Price		*	
GRAPPLE SEGMENT	**Logan Part No.**		**F3035-B**	
(8 per set)	Bowen No.		27782B	
	Price	*	*	*
SEGMENT SCREW	**Logan Part No.**		**T3002**	
	Bowen No.		12019	
	No. Req'd		16	
	Price		$12	
RETAINER RING	**Logan Part No.**		**T4002**	
	Bowen No.		56858	
	No. Req'd		2	
	Price		$1,007	
RETAINER RING SCREW	**Logan Part No.**		**T5002**	
	Bowen No.		56859	
	No. Req'd		4	
	Price		$3	
RETAINER RING SCREW SPACER	**Logan Part No.**		**T6000**	
	Bowen No.		56979	
	No. Req'd		4	
	Price		$12	

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** Available upon request.*

Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	Logan Part No.	F3000	F3000	F3000	F3000	F3000	F3000	F3000
	Bowen No.	16457	16457	16457	16457	16457	16457	16457
	Price	$1,152	$1,152	$1,152	$1,152	$1,152	$1,152	$1,152
Actual Catching Range								
Minimum ID		.725	...	.799	...	.850	.912	.932
Nominal Catch Size		.742	...	.813	...	.864	.924	.944
Maximum ID		.750	...	.824	...	.875	.937	.957
Old Nominal Size (inches)		3/4 ID & 3/4 X-STG Pipe	...	3/4 Std Pipe .824 ID	...	.875 -.864 ID 1 to 2.25# CS Hydril	.937 ID	.957 ID 1" X-STG Pipe

Logan Spear Grapple	Logan Part No.	F3000	F3000	F3000	F3000	F3001	F3001	F3001
	Bowen No.	16457	16457	16457	16457	19352	19352	19352
	Price	$1,152	$1,152	$1,152	$1,152	$1,223	$1,223	$1,223
Actual Catching Range								
Minimum ID		.955	.975	1.033	1.100	.913	.956	1.005
Nominal Catch Size		.967	.987	1.049	1.112	.937	.978	1.027
Maximum ID		.982	1.000	1.058	1.125	.957	1.000	1.049
Old Nominal Size (inches)		.982 ID	1" ID	1" Std Pipe 1.049 ID	1-1/8 ID	.957 ID 1" X-STG Pipe	1" ID	1.045 ID 1" Std Pipe

Logan Spear Grapple	Logan Part No.	F3001	F3001	F3002	F3002	F3002	F3002	F3002
	Bowen No.	19352	19352	11197	11197	11197	11197	11197
	Price	$1,223	810	$1,223	$1,223	$1,223	$1,223	$1,223
Actual Catching Range								
Minimum ID		1.050	1.081	1.137	1.180	1.211	1.242	1.273
Nominal Catch Size		1.072	1.103	1.170	1.215	1.246	1.277	1.308
Maximum ID		1.093	1.125	1.207	1.250	1.281	1.312	1.342
Old Nominal Size (inches)		1.093 ID	1.250 ID	1.187 ID	1.250 to 1.219 ID	1.281 to 1.250 ID	1.312 to 1.281 ID	1.343 to 1.312 ID

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Note: Grapples are stenciled with nominal catch size.

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Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	Logan Part No. Bowen No. Price	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285
Actual Catching Range:								
Minimum ID		1.332	1.394	1.430	1.580	1.481	1.519	1.650
Nominal Catch Size		1.367	1.429	1.465	1.615	1.516	1.554	1.687
Maximum ID		1.402	1.464	1.500	1.652	1.551	1.589	1.720
Old Nominal Size (inches)		1-3/8 ID 1-1/4 Tbg	1.438 ID	1.500 to 1.469 ID	1-1/2 Std Pipe & 1-5/8 ID	1.531 ID	1 9/16 ID	1.687 to 1.700 ID

Logan Spear Grapple	Logan Part No. Bowen No. Price	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3002 11197 $1,285	F3004 9917 $1,285
Actual Catching Range:								
Minimum ID		1.722	1.771	1.836	1.895	1.957	2.024	1.441
Nominal Catch Size		1.757	1.806	1.875	1.930	1.992	2.061	1.470
Maximum ID		1.792	1.841	1.906	1.965	2.027	2.094	1.500
Old Nominal Size (inches)		1-3/4 to 1-25/32 ID	1.815 ID	1-7/8 to 1-29/32	1-15/16 ID	2 ID	2.067 ID	1.500 ID to 1-1/2 X-STG Pipe

Logan Spear Grapple	Logan Part No. Bowen No. Price	F3004 9917 $1,285	F3004 9917 $1,285	F3004 9917 $1,285	F3004 9917 $1,285	F3004 9917 $1,285	F3004 9917 $1,285	F3004 9917 $1,285
Actual Catching Range:								
Minimum ID		1.470	1.472	1.553	1.566	1.598	1.612	1.673
Nominal Catch Size		1.500	1.502	1.583	1.596	1.628	1.642	1.700
Maximum ID		1.527	1.529	1.610	1.625	1.657	1.670	1.750
Old Nominal Size (inches)		to 1.610 ID	1-1/2 Std Pipe	1-5/8 ID	1.657 ID	1.670 ID 1.700 ID	1-3/4	

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Note: Grapples are stenciled with nominal catch size.

Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
Logan Spear Grapple	**Logan Part No.**	**F3004**	**F3004**	**F3004**	**F3004**	**F3004**	**F3005**	**F3005**
	Bowen No.	9917	9917	9917	9917	9917	9647	9647
	Price	$1,223	$1,223	$1,223	$1,223	$1,223	$1,349	$1,349
Actual Catching Range:								
Minimum ID		1.707	1.742	1.817	1.881	1.942	1.677	1.742
Nominal Catch Size		1.737	1.772	1.847	1.911	1.972	1.719	1.778
Maximum ID		1.781	1.800	1.875	1.939	2.000	1.750	1.815
Old Nominal Size (inches)		1.781 ID	1.800 ID	1-7/8 ID	1.939 ID	2 ID	1.719 to 1.750 ID	2-3/8 DP, 65.5#

Logan Spear Grapple	**Logan Part No.**	**...**	**...**	**...**	**F3007**	**F3007**	**F3007**	**F3007**
	Bowen No.	...	...	...	1348	1348	1348	1348
	Price	...	...	...	$1,239	$1,239	$1,239	$1,239
Logan Spear Grapple	**Logan Part No.**	**F3005**	**F3005**	**F3005**	**F3008**	**F3008**	**F3008**	**F3008**
	Bowen No.	9647	9647	9647	17230	17230	17230	17230
	Price	$1,349	$1,349	$1,349	$2,228	$2,228	$2,228	$2,228
Actual Catching Range:								
Minimum ID		1.802	1.864	1.968	1.788	1.796	1.889	1.952
Nominal Catch Size		1.838	1.900	2.004	1.828	1.836	1.929	1.992
Maximum ID		1.875	1.937	2.041	1.867	1.876	1.968	2.041
Old Nominal Size (inches)		1-7/8 & 1-27/32 ID	1.875 to 1.937 ID	2-3/8 Tbg, 4 to 4.7#	1.867 ID Turn Body Down	1.875 ID Turn Body Down	1.937 to 1.968 ID	2-3/8 Tbg, 4 to 4.7#

Logan Spear Grapple	**Logan Part No.**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**
	Bowen No.	1348	1348	1348	1348	1348	1348	1348
	Price	$1,239	$1,239	$1,239	$1,239	$1,239	$1,239	$1,239
Logan Spear Grapple	**Logan Part No.**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**
	Bowen No.	17230	17230	17230	17230	17230	17230	17230
	Price	$2,228	$2,228	$2,228	$2,228	$2,228	$2,228	$2,228
Actual Catching Range:								
Minimum ID		1.983	2.045	2.091	2.170	2.186	2.233	2.249
Nominal Catch Size		2.023	2.085	2.131	2.211	2.226	2.273	2.289
Maximum ID		2.062	2.125	2.172	2.250	2.266	2.312	2.329
Old Nominal Size (inches)		2.000 to 2.062 ID	2-1/8 ID	2-7/8 DP, 9.75 to 10.4#	2-1/4 to 2-3/16 ID	2-17/64 ID	2-5/16 ID	2-7/8 OD 7.8 to 8.35# DP

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Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**	**F3007**
	Bowen No.	1348	1348	1348	1348	1348	1348	1348
	Price	$1,239	$1,239	$1,239	$1,239	$1,239	$1,239	$1,239
Logan Spear Grapple	**Logan Part No.**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**	**F3008**
	Bowen No.	17230	17230	17230	17230	17230	17230	17230
	Price	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340	$2,340
Actual Catching Range:								
Minimum ID		2.295	2.358	2.390	2.420	2.556	2.608	2.670
Nominal Catch Size		2.335	2.398	2.430	2.460	2.596	2.648	2.710
Maximum ID		2.375	2.438	2.469	2.500	2.625	2.688	2.750
Old Nominal Size (inches)		2-3/8 ID NX 1/2 Rod	2-3/8 ID & 2-7/16 ID	2-7/8 Tbg 6.25 to 6.5#, 2-7/8 OD	2-7/16 ID	2-5/8 ID & 2-1/2 ID	2-5/8 ID & 2-9/16 ID	2-3/4 ID & 2-11/16 ID

Logan Spear Grapple	**Logan Part No.**	**F3007**	**F3007**	**F3007**	**F3007**	**F3009**	**F3009**	**F3009**
	Bowen No.	1348	1348	1348	1348	1230	1230	1230
	Price	$1,239	$1,239	$1,239	$1,239	$1,354	$1,354	$1,354
Logan Spear Grapple	**Logan Part No.**	**F3008**	**F3008**	**F3008**	**F3008**	**F3010**	**F3010**	**F3010**
	Bowen No.	17230	17230	17230	17230	17233	17233	17233
	Price	$2,340	$2,340	$2,340	$2,340	$2,500	$2,500	$2,500
Actual Catching Range:								
Minimum ID		2.921	3.046	3.170	3.264	2.280	2.351	2.390
Nominal Catch Size		2.961	3.086	3.210	3.304	2.328	2.399	2.438
Maximum ID		3.000	3.126	3.250	3.344	2.375	2.446	2.487
Old Nominal Size (inches)		3 ID & 2-15/16 ID - NX DRIVE	3-1/16 ID & 3-1/8 ID	3-1/4 ID & 3-3/16 ID	3-11/32 ID & 3-9/32 ID	2-3/8 ID	2-3/8 to 2-7/16 ID	2-7/8 Tbg 6.25 to 6.5# 2-7/8 OD

Logan Spear Grapple	**Logan Part No.**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**
	Bowen No.	1230	1230	1230	1230	1230	1230	1230
	Price	$1,354	$1,354	$1,354	$1,354	$1,354	$1,354	$1,354
Logan Spear Grapple	**Logan Part No.**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**
	Bowen No.	17233	17233	17233	17233	17233	17233	17233
	Price	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
Actual Catching Range:								
Minimum ID		2.468	2.515	2.593	2.671	2.718	2.700	2.827
Nominal Catch Size		2.516	2.562	2.641	2.718	2.766	2.748	2.875
Maximum ID		2.563	2.610	2.688	2.766	2.814	2.813	2.922
Old Nominal Size (inches)		2.562 to 2-15/32 ID	3-1/2 OD 15.5# Drill Pipe	2-11/16 2-5/8 ID	3-1/2 OD 12.4 to 13.3# Drill Pipe		2-13/16 ID & 2-3/4 ID Drill Pipe	3-1/2 OD 10.2 to 11.2#

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Note: Grapples are stenciled with nominal catch size.

Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**	**F3009**
	Bowen No.	1230	1230	1230	1230	1230	1230	1230
	Price	$1,354	$1,354	$1,354	$1,354	$1,354	$1,354	$1,354
Logan Spear Grapple	**Logan Part No.**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**	**F3010**
	Bowen No.	17233	17233	17233	17233	17233	17233	17233
	Price	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500
Actual Catching Range:								
Minimum ID		2.843	2.890	2.984	3.030	3.155	3.297	3.437
Nominal Catch Size		2.891	2.938	3.032	3.078	3.203	3.345	3.485
Maximum ID		2.938	2.992	3.079	3.125	3.250	3.392	3.532
Old Nominal Size (inches)		2-7/8 to 2-15/16 ID	3-1/2 OD 9.2 to 10.2# Tbg	3-1/2 OD 7.7# Tbg	3-1/8 3-1/16 ID	3-1/4 3-3/16 ID	3.340 to 3.382 ID	3-1/2 ID

Logan Spear Grapple	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
Logan Spear Grapple	**Logan Part No.**	**F3012**	**F3012**	**F3012**	**F3012**	**F3012**	**F3012**	**F3012**
	Bowen No.	9412	9412	9412	9412	9412	9412	9412
	Price	$2,801	$2,801	$2,801	$2,801	$2,801	$2,801	$2,801
Actual Catching Range:								
Minimum ID		2.881	2.949	3.021	3.146	3.256	3.365	3.444
Nominal Catch Size		2.933	3.001	3.073	3.198	3.308	3.417	3.496
Maximum ID		2.992	3.068	3.125	3.250	3.364	3.476	3.548
Old Nominal Size (inches)		3-1/2 OD 9.2 to 10.2# Tbg	3-1/2 OD 7.7 to 9.2#	3-1/8 ID	3-1/4 ID 3-3/16 ID	4 OD 12.5 to 14.0# Drill Pipe	4 OD 11.0 to 11.6#	4 OD 9.5 to 11.0#

Logan Spear Grapple	**Logan Part No.**	**...**	**...**	**...**	**F3014**	**F3014**	**F3014**	**F3014**
	Bowen No.	...	...	...	532	532	532	532
	Price	...	...	...	$2,575	$2,575	$2,575	$2,575
Logan Spear Grapple	**Logan Part No.**	**F3012**	**F3012**	**F3012**	**F3015**	**F3015**	**F3015**	**F3015**
	Bowen No.	9412	9412	9412	9487	9487	9487	9487
	Price	$2,801	$2,801	$2,801	$2,797	$2,797	$2,797	$2,797
Actual Catching Range:								
Minimum ID		3.522	3.584	3.646	3.218	3.327	3.406	3.484
Nominal Catch Size		3.574	3.636	3.698	3.291	3.400	3.479	3.557
Maximum ID		3.625	3.687	3.750	3.364	3.476	3.548	3.625
Old Nominal Size (inches)		3.500 to 3.625 ID	3-11/16 ID	3-3/4 ID	4 OD 12.5 to 14.0 Tbg	4 OD 11.0 to 11.6# Tbg	4 OD 9.5 to 11.0# Tbg	3-5/8 ID & 3-9/16 ID

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Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3014**	**F3014**	**F3014**	**F3014**	**F3014**	**F3014**	**F3014**
	Bowen No.	532	532	532	532	532	532	532
	Price	$2,797	$2,797	$2,797	$2,797	$2,797	$2,575	$2,660
Logan Spear Grapple	**Logan Part No.**	**F3015**	**F3015**	**F3015**	**F3015**	**F3015**	**F3015**	**F3015**
	Bowen No.	9487	9487	9487	9487	9487	9487	9487
	Price	$2,797	$2,797	$2,797	$2,797	$2,797	$2,927	$2,927
Actual Catching Range:								
Minimum ID		3.671	3.812	3.874	3.937	4.134	4.155	4.358
Nominal Catch Size		3.744	3.885	3.947	4.010	4.207	4.228	4.431
Maximum ID		3.826	3.958	4.026	4.090	4.276	4.300	4.506
Old Nominal Size (inches)		4-1/2 OD 15.3 to 18.1# Tbg	4-1/2 OD 13.7 to 15.3# Tbg	4-1/2 OD 11.0 to 13.7# Tbg	4-1/2 OD 9.5 to 11.6# Tbg	5 OD 18.0 to 21.0# Tbg	5 OD 17.7 to 18.0# Tbg	5 Tbg 12.6 to15.0# (4.408 ID)

Logan Spear Grapple	**Logan Part No.**	**F3014**	**F3014**	**F3016**	**F3016**	**F3016**	**F3016**	**F3016**
	Bowen No.	532	532	13202	13202	13202	13202	13202
	Price	$2,669	$2,669	$2,620	$2,620	$2,620	$2,620	$2,620
Logan Spear Grapple	**Logan Part No.**	**F3015**	**F3015**	**F3017**	**F3017**	**F3017**	**F3017**	**F3017**
	Bowen No.	9487	9487	17477	17477	17477	17477	17477
	Price	$2,927	$2,927	$3,663	$3,663	$3,663	$3,663	$3,663
Actual Catching Range:								
Minimum ID		4.406	4.874	3.682	3.761	3.823	3.886	4.073
Nominal Catch Size		4.479	4.947	3.782	3.861	3.923	3.986	4.173
Maximum ID		4.560	5.012	3.881	3.958	4.026	4.090	4.276
Old Nominal Size (inches)		5 OD 11.5# Tbg	5-1/2 OD 14.0 to 17.0# Tbg	4-1/2 OD 15.3 to 18.1# Tbg	4-1/2 OD 13.7 to 15.3# Tbg	4-1/2 OD 11.0 to 13.7# Tbg	4-1/2 OD 9.5 to 11.6# Csg	5 OD 18.0 to 21.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3016**	**F3016**	**F3018**	**F3018**	**F3018**	**F3018**	**F3018**
	Bowen No.	13202	13202	1334	1334	1334	1334	1334
	Price	$2,620	$2,620	$2,712	$2,712	$2,712	$2,712	$2,712
Logan Spear Grapple	**Logan Part No.**	**F3017**	**F3017**	**F3019**	**F3019**	**F3019**	**F3019**	**F3019**
	Bowen No.	17477	17477	9682	9682	9682	9682	9682
	Price	$3,663	$3,663	$3,408	$3,408	$3,408	$3,408	$3,408
Actual Catching Range:								
Minimum ID		4.214	4.307	4.093	4.234	4.390	4.469	4.515
Nominal Catch Size		4.314	4.407	4.179	4.320	4.476	4.555	4.601
Maximum ID		4.408	4.506	4.276	4.408	4.562	4.642	4.696
Old Nominal Size (inches)		5 OD 15.0 to 18.0# Csg	5 OD 12.6 to 15.0# Csg	5 OD 18.0 to 21.0# Csg	5 OD 15.0 to 18.0# Csg	5 OD 11.5 to 15.0# Csg	5 OD 9.0 to 13.0# Csg	5 OD, 8# 5-1/2 OD 23 to 25# Csg

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: Grapples are stenciled with nominal catch size.

Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3018**	**F3018**	**F3018**	**F3018**	**F3018**	**F3018**	**F3018**
	Bowen No.	1334	1334	1334	1334	1334	1334	1334
	Price	$3,438	$3,438	$3,438	$3,438	$3,438	$3,812	$3,812
Logan Spear Grapple	**Logan Part No.**	**F3019**	**F3019**	**F3019**	**F3019**	**F3019**	**F3019**	**F3019**
	Bowen No.	9682	9682	9682	9682	9682	9682	9682
	Price	$3,545	$3,545	$3,545	$3,545	$3,545	$4,089	$4,089
Actual Catching Range:								
Minimum ID		4.609	4.719	4.875	4.922	5.015	5.124	5.218
Nominal Catch Size		4.695	4.805	4.961	5.008	5.101	5.210	5.304
Maximum ID		4.782	4.892	5.048	5.095	5.192	5.297	5.390
Old Nominal Size (inches)		5-1/2 OD 20.0 to 23.0# Csg	5-1/2 OD 17.0 to 20.0# Csg	5-1/2 OD 14.0 to 17.0# Csg	5-3/4 OD 19.5 to 22.5# Csg 9.0 to 13.0# Csg	5-3/4 OD 17 to 19.5# 5-1/2 OD	5-3/4 OD 14.0 to 17.0 Csg	6 OD 20.0 to 23.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3018**	**F3018**	**F3018**	**F3022**	**F3022**	**F3022**	**F3022**
	Bowen No.	1334	1334	1334	9717	9717	9717	9717
	Price	$3,812	$3,812	$3,812	$4,180	$4,180	$4,180	$4,180
Logan Spear Grapple	**Logan Part No.**	**F3019**	**F3019**	**F3019**	**F3023**	**F3023**	**F3023**	**F3023**
	Bowen No.	9682	9682	9682	17236	17236	17236	17236
	Price	$4,088	$4,088	$4,088	$6,092	$6,092	$6,092	$6,092
Actual Catching Range:								
Minimum ID		5.281	5.375	5.500	5.000	5.093	5.187	5.280
Nominal Catch Size		5.367	5.461	5.586	5.134	5.227	5.321	5.414
Maximum ID		5.454	5.552	5.675	5.266	5.360	5.454	5.547
Old Nominal Size (inches)		6 OD 17.0 to 20.0# Csg	6 OD 14.0 to 17.0# Csg	6-5/8 OD 32.0 to 34.0# Csg	6 OD 23.0 to 26.0# Csg	6 OD 20.0 to 23.0# Csg	6 OD 17.0 to 20.0# Csg	6 OD 14.0 to 17.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3022**	**F3022**	**F3022**	**F3022**	**F3022**	**F3022**	**F3022**
	Bowen No.	9717	9717	9717	9717	9717	9717	9717
	Price	$4,180	$4,447	$4,447	$5,092	$5,092	$5,092	$5,092
Logan Spear Grapple	**Logan Part No.**	**F3023**	**F3023**	**F3023**	**F3023**	**F3023**	**F3023**	**F3023**
	Bowen No.	17236	17236	17236	17236	17236	17236	17236
	Price	$6,092	$6,399	$6,399	$7,500	$7,500	$7,500	$7,500
Actual Catching Range:								
Minimum ID		5.406	5.530	5.593	5.656	5.671	5.781	5.796
Nominal Catch Size		5.540	5.664	5.727	5.790	5.805	5.915	5.930
Maximum ID		5.675	5.797	5.860	5.923	5.938	6.049	6.063
Old Nominal Size (inches)		6 OD 10.5 to 14.0# Csg	6-5/8 OD 28.0 to 32.0# Csg	6-5/8 OD 26.0 to 29.0# Csg	6-5/8 OD 24.0 to 28.0# Csg	7 OD 38.0 to 40.0# Csg	6-5/8 OD 20.0 to 24.0# Csg	7 OD 33.7 to 38.0# Csg

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Note: Grapples are stenciled with nominal catch size.

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Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3022**	**F3022**	**F3022**	**F3022**	**F3022**	**F3022**	**F3024**
	Bowen No.	9717	9717	9717	9717	9717	9717	9268
	Price	$5,092	$5,681	$5,681	$5,681	$5,681	$5,681	$4,460
Logan Spear Grapple	**Logan Part No.**	**F3023**	**F3023**	**F3023**	**F3023**	**F3023**	**F3023**	**F3026**
	Bowen No.	17236	17236	17236	17236	17236	17236	17239
	Price	$7,500	$8,123	$8,123	$8,123	$8,123	$8,123	$9,402
Actual Catching Range:								
Minimum ID		5.875	5.937	6.015	6.140	6.202	6.281	5.770
Nominal Catch Size		6.009	6.071	6.149	6.274	6.335	6.415	5.970
Maximum ID		6.142	6.204	6.282	6.407	6.469	6.548	6.173
Old Nominal Size (inches)		6-5/8 OD 17.0 to 22.0# Csg	7 OD 29.0 to 33.7# Csg	7 OD 26.0 to 29.0# Csg	7 OD 22.0 to 26.0# Csg	7 OD 20.0 to 23.0# Csg	7 OD 17.0 to 20.0# Csg	7" 30.0-40.0# & 6-5/8 24.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**
	Bowen No.	9268	9268	9268	9268	9268	9268	9268
	Price	$4,460	$4,460	$4,460	$4,668	$4,668	$4,668	$4,668
Logan Spear Grapple	**Logan Part No.**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**
	Bowen No.	17239	17239	17239	17239	17239	17239	17239
	Price	$9,402	$9,402	$9,402	$9,800	$9,800	$9,800	$9,800
Actual Catching Range:								
Minimum ID		5.895	6.020	6.270	6.364	6.567	6.864	6.987
Nominal Catch Size		6.095	6.220	6.470	6.564	6.767	7.064	7.187
Maximum ID		6.297	6.423	6.673	6.765	6.969	7.263	7.391
Old Nominal Size (inches)		7 OD 26.0 to 35.0# Csg	7 OD 22.0 to 33.7# Csg	7 OD 13.0 to 24.0# Csg	7-5/8 OD 33.7 to 45.0# Csg	7-5/8 OD 26.4 to 39.0# Csg	7-5/8 OD 14.7 to 26.4# Csg	8-1/8 OD 32.0 to 42.0#Csg

Logan Spear Grapple	**Logan Part No.**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**	**F3024**
	Bowen No.	9268	9268	9268	9268	9268	9268	9268
	Price	$5,878	$5,878	$5,878	$5,878	$6,151	$6,151	$7,734
Logan Spear Grapple	**Logan Part No.**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**	**F3026**
	Bowen No.	17239	17239	17239	17239	17239	17239	17239
	Price	$10,063	$10,063	$10,063	$10,063	$10,489	$10,489	$11,016
Actual Catching Range:								
Minimum ID		7.225	7.239	7.489	7.755	7.911	7.958	8.692
Nominal Catch Size		7.425	7.439	7.689	7.955	8.111	8.158	8.892
Maximum ID		7.628	7.642	7.892	8.157	8.313	8.360	9.094
Old Nominal Size (inches)		8 OD 16.0 to 26.0# Csg	7-9/16 ID	8-5/8 OD 34.0 to 48.0# Csg	8-5/8 24.0-38.0#, 9" 55# Csg	8-5/8 OD 17.6 to 29.3# Csg	9 OD 34.0 to 45.0# Csg	9-5/8 OD 29.3 to 42.0# Csg

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Note: Grapples are stenciled with nominal catch size.

Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**F3024**	**F3029**	**F3029**	**F3029**	**F3029**	**F3029**	**F3029**
	Bowen No.	9268	9382	9382	9382	9382	9382	9382
	Price	$7,732	$6,566	$6,566	$6,566	$7,770	$7,770	$7,770
Logan Spear Grapple	**Logan Part No.**	**F3026**	**F3030**	**F3030**	**F3030**	**F3030**	**F3030**	**F3030**
	Bowen No.	17239	17245	17245	17245	17245	17245	17245
	Price	$10,489	$9,328	$9,328	$9,328	$10,635	$10,635	$10,635
Actual Catching Range:								
Minimum ID		8.442	7.537	7.729	7.981	8.435	8.535	8.760
Nominal Catch Size		8.642	7.690	7.882	8.134	8.588	8.688	8.913
Maximum ID		8.884	7.846	8.034	8.315	8.755	8.846	9.065
Old Nominal Size (inches)		9-5/8 OD 43.5 to 53.5# Csg	8-5/8 OD 36.0 to 48.0# Csg	8-5/8 28.0 to 38.0#, 9 OD 45.0 to 55.0# Csg	8-5/8 17.5 to 29.3#, 9 OD 34.0 to 45.0# Csg	9 OD 19.0# & 9-5/8 OD 43.5 to 58.0# Csg	9-5/8 OD 40.0 to 53.5# Csg	9-5/8 OD 29.3 to 42.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3029**	**205-000 ***	**205-000 ***	**205-000 ***	**205-000 ***	**205-000 ***	**205-000 ***
	Bowen No.	9382	9382	9382	9382	9382	9382	9382
	Price	$7,770	$15,874	$15,874	$17,012	$17,012	$18,420	$18,580
Logan Spear Grapple	**Logan Part No.**	**205-001 ***	**205-001 ***	**205-001 ***	**205-001 ***	**205-001 ***	**205-001 ***	**205-001 ***
	Bowen No.	17245	17245	17245	17245	17245	17245	17245
	Price	$23,742	$23,742	$23,714	$24,671	$24,671	$26,641	$26,641
Actual Catching Range:								
Minimum ID		9.479	9.760	9.885	10.729	10.854	12.228	12.415
Nominal Catch Size		9.632	9.913	10.038	10.882	11.007	12.381	12.568
Maximum ID		9.784	10.065	10.192	11.034	11.159	12.534	12.721
Old Nominal Size (inches)		10-3/4 OD 55.5 to 65.7# Csg	10-3/4 OD 40.0 to 55.5# Csg	10-3/4 OD 32.7 to 48.0# Csg	11-3/4 OD 47.0 to 60.0# Csg	11-3/4 OD 38.0 to 54.0# Csg	13-3/8 OD 61.0 to 85.0# Csg	13-3/8 OD 48.0 to 68.0# Csg

Logan Spear Grapple	**Logan Part No.**	**F3032**	**F3032**	**F3032**	**F3032**	**F3032**	**F3032**	**F3032**
	Bowen No.	9283	9283	9283	9283	9283	9283	9283
	Price	$6,406	$6,406	$6,406	$6,406	$8,444	$8,444	$8,444
Logan Spear Grapple	**Logan Part No.**	**F3034**	**F3034**	**F3034**	**F3034**	**F3034**	**F3034**	**F3034**
	Bowen No.	17248	17248	17248	17248	17248	17248	17248
	Price	$10,623	$10,623	$10,623	$10,623	$12,594	$12,594	$12,594
Actual Catching Range:								
Minimum ID		8.435	8.519	8.596	8.738	9.738	9.867	9.225
Nominal Catch Size		8.597	8.681	8.758	8.900	9.900	10.029	9.387
Maximum ID		8.755	8.844	8.921	9.063	10.063	10.192	9.550
Old Nominal Size (inches)		9-5/8 OD 43.5 to 58.0# Csg	9-5/8 OD 40.0 to 53.5# Csg	9-5/8 OD 36.0 to 43.5# Csg	9-5/8 OD 29.3 to 40.0# Csg	10-3/4 OD 40.0 to 55.5# Csg	10-3/4 OD 32.7 to 48.0# Csg	10-3/4 OD 71.0 to 76.0# Csg

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Note: Grapples are stenciled with nominal catch size.

** Segmented Grapples*

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Logan Releasing Spear Grapple Range Chart

Logan Spear Grapple	**Logan Part No.**	**205-002 ***	**F3032**	**F3032**	**F3032**	**F3032**	**205-002 ***	**205-002 ***
	Bowen No.	9283	9283	9283	9283	9283	9283	9283
	Price	$17,855	$11,045	$11,045	$11,045	$11,045	$17,811	$17,811
Logan Spear Grapple	**Logan Part No.**	**205-003 ***	**F3034**	**F3034**	**F3034**	**F3034**	**205-003 ***	**205-003 ***
	Bowen No.	17248	17248	17248	17248	17248	17248	17248
	Price	$25,527	$15,873	$15,873	$15,873	$15,873	$25,465	$25,465
Actual Catching Range:								
Minimum ID		11.206	10.581	10.832	10.612	10.675	11.643	11.674
Nominal Catch Size		11.369	10.743	10.994	10.774	10.837	11.805	11.837
Maximum ID		11.531	10.906	11.157	10.937	11.000	11.968	12.000
Old Nominal Size (inches)		11.5 ID	11-3/4 OD 54.0 to 65.0# Csg	11-3/4 OD 38.0 to 54.0# Csg	11-3/4 OD 60.0# Csg	11-3/4 OD 47.0 to 60.0# Csg	13-3/8 OD 11.937 ID Csg	13-3/8 OD 96.0#, 11.975 ID Csg

Logan Spear Grapple	**Logan Part No.**	**205-002 ***	**205-002 ***	**205-002 ***	**205-002 ***	**205-002 ***	**205-002 ***	**205-002 ***
	Bowen No.	9283	9283	9283	9283	9283	9283	9283
	Price	$17,812	$17,811	$17,811	$18,622	$18,622	$18,622	$19,217
Logan Spear Grapple	**Logan Part No.**	**205-003 ***	**205-003 ***	**205-003 ***	**205-003 ***	**205-003 ***	**205-003 ***	**205-003 ***
	Bowen No.	17248	17248	17248	17248	17248	17248	17248
	Price	$25,463	$25,465	$25,465	$26,247	$26,247	$26,247	$30,112
Actual Catching Range:								
Minimum ID		12.022	12.393	12.455	13.143	13.312	13.330	15.112
Nominal Catch Size		12.184	12.555	12.617	13.305	13.474	13.492	15.274
Maximum ID		12.347	12.718	12.780	13.468	13.637	13.655	15.437
Old Nominal Size (inches)		13-3/8 OD 72.0 to 85.0# Csg	13-3/8 OD 48.0 to 68.0# Csg	12-3/4 ID	14 OD 42.0 to 57.0# Csg	13.599 to 13.609 ID	13-5/8 ID	16 OD 55.0 to 75.0# Csg

Logan Spear Grapple	**Logan Part No.**	**205-002 ***	**205-002 ***	**205-002 ***	**205-002 ***			
	Bowen No.	9283	9283	9283	9283			
	Price	$19,217	$29,447	$29,447	$29,447			
Logan Spear Grapple	**Logan Part No.**	**205-003 ***	**205-003 ***	**205-003 ***	**205-003 ***			
	Bowen No.	17248	17248	17248	17248			
	Price	$25,463	$45,865	$45,865	$45,865			
Actual Catching Range:								
Minimum ID		14.925	17.331	18.862	17.487			
Nominal Catch Size		15.087	17.493	19.024	17.650			
Maximum ID		15.250	17.656	19.187	17.812			
Old Nominal Size (inches)		16 OD 65.0 to 84.0# Csg	17-1/2 ID	20 OD 90.0 to 106.5# Csg	18-5/8 OD 87.5# Csg			

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** Segmented Grapples*

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LOGAN RELEASING SPEAR PACKOFF ASSEMBLIES

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Logan Releasing Spear Packoff Assemblies

CASING SIZE TO PACKOFF		1-1/2 Tbg	2-3/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4 Tbg	4-1/2 Tbg	5 Csg
OD ADAPTER SUB (INCHES)		1-1/4	1-13/16	1-13/16	2-1/2	3-1/4	3-1/2	4
OD INTEGRAL NUT (INCHES)		1	1-3/4	2	2	2-1/2	3-1/4	3-1/8
PACKOFF ASSEMBLY	**Logan Part No.**	**400-036**	**400-037**	**400-038**	**400-039**	**400-040**	**400-041**	**400-042**
	Price	*	$3,460	$3,590	$3,884	$5,315	$5,487	$6,525
MANDREL	**Logan Part No.**	**F6000**	**F6001**	**F6002**	**F6003**	**F6004**	**F6005**	**F6006**
	Price	$996	$1,167	$1,203	$1,320	$1,836	$1,748	$2,155
ADAPTER SUB	**Logan Part No.**	**F7000**	**F7001**	**F7002**	**F7003**	**F7004**	**F7005**	**F7006**
	Std. Length	6	8	8	8	8	9	10
	Price	$783	$943	$977	$1,040	$1,059	$1,163	$1,089
PACKING CUP	**Logan Part No.**	**F8000**	**F8001**	**F8002**	**F8003**	**F8004**	**F8005**	**F8006**
	Price	*	$251	$265	$365	$589	$429	$581
THIMBLE	**Logan Part No.**	**F9000**	**F9001**	**F9002**	**F9003**	**F9004**	**F9005**	**F9006**
	Price	*	$162	$172	$346	$346	$470	$943
STABILIZER	**Logan Part No.**	**F10000**	**F10001**	**F10002**	**F10003**	**F10004**	**F10005**	**F10006**
	Price	*	$937	$973	$1,265	$1,454	$1,675	$1,751
CAN BE DRESSED TO PACKOFF				3-1/2 DP	4 Tbg		4-1/2 Csg & 4-3/4 Csg	

CASING SIZE TO PACKOFF		5-1/2 Csg	6 Csg	6-5/8 Csg	8 Csg	9-5/8 Csg	10-3/4 Csg	11-3/4 Csg
OD ADAPTER SUB (INCHES)		4	4-3/4	4-3/4	6-1/8	6-3/8	8	8
OD INTEGRAL NUT (INCHES)		4	4-1/2	4-3/4	6-3/8	6-3/8	8	8
PACKOFF ASSEMBLY	**Logan Part No.**	**400-043**	**400-044**	**400-045**	**400-046**	**400-047**	**400-048**	**400-055**
	Price	$6,765	$7,084	$7,326	*	$10,380	$14,959	$16,633
MANDREL	**Logan Part No.**	**F6007**	**F6008**	**F6009**	**F6011**	**F6011**	**F6013**	**F6013**
	Price	$2,005	$2,306	$2,434	$2,962	$2,962	$5,230	$5,230
ADAPTER SUB	**Logan Part No.**	**F7006**	**F7007**	**F7007**	**F7009**	**F7009**	**F7009**	**F7009**
	Std. Length	10	12	12	12	12	12	12
	Price	$1,341	$1,495	$1,495	$1,778	$2,212	$2,642	$2,642
PACKING CUP	**Logan Part No.**	**F8007**	**F8008**	**F8009**	**F8009**	**F8011**	**F8012**	**F80125**
	Price	$954	$882	$780	*	$1,000	$2,112	$2,229
THIMBLE	**Logan Part No.**	**F9007**	**F9008**	**F9009**	**F9009**	**F9011**	**F9012**	**F90125**
	Price	$948	$899	$993	*	$1,533	$2,942	$3,919
STABILIZER	**Logan Part No.**	**F10007**	**F10008**	**F10009**	**F10011**	**F10011**	**F10012**	**F100125**
	Price	$1,763	$1,797	$1,861	$2,495	$2,495	$3,604	$4,198
CAN BE DRESSED TO PACKOFF		5-3/4 Csg		7 & 7-5/8 Csg	8-5/8 Csg 9 Csg			

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** Available upon request.*

When ordering, please specify:

(1) Part description and part number of item desired

(2) Size and type of top connection

(3) Size and weight of pipe to run in

Recommended Spare Parts:

(1) 2 Packers for each size

(2) 1 Thimble for each size

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Logan Releasing Spear Packoff Assemblies

CASING SIZE TO PACKOFF		13-3/8 Csg	16 Csg	18-5/8 Csg	20 Csg			
OD ADAPTER SUB (INCHES)		8	8	8	8			
OD INTEGRAL NUT (INCHES)		8	8	8	8			
PACKOFF ASSEMBLY	**Logan Part No.**	**400-049**	**400-066**	**400-067**	**400-068**			
	Price	$19,584	$21,348	$24,653	$23,937			
MANDREL	**Logan Part No.**	**F6013**	**F6013**	**F6013**	**F6013**			
	Price	$5,230	$5,310	$5,310	$5,310			
ADAPTER SUB	**Logan Part No.**	**F7009**	**F7009**	**F7009**	**F7009**			
	Std. Length	12	12	12	12			
	Price	$2,211	$2,211	$2,211	$2,211			
PACKING CUP	**Logan Part No.**	**F8013**	**F8014**	**F8015**	**F8016**			
	Price	$3,136	$8,688	$8,304	$8,465			
THIMBLE	**Logan Part No.**	**F9013**	*not req'd*	*not req'd*	*not req'd*			
	Price	$4,393	...	...	...			
STABILIZER	**Logan Part No.**	**F10013**	**F10014**	**F10015**	**F10016**			
	Price	$4,615	$5,137	$5,810	$7,948			
CAN BE DRESSED TO PACKOFF		13-5/8 Csg						

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

When ordering, please specify:

(1) Part description and part number of item desired

(2) Size and type of top connection

(3) Size and weight of pipe to run in

Recommended Spare Parts:

(1) 2 Packers for each size

(2) 1 Thimble for each size

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LOGAN RELEASING SPEAR STOP SUB ASSEMBLIES

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Logan Releasing Spear Stop Sub Assemblies

STANDARD STOP SUB & FLUSH MANDREL OD		2-5/16	3-1/8	3-1/2	3-5/8	4-1/32	5	5-3/4
STOP SUB ASSEMBLY	**Logan Part No.**	**400-071**	**400-064**	**400-063**	**400-050**	**400-051**	**400-052**	**400-053**
	Price	$3,801	$3,452	$4,454	$3,484	$4,133	$4,008	$4,825
STOP SUB (2 PCS. REQ'D)								
UPPER SECTION 18" LENGTH	**Logan Part No.**	**F11009-A**	**F110002-A**	**F110005-A**	**F11000-A**	**F11001-A**	**F11002-A**	**F11003-A**
	Price	$1,583	$1,410	$1,706	$1,611	$1,893	$1,770	$1,960
LOWER SECTION 12" LENGTH	**Logan Part No.**	**F11009-B**	**F110002-B**	**F110005-B**	**F11000-B**	**F11001-B**	**F11002-B**	**F11003-B**
	Price	$1,583	$1,139	$2,278	$1,308	$1,515	$1,432	$1,583
STOP RING	**Logan Part No.**	**F12009**	**F120002**	**F120005**	**F12000**	**F12001**	**F12002**	**F12003**
	Minimum O.D.	3	4-1/8	4-1/8	4-1/2	5	6	7
	Price	$638	$905	$469	$566	$724	$806	$1,283

STANDARD STOP SUB & FLUSH MANDREL O.D.		7-1/4	7-3/4	8-1/4	11-3/4			
STOP SUB ASSEMBLY	**Logan Part No.**	**400-054**	**400-062**	**400-065**	**400-056**			
	Price	$6,926	$6,928	$8,400	*			
STOP SUB (2 PCS. REQ'D)								
UPPER SECTION 18" LENGTH	**Logan Part No.**	**F11004-A**	**F11005-A**	**F11015-A**	**F11006-A**			
	Price	$3,005	$2,978	$3,630	*			
LOWER SECTION 12" LENGTH	**Logan Part No.**	**F11004-B**	**F11005-B**	**F11015-B**	**F11006-B**			
	Price	$2,248	$2,191	$2,697	*			
STOP RING	**Logan Part No.**	**F12004**	**F12005**	**F12015**	**F12006**			
	Minimum O.D.	8-5/8	9-5/8	9-5/8	13-3/8			
	Price	$1,672	$1,761	$1,984	*			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Note: All Stop Rings are furnished with left-hand threads.

To oversize add 10% to the Upper and Lower Section price for each 1/4" or portion thereof.

When ordering, please specify:

(1) O.D. of Stop Subs

(2) Length from Stop to threaded connection

(3) Top and bottom connection desired

(4) Spear assembly number that the Stop Sub will be used in conjunction with

(5) O.D. of Stop Ring

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Logan/HE EFL Rotating and Releasing Spears

Nominal - Size-Inches		2	2-3/8	3	4	4	5
Catch Size - Inches		2" Tubing	2-7/8" Tubing	3-1/2" Tubing	4" Casing	4-1/2" Casing	5" Casing
Spear O.D. - Inches		1-29/32'	2-5/16"	2-11/16"	3-1/8"	3-1/8"	4-1/16"
Spear I.D. - Inches		3/8"	3/8"	1/2"	1"	1"	1-1/4"
Complete Assembly	**Logan Part No.**	**14272**	**14273**	**14274**	**14275**	**14275**	**14276**

REPLACEMENT PARTS

TOP COUPLING	**Logan Part No.**	**213920**	**213925**	**213931**	**213940**	**213940**	**313101**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**313097**	**313098**	**213930**	**313099**	**313099**	**313100**
	No. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK RING	**Logan Part No.**	**213921**	**213926**	**213932**	**113638**	**113638**	**213944**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG	**Logan Part No.**	**113632**	**113634**	**113636**	**113639**	**113639**	**113642**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG SCREW	**Logan Part No.**	**113706**	**113706**	**113706**	**113706**	**113706**	**113703**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
BULL PLUG	**Logan Part No.**	**113633**	**113635**	**113637**	**113640**	**113640**	**113641**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
Slip (Smallest Catch Size)	**Logan Part No.**	**213922**	**213929**	**213934**	**213941**	**213945**	**213953**
	Qty. Req'd	2-3/8" 5.8-6.65	2-7/8" 6.4	3-1/2" 12.7-13.3	4" 14.0	4-1/2" 20.0	5" 18.0-20.8
	Price	*	*	*	*	*	*

SLIPS - ADDITIONAL CATCH SIZES

SLIP	**Logan Part No.**	**213623**	**214609**	**213936**	**213942**	**213947**	**213954**
	Casing Size/Wt	2-3/8" 4.0-4.85	3-1/2" 14.9-15.5	3-1/2" 9.2-10.2	4"- 9.5-11.85	4-1/2" 16.6-13.5	5" 13.0-15.0
	Price	*	*	*	*	*	*
SLIP	**Logan Part No.**	**214607**	**...**	**213938**	**...**	**213942**	**213955**
	Casing Size/Wt	2-7/8" 10.4	...	3-1/2" 9.5-11.85	...	4-1/2" DP 11.85	5" 11.5
	Price	*	...	*	...	*	*
SLIP	**Logan Part No.**	**214608**	**...**	**...**	**...**	**...**	**...**
	Casing Size/Wt	2-7/8" 7.9-8.7	...	...	...	...	...
	Price	*	...	...	...	...	...
SLIP	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Casing Size/Wt	...	...	...	...	...	...
	Price	...	...	...	...	...	...
SLIP	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Casing Size/Wt	...	...	...	...	...	...
	Price	...	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Complete assembly includes the smallest catch available, larger sizes are additional, mandrel threaded with bull plug standard.

Note: Slips to catch additional catch range sizes are available on request.

Slips listed are less Flange, Flange Type Slips are available upon request.

When ordering, please specify:

(1) Tool joint connection required

(2) Size and weight of Tubing or Casing to be caught

Recommended Spare Parts:
Qty. 1 set of Lock Lugs

Qty. 1 set of Lock Lug Screws

Qty. 1 extra Slip for each size Tubing or Casing

Logan/HE EFL Rotating and Releasing Spears

Nominal - Size-Inches		5	6-5/8	6-5/8	6-5/8	8-5/8	8-5/8
Catch Size - Inches		5-1/2" Casing	6-5/8" Casing	7" Casing	7-5/8" Casing	8-5/8" Casing	9-5/8" Casing
Spear O.D. - Inches		4-1/16"	5-11/16"	5-11/16"	5-11/16"	7-1/4"	7-1/4"
Spear I.D. - Inches		1-1/4"	2-1/4"	2-1/4"	2-1/4"	3"	3"
Complete Assembly	**Logan Part No.**	**14276**	**14277**	**14277**	**14277**	**14278**	**14278**

REPLACEMENT PARTS

TOP COUPLING	**Logan Part No.**	**313101**	**113643**	**113643**	**113643**	**213970**	**213970**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**313100**	**313102**	**313102**	**313102**	**313103**	**313103**
	No. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK RING	**Logan Part No.**	**213944**	**113644**	**113644**	**113644**	**113648**	**113648**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG	**Logan Part No.**	**113642**	**113645**	**113645**	**113645**	**113647**	**113647**
	Qty. Req'd	1	3	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG SCREW	**Logan Part No.**	**113703**	**113704**	**113704**	**113704**	**113704**	**113704**
	Qty. Req'd	1	3	1	1	1	1
	Price	*	*	*	*	*	*
BULL PLUG	**Logan Part No.**	**113641**	**113646**	**113646**	**113646**	**113649**	**113649**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
SLIP (SMALLEST CATCH SIZE)	**Logan Part No.**	**213956**	**213959**	**213959**	**213965**	**213971**	**214565**
	Qty. Req'd	5-1/2" 14.0-21.0	6-5/8" 24.0-28.0	7"38.0	7-5/8" 45.3	8-5/8" 44.0-49.0	9-5/8" 71.8
	Price	*	*	*	*	*	*

SLIPS - ADDITIONAL CATCH SIZES

SLIP	**Logan Part No.**	**213957**	**213960**	**214588**	**213966**	**213972**	**213976**
	Casing Size/Wt	5-1/2" 14.0-17.0	6-5/8" 20.0	7" 32.0-35.0	7-5/8"39.0	8-5/8" 36.0-40.0	9-5/8" 53.5-58.4
	Price	*	*	*	*	*	*
SLIP	**Logan Part No.**	**214607**	**...**	**213962**	**213967**	**213973**	**214563**
	Casing Size/Wt	5-3/4" 18.8	...	7" 29.0	7-5/8" 29.7-33.7	8-5/8" 28.0-32.0	9-5/8" 43.5-47.0
	Price	*	...	*	*	*	*
SLIP	**Logan Part No.**	**214610**	**...**	**213963**	**213968**	**213974**	**214562**
	Casing Size/Wt	6-5/8" 32.0	...	7" 23.0-26.0	7-5/8" 24.0-25.4	8-5/8" 24.0	9-5/8" 36.0-40.0
	Price	*	...	*	*	*	*
SLIP	**Logan Part No.**	**...**	**...**	**216923**	**213969**	**...**	**213978**
	Casing Size/Wt	...	...	7" 20.0-23.0	7-5/8" 20.0	...	9-5/8" 29.3-32.3
	Price	...	...	...	*	...	*
SLIP	**Logan Part No.**	**...**	**...**	**...**	**214549**	**...**	**214564**
	Casing Size/Wt	...	...	...	8" 30.54	...	9-5/8" 61.10
	Price	...	...	...	*	...	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Complete assembly includes the smallest catch available, larger sizes are additional, mandrel threaded with bull plug standard.

Note: Slips to catch additional catch range sizes are available on request.

Slips listed are less Flange, Flange Type Slips are available upon request.

When ordering, please specify:

(1) Tool joint connection required

(2) Size and weight of Tubing or Casing to be caught

Recommended Spare Parts:
Qty. 1 set of Lock Lugs

Qty. 1 set of Lock Lug Screws

Qty. 1 extra Slip for each size Tubing or Casing

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Logan/HE EFL Rotating and Releasing Spears

Nominal - Size-Inches		8-5/8	8-5/8	13-3/8	13-3/8	13-3/8	13-3/8
Catch Size - Inches		10-3/4" Casing	11-3/4" Casing	13-3/8" Casing	16" Casing	18-5/8" Casing	20" Casing
Spear O.D. - Inches		7-1/4"	7-1/4"	11-3/4"	11-3/4"	11-3/4"	11-3/4"
Spear I.D. - Inches		3"	3"	3-1/4"	3-1/4"	3-1/4"	3-1/4"
Complete Assembly	**Logan Part No.**	**14278**	**14278**	**14279**	**14279**	**14279**	**14279**

REPLACEMENT PARTS

TOP COUPLING	**Logan Part No.**	**213970**	**213970**	**213986**	**213986**	**213986**	**213986**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**313103**	**313103**	**213985**	**213985**	**213985**	**213985**
	No. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK RING	**Logan Part No.**	**113648**	**113648**	**113652**	**113652**	**113652**	**113652**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG	**Logan Part No.**	**113647**	**113647**	**113650**	**113650**	**113650**	**113650**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
LOCK LUG SCREW	**Logan Part No.**	**113704**	**113704**	**113705**	**113705**	**113705**	**113705**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
BULL PLUG	**Logan Part No.**	**113649**	**113649**	**113651**	**113651**	**113651**	**113651**
	Qty. Req'd	1	1	1	1	1	1
	Price	*	*	*	*	*	*
SLIP (SMALLEST CATCH SIZE)	**Logan Part No.**	**213979**	**213979**	**213987**	**216625**	**14730**	**14731**
	Qty. Req'd	10-3/4" 65.7-71.1	11-3/4" 54.0-60.0	13-3/8" 98.0	16" 109.0	18-5/8" 87.5	20" 133.0
	Price	*	*	*	*	*	*

SLIPS - ADDITIONAL CATCH SIZES

SLIP	**Logan Part No.**	**213980**	**213984**	**213988**	**216626**	**...**	**14732**
	Casing Size/Wt	10-3/4" 55.5-60.7	11-3/4" 42.0-47.0	13-3/8" 77.0-85.0	16" 75.0-84.0	...	20" 94.0-106.5
	Price	*	*	*	*	*	*
SLIP	**Logan Part No.**	**213981**	**...**	**213989**	**216627**	**...**	**...**
	Casing Size/Wt	10-3/4" 45.5-51.0	...	13-3/8" 68.0-72.0	16" 65.0	...	...
	Price	*	...	*	*	...	...
SLIP	**Logan Part No.**	**213982**		**213990**	**...**	**...**	**...**
	Casing Size/Wt	10-3/4" 32.75-40.5		13-3/8" 54.5-61.0	...	...	...
	Price	*	...	*	...	...	...
SLIP	**Logan Part No.**	**...**	**...**	**213991**	**...**	**...**	**...**
	Casing Size/Wt	...	...	13-3/8" 48.0	...	...	...
	Price	...	...	...	...	...	...
SLIP	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Casing Size/Wt	...	...	...	...	...	...
	Price	...	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Complete assembly includes the smallest catch available, larger sizes are additional, mandrel threaded with bull plug standard.

Note: Slips to catch additional catch range sizes are available on request.

Slips listed are less Flange, Flange Type Slips are available upon request.

When ordering, please specify:

(1) Tool joint connection required

(2) Size and weight of Tubing or Casing to be caught

Recommended Spare Parts:
Qty. 1 set of Lock Lugs

Qty. 1 set of Lock Lug Screws

Qty. 1 extra Slip for each size Tubing or Casing

Logan/HE EFL Rotating and Releasing Spears

Nominal - Size-Inches		8-5/8	8-5/8	13-3/8	13-3/8	13-3/8	13-3/8
Catch Size - Inches		10-3/4" Casing	11-3/4" Casing	13-3/8" Casing	16" Casing	18-5/8" Casing	20" Casing
Spear O.D. - Inches		7-1/4"	7-1/4"	11-3/4"	11-3/4"	11-3/4"	11-3/4"
Spear I.D. - Inches		3"	3"	3-1/4"	3-1/4"	3-1/4"	3-1/4"
Complete Assembly	**Logan Part No.**	**14278**	**14278**	**14279**	**14279**	**14279**	**14279**

REPLACEMENT PARTS

SLIP CARRIER (MASTER SLIP)	**Logan Part No.**	**...**	**...**	**...**	**...**	**313163**	**313163**
	...	...	...	...	...	1	1
	Price	...	...	...	...	*	*
SLIP SEGMENT (SET OF 8)	**Logan Part No.**	**...**	**...**	**...**	**...**	**213995**	**213996**
	Casing Size ...	...	...	...	18-5/8" 87.5	20" 133.0	
	Price	...	...	...	...	*	*
SLIP SEGMENT (SET OF 8)	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**213997**
	Casing Size ...	...	...	...	...	20"94.0-106.	
	Price	...	...	...	...	...	*
SEGMENT BOLTS	**Logan Part No.**	**...**	**...**	**...**	**...**	**113956**	**113956**
	Qty. Req'd	...	...	...	...	16	16
	Price	...	...	...	...	*	*
SLIP CARRIER STOP RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**313093**	**313093**
	Qty. Req'd	...	...	...	...	1	1
	Price	...	...	...	...	*	*

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Complete assembly includes the smallest catch available, larger sizes are additional, mandrel threaded with bull plug standard.

Note: Slips to catch additional catch range sizes are available on request.

Slips listed are less Flange, Flange Type Slips are available upon request.

When ordering, please specify:

(1) Tool joint connection required

(2) Size and weight of Tubing or Casing to be caught

Recommended Spare Parts:
Qty. 1 set of Lock Lugs

Qty. 1 set of Lock Lug Screws

Qty. 1 extra Slip for each size Tubing or Casing

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LOGAN TAPER TAPS

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Logan Taper Taps

COMPLETE ASSEMBLY	Logan Part No.	203-150	203-175	203-181	203-190	203-231	203-238	203-306
	Price	$1,461	$1,565	$1,565	$1,565	$1,647	$1,649	$2,034
NOMINAL SIZE		5/8 SR	3/4 SR	1-13/16 FJ	1 EUE	7/8 SR	1-1/4 EUE	2-3/8 EUE
O.D.		1-1/2	1-3/4	1-13/16	1.9	2-5/16	2-3/8	3-1/16
TO CATCH		1/2 to 1 ID	5/8 to 1-1/4 ID	3/4 to 1-3/8 ID	1 PIPE	7/8 to 1-1/2 ID	1-1/4 PIPE	2-3/8 OD CPL
DIAMETER OF SMALLEST WICKER		3/8	1/2	5/8	3/4	3/4	7/8	1-5/8
DIAMETER OF LARGEST WICKER		1-1/4	1-1/2	1-5/8	1-3/4	1-3/4	1-7/8	2-5/8
LENGTH OF TAPER	Inches	14	16	16	16	16	16	16
	Price	$1,461	$1,565	$1,565	$1,565	$1,647	$1,649	$2,034
ADDITIONAL LENGTH	Price Per Inch	$77	$77	$77	$110	$129	$160	$160

COMPLETE ASSEMBLY	Logan Part No.	203-313	203-338	203-363	203-375	203-413	203-425	203-463
	Price	$2,034	$2,197	$3,450	$2,429	$2,571	$2,899	$3,130
NOMINAL SIZE		2-3/8 Reg	2-3/8 IF	2-3/8 Reg	2-7/8 Reg	2-7/8 IF	3-1/2 Reg	3-1/2 FH
O.D.		3-1/8	3-3/8	3-5/8	3-3/4	4-1/8	4-1/4	4-5/8
TO CATCH		2-3/8 Reg	2-3/8 IF HYD	2-3/8 Reg	2-7/8 Reg	2-7/8 PIPE API	3-1/2 Reg	3-1/2 PIPE API, FH
DIAMETER OF SMALLEST WICKER		5/8	1-3/8	1-1/2	7/8	1-3/4	1	1-5/8
DIAMETER OF LARGEST WICKER		1-5/8	2-3/8	3	1-7/8	2-3/4	2-1/2	3-1/8
LENGTH OF TAPER	Inches	16	16	24	16	16	24	24
	Price	$2,034	$2,197	$3,450	$2,429	$2,571	$2,899	$3,130
ADDITIONAL LENGTH	Price Per Inch	$160	$160	$160	$160	$162	$162	$162

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: For left-hand application add 20%.

When ordering, please specify:

(1) Assembly number
(2) Size of fish to be caught
(3) Size and type of top connection
(4) Fluted or non-futed wickers; same price
(5) Threaded for skirt with skirt thread protector. An additional charge will apply (add 10% to our list price).

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Logan Taper Taps

COMPLETE ASSEMBLY	Logan Part No.	203-475	203-500	203-525	203-550	203-575	203-600	203-613
	Price	$3,130	$3,584	$3,859	$4,069	$4,286	$4,678	$4,678
NOMINAL SIZE		3-1/2 IF	4-1/2 REED DS	4 FH	4-1/2 Reg	4-1/2 FH	4-1/2 XH	4-1/2 IF
O.D.		4-3/4	5	5 1/4	5 1/2	5 3/4	6	6-1/8
TO CATCH		3-1/2 IF 3-1/2 PIPE	4-1/2 REED DS	4 FH	4-1/2 Reg	4 IF 4 PIPE 4-1/2 FH 4-1/2 PIPE	4-1/2 XH	4-1/2 IF 4-1/2 PIPE
DIAMETER OF SMALLEST WICKER		2-3/16	2-5/16	2-5/16	1-3/4	2-5/8	2-7/8	3-1/4
DIAMETER OF LARGEST WICKER		3-11/16	3-13/16	3-15/16	3-3/8	4-1/4	4-1/2	4-3/4
LENGTH OF TAPER	Inches	24	24	26	26	26	26	24
	Price	$3,130	$3,584	$3,859	$4,069	$4,286	$4,678	$4,678
ADDITIONAL LENGTH	Price Per Inch	$162	$172	$172	$172	$172	$183	$183

COMPLETE ASSEMBLY	Logan Part No.	203-675	203-700	203-738	203-775	203-800		
	Price	$5,300	$5,790	$6,949	$6,420	$7,179		
NOMINAL SIZE		5-1/2 Reg	5-1/2 FH	5-1/2 IF	6-5/8 Reg	6-5/8 Reg		
O.D.		6-3/4	7	7-3/8	7-3/4	8		
TO CATCH		5-1/2 OR 5-9/16 Reg	5-1/2 OR 5-9/16 FH PIPE	5-1/2 OR 5-9/16 IF PIPE	6-5/8 Reg	6-5/8 FH IF PIPE		
DIAMETER OF SMALLEST WICKER		2-1/4	3-5/8	4-1/4	3	4-5/8		
DIAMETER OF LARGEST WICKER		4	5-3/8	6	4-3/4	6-3/8		
LENGTH OF TAPER	Inches	28	28	28	28	28		
	Price	$5,300	$5,790	$6,949	$6,420	$7,179		
ADDITIONAL LENGTH	Price Per Inch	$199	$207	$207	$223	$233		

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: For left-hand application add 20%.

When ordering, please specify:

(1) Assembly number
(2) Size of fish to be caught
(3) Size and type of top connection
(4) Fluted or non-futed wickers; same price
(5) Threaded for skirt with skirt thread protector. An additional charge will apply (add 10% to our list price).

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LOGAN CORE TYPE JUNK BASKETS

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Logan Core Type Junk Baskets

HOLE SIZE		3-3/4 to 4-1/8	4-1/4 to 4-1/2	4-5/8 to 5	4-5/8 to 5	5-1/8 to 5-1/2	5-5/8 to 6	5-5/8 to 6
BARREL O.D.		3-5/8	3-3/4	3-7/8	3-7/8	4-1/4	5-1/8	4-3/4
SHOE O.D.		3-5/8	4-1/16	4-1/2	4-1/2	4-7/8	5-1/8	5-3/8
MAXIMUM DIAMETER OF FISH		2-23/32	2-31/32	3-9/32	3-3/8	3-23/32	3-25/32	4-1/16
COMPLETE ASSEMBLY	Logan Part No.	301-363	301-375	301-388	301-387	301-425	301-512	301-475
	Bowen No.	14590	14586	14595	19375	14600	59993	14605
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**E1000**	**E1001**	**E1002**	**E1002**	**E1003**	**D1004**	**E1004**
	Bowen No.	14725	14726	14727	14727	14728	2619	14729
	Price	*	*	*	*	*	*	*
BARREL	**Logan Part No.**	**E2000**	**E2001**	**E20015**	**E2002**	**E2003**	**E20035**	**E2004**
	Bowen No.	14591	14587	14596	19376	14601	14746	14606
	Price	*	*	*	*	*	*	*
UPPER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**600-083**	**500-014**
	Bowen No.	...	...	...	...	...	14747-W	14607-W
	Price	...	...	...	...	...	*	*
LOWER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**500-023**	**500-024**	**500-050**	**500-025**	**500-026**	**500-026**	**500-027**
	Bowen No.	14593-W	14589-W	14598-W	19377-W	14603-W	14603-W	14608-W
	Price	*	*	*	*	*	*	*
TYPE A MILL SHOE *(Hard Faced Mill Teeth)*	**Logan Part No.**	**E5000-A**	**E5001-A**	**E50015**	**E5002-A**	**E5003-A**	**E50035-A**	**E5004-A**
	Bowen No.	14594-A	14574-A	14599-A	19378-A	14604-A	2625-A	14609-A
	Price	*	*	*	*	*	*	*

OPTIONAL COMPONENTS

TYPE B MILL SHOE *(Tungsten Carbide Mill Teeth)*	**Logan Part No.**	**E5000-B**	**E5001-B**	**E50015-B**	**E5002-B**	**E5003-B**	**E50035-B**	**E5004-B**
	Bowen No.	14594-B	14574-B	14599-B	19378-B	14604-B	2625-B	14609-B
	Price	*	*	*	*	*	*	*
TYPE C MILL SHOE *(Tungsten Carbide Faced)*	**Logan Part No.**	**E5000-C**	**E5001-C**	**E50015-C**	**E5002-C**	**E5003-C**	**E50035-C**	**E5004-C**
	Bowen No.	14594-C	14574-C	14599-C	19378-C	14604-C	2625-C	14609-C
	Price	*	*	*	*	*	*	*
FINGER SHOE	**Logan Part No.**	**E3000**	**E3001**	**E3002**	**E3002**	**E3003**	**...**	**E3004**
	Bowen No.	22205	22206	22207	22207	22208	...	22209
	Max. Dia. of Fish	3-1/4	3-13/16	4-1/16	4-1/16	4-1/2	...	4-3/4
	Price	*	*	*	*	*	...	*
MAGNET INSERTS	**Logan Part No.**	**500-036**	**500-037**	**500-038**	**500-038**	**500-039**	**...**	**500-040**
	Bowen No.	61842	61838	61858	61858	61854	...	61862
	Price	*	*	*	*	*	...	*
ADAPTER	**Logan Part No.**	**E4000**	**E4001**	**E4002**	**E4002**	**E4003**	**...**	**E4004**
	Bowen No.	M-61843	M-61839	M-61859	M-61859	M-61853	...	M-61853
	Price	*	*	*	*	*	...	*
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-069**	**600-069**	**600-070**	**600-070**	**600-070**	**...**	**600-071**
	Bowen No.	61812	61812	61814	61814	61814	...	61816
	Price	*	*	*	*	*	...	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** See Range Chart for weight and oversize Grapple price.*

Special Notes:

(1) For component breakdown of the junk catcher assemblies, refer to Junk Catcher Assemblies chart.

(2) For type A, B, or C shoes: unless specified, shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) For type A, B, or C shoes: left blank, no teeth, no hard facing, no tungsten carbide. Deduct 10% from above list price.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of shoe

Recommended Spare Parts:

(1) 2 Upper Catchers

(2) 2 Lower Catchers

(3) 2 Mill Shoes

(4) 2 Finger Shoes

(5) 4 Finger Shoe Replacements

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Logan Core Type Junk Baskets

HOLE SIZE		6-1/8 to 6-1/2	6-1/8 to 6-1/2	6-1/8 to 6-1/2	6-5/8 to 7	7-1/4 to 8	8-1/4 to 9	9-1/4 to 10-1/8
BARREL O.D.		5-3/4	5-1/8	5-1/4	5-3/4	6-1/2	7-1/2	8-1/2
SHOE O.D.		5-3/4	5-7/8	5-7/8	6-1/4	7-1/8	8-1/8	9-1/8
MAXIMUM DIAMETER OF FISH		4-13/32	4-5/16	4-1/2	4-13/16	5-7/16	6-3/16	7-3/16
COMPLETE ASSEMBLY	**Logan Part No.**	**301-576**	**301-513**	**301-525**	**301-575**	**301-650**	**301-750**	**301-850**
	Bowen No.	59996	14610	19379	14615	14620	14625	14630
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**E10045**	**E10047**	**E1005**	**E1006**	**E1007**	**E1008**	**E1009**
	Bowen No.	59997	14730	19380	14731	14732	14733	14734
	Price	*	*	*	*	*	*	*
BARREL	**Logan Part No.**	**E20045**	**E20047**	**E2005**	**E2006**	**E2007**	**E2008**	**E2009**
	Bowen No.	15134	14611	19381	14616	14621	14626	14631
	Price	*	*	*	*	*	*	*
UPPER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**500-051**	**600-065**	**500-015**	**500-016**	**500-017**	**500-018**	**14000-013**
	Bowen No.	15130-W	14612-W	19382-W	14617-W	14622-W	14627-W	14632-W
	Price	*	*	*	*	*	*	*
LOWER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**600-020**	**600-066**	**500-028**	**500-029**	**500-030**	**500-031**	**600-024**
	Bowen No.	28349-W	14613-W	19383-W	14618-W	14623-W	14628-W	14633-W
	Price	*	*	*	*	*	*	*
TYPE A MILL SHOE *(Hard Faced Mill Teeth)*	**Logan Part No.**	**E50045-A**	**E50047-A**	**E5005-A**	**E5006-A**	**E5007-A**	**E5008-A**	**E5009-A**
	Bowen No.	2676-A	14614-A	19384-A	14619-A	14624-A	14629-A	14634-A
	Price	*	*	*	*	*	*	*

OPTIONAL COMPONENTS

TYPE B MILL SHOE *(Tungsten Carbide Mill Teeth)*	**Logan Part No.**	**E50045-B**	**E50047-B**	**E5005-B**	**E5006-B**	**E5007-B**	**E5008-B**	**E5009-B**
	Bowen No.	2676-B	14614-B	19384-B	14619-B	14624-B	14629-B	14634-B
	Price	*	*	*	*	*	*	*
TYPE C MILL SHOE *(Tungsten Carbide Faced)*	**Logan Part No.**	**E50045-C**	**E50047-C**	**E5005-C**	**E5006-C**	**E5007-C**	**E5008-C**	**E5009-C**
	Bowen No.	2676-C	14614-C	19384-C	14619-C	14624-C	14629-C	14634-C
	Price	*	*	*	*	*	*	*
FINGER SHOE	**Logan Part No.**	**E30045**	**...**	**E3005**	**E3006**	**E3007**	**E3008**	**E3009**
	Bowen No.	22218	...	19406	22210	22211	22212	22213
	Max. Dia. of Fish	4-13/32	...	5-3/8	5-29/32	6-1/2	7-1/4	8-1/8
	Price	*	...	*	*	*	*	*
MAGNET INSERTS *(Complete Assembly)*	**Logan Part No.**	**500-055**	**500-053**	**500-041**	**500-042**	**500-043**	**500-044**	**500-045**
	Bowen No.	61866	62637	61868	61874	61949	61955	61959
	Price	*	*	*	*	*	*	*
ADAPTER	**Logan Part No.**	**E4018**	**E4031**	**E4005**	**E4006**	**E4007**	**E4008**	**E4009**
	Bowen No.	M-61867	62638	M-61869	M-61875	M-61950	M-61956	M-61960
	Price	*	*	*	*	*	*	*
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-071**	**600-071**	**600-071**	**600-072**	**600-072**	**600-079**	**600-075**
	Bowen No.	61816	61816	61816	61818	61822	61824	61826
	Price	*	*	*	*	*	*	*

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** Available upon request.*

*** See Range Chart for weight and oversize Grapple price.*

Special Notes:

(1) For component breakdown of the junk catcher assemblies, refer to Junk Catcher Assemblies chart.

(2) For type A, B, or C shoes: unless specified, shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) For type A, B, or C shoes: left blank, no teeth, no hard facing, no tungsten carbide. Deduct 10% from above list price.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of shoe

Recommended Spare Parts:

(1) 2 Upper Catchers

(2) 2 Lower Catchers

(3) 2 Mill Shoes

(4) 2 Finger Shoes

(5) 4 Finger Shoe Replacements

Logan Core Type Junk Baskets

HOLE SIZE		10-1/4 to 11-5/8	11-3/4 to 12-1/2	12-5/8 to 15	15 to 20			
BARREL O.D.		9-3/8	10-3/8	11-3/8	13-3/4			
SHOE O.D.		10-1/8	11-1/4	12-1/4	14-1/2			
MAXIMUM DIAMETER OF FISH		8-1/16	9-1/16	10-1/16	12-1/16			
COMPLETE ASSEMBLY	**Logan Part No.**	**301-938**	**301-1038**	**301-1138**	**301-1375**			
	Bowen No.	14635	14640	14645	14650			
	Price	*	*	*	*			
TOP SUB	**Logan Part No.**	**E1010**	**E1011**	**E1012**	**E1013**			
	Bowen No.	14735	14736	14737	14738			
	Price	*	*	*	*			
BARREL	**Logan Part No.**	**E2010**	**E2011**	**E2012**	**E2013**			
	Bowen No.	14636	14641	14646	14651			
	Price	*	*	*	*			
UPPER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**500-054**	**500-020**	**500-021**	**500-022**			
	Bowen No.	14637-W	14642-W	14647-W	14652-W			
	Price	*	*	*	*			
LOWER CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**500-032**	**500-033**	**500-034**	**500-035**			
	Bowen No.	14638-W	14643-W	14648-W	14653-W			
	Price	*	*	*	*			
TYPE A MILL SHOE *(Hard Faced Mill Teeth)*	**Logan Part No.**	**E5010-A**	**E5011-A**	**E5012-A**	**E5013-A**			
	Bowen No.	14639-A	14644-A	14649-A	14654-A			
	Price	*	*	*	*			

OPTIONAL COMPONENTS

TYPE B MILL SHOE *(Tungsten Carbide Mill Teeth)*	**Logan Part No.**	**E5010-B**	**E5011-B**	**E5012-B**	**E5013-B**			
	Bowen No.	14639-B	14644-B	14649-B	14654-B			
	Price	*	*	*	*			
TYPE C MILL SHOE *(Tungsten Carbide Faced)*	**Logan Part No.**	**E5010-C**	**E5011-C**	**E5012-C**	**E5013-C**			
	Bowen No.	14639-C	14644-C	14649-C	14654-C			
	Price	*	*	*	*			
FINGER SHOE	**Logan Part No.**	**E3010**	**E3011**	**E3012**	**E3013**			
	Bowen No.	22214	22215	22216	22217			
	Max. Dia. of Fish	9-15/16	11	11-7/8	15-1/4			
	Price	*	*	*	*			
MAGNET INSERTS *(Complete Assembly)*	**Logan Part No.**	**500-046**	**500-047**	**500-048**	**500-049**			
	Bowen No.	61969	61977	61979	61987			
	Price	*	*	*	*			
ADAPTER	**Logan Part No.**	**E4010**	**E4011**	**E4012**	**E4013**			
	Bowen No.	M-61970	M-61978	M-61980	M-61988			
	Price	*	*	*	*			
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-076**	**600-077**	**600-077**	**600-078**			
	Bowen No.	61828	61830	61830	61834			
	Price	*	*	*	*			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** See Range Chart for weight and oversize Grapple price.*

Special Notes:

(1) For component breakdown of the junk catcher assemblies, refer to Junk Catcher Assemblies chart.

(2) For type A, B, or C shoes: unless specified, shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) For type A, B, or C shoes: left blank, no teeth, no hard facing, no tungsten carbide. Deduct 10% from above list price.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of shoe

Recommended Spare Parts:

(1) 2 Upper Catchers

(2) 2 Lower Catchers

(3) 2 Mill Shoes

(4) 2 Finger Shoes

(5) 4 Finger Shoe Replacements

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LOGAN REVERSE CIRCULATION JUNK BASKETS

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Logan Reverse Circulation Junk Baskets

HOLE SIZE		3-3/4 to 4	4-1/8 to 4-1/2	4-5/8 to 5	5-1/8 to 5-1/2	5-5/8 to 6	6-1/8 to 6-1/2	6-5/8 to 7-3/8
BARREL O.D.		3-5/8	4	4-1/2	4-7/8	5-1/8	5-3/4	6-1/4
MAXIMUM DIAMETER OF FISH		2-11/32	2-17/32	3-1/16	3-9/16	3-3/4	4-13/32	4-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**302-363**	**302-400**	**302-450**	**302-487**	**302-513**	**302-575**	**302-625**
	Bowen No.	6635	7295	4448	4572	2618	2670	2677
	Price	$13,368	*	*	*	$16,409	$18,616	*
TOP SUB	**Logan Part No.**	**D1000**	**D1001**	**D1002**	**D1003**	**D1004**	**D1005**	**D1006**
	Bowen No.	6636	7296	4449	4573	2619	2671	2678
	Price	$2,306	*	*	*	$2,620	$3,815	*
BARREL	**Logan Part No.**	**D2000**	**D2001**	**D2002**	**D2003**	**D2004**	**D2005**	**D2006**
	Bowen No.	6637	7297	4450	4574	2620	2672	2679
	Price	$10,104	*	*	*	$8,585	$8,923	*
VALVE CUP	**Logan Part No.**	**D3000**	**D3000**	**D3002**	**D3002**	**D3004**	**D3004**	**D3004**
	Bowen No.	6638	6638	4451	4451	2621	2621	2621
	Price	$400	$400	*	*	$434	$434	$434
STEEL BALL	**Logan Part No.**	**D4000**	**D4000**	**D4002**	**D4002**	**D4004**	**D4004**	**D4004**
	Bowen No.	6640	6640	4453	4453	2623	2623	2623
	Price	$37	$37	*	*	$90	$90	$90
VALVE SEAT	**Logan Part No.**	**D5000**	**D5000**	**D5002**	**D5002**	**D5004**	**D5004**	**D5004**
	Bowen No.	6639	6639	4452	4452	2622	2622	2622
	Price	$146	$146	*	*	$210	$210	$210
LIFTING SUB	**Logan Part No.**	**D6000**	**D6000**	**D6002**	**D6002**	**D6004**	**D6004**	**D6006**
	Bowen No.	4568	4568	424	424	425	425	1849
	Price	$906	$906	$986	$986	$1,004	$944	$1,208
JUNK CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**600-015**	**600-016**	**600-017**	**600-018**	**600-019**	**600-020**	**600-021**
	Bowen No.	21795W	21855W	21780W	21790W	21735W	28349W	21750W
	Price	$1,685	$1,685	$1,832	$1,747	$1,770	$2,306	$2,366
TYPE A MILL SHOE *(Hard Faced Mill Teeth)*	**Logan Part No.**	**D8000-A**	**D8001-A**	**D8002-A**	**D8003-A**	**D8004-A**	**D8005-A**	**D8006-A**
	Bowen No.	6642A	7299A	4455A	4576A	2625A	2676A	2683A
	Price	$1,679	$2,028	*	*	$1,848	$2,349	$2,474

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

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Logan Reverse Circulation Junk Baskets

HOLE SIZE		3-3/4 to 4	4-1/8 to 4-1/2	4-5/8 to 5	5-1/8 to 5-1/2	5-11/16 to 6	6-1/8 to 6-1/2	6-5/8 to 7-3/8
BARREL O.D.		3-5/8	4	4-1/2	4-7/8	5-1/8	5-3/4	6-1/4
MAXIMUM DIAMETER OF FISH		2-11/32	2-17/32	3-1/16	3-9/16	3-3/4	4-13/32	4-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**302-363**	**302-400**	**302-450**	**302-487**	**302-513**	**302-575**	**302-625**
	Bowen No.	6635	7295	4448	4572	2618	2670	2677

OPTIONAL COMPONENTS

TYPE B MILL SHOE	**Logan Part No.**	**D8000-B**	**D8001-B**	**D8002-B**	**D8003-B**	**D8004-B**	**D8005-B**	**D8006-B**
(Tungsten Carbide	Bowen No.	6642B	7299B	4455B	4576B	2625B	2676B	2683B
Mill Teeth)	Price	$2,468	*	*	*	$3,448	$3,947	*
TYPE C MILL SHOE	**Logan Part No.**	**D8000-C**	**D8001-C**	**D8002-C**	**D8003-C**	**D8004-C**	**D8005-C**	**D8006-C**
(Tungsten Carbide	Bowen No.	6642C	7299C	4455C	4576C	2625C	2676C	2683C
Faced)	Price	$2,652	*	*	*	$3,666	$4,117	*
FINGER SHOES	**Logan Part No.**	**600-100**	**600-101**	**600-102**	**600-103**	**600-104**	**600-105**	**600-106**
(Complete Assembly)	Bowen No.	6643	7300	4456	4577	22208	22218	2739
	Max. Dia. of Fish	3-1/4	3-3/4	4-1/16	4-1/2	4-3/4	5-17/32	5-29/32
	Price	*	*	*	*	*	*	*
BODY	**Logan Part No.**	**D7000**	**D7001**	**D7002**	**D7003**	**D7004**	**D7005**	**D7006**
	Bowen No.	6643-2	7300-2	4456-2	4577-2	22208-2	22218-2	2739-2
	Price	*	*	*	*	*	*	*
REPLACEMENT	**Logan Part No.**	**D10000**	**D10001**	**D10002**	**D10003**	**D10004**	**D10005**	**D10006**
	Bowen No.	6643-1	7300-1	4456-1	4577-1	22208-1	22218-1	2739-1
	Price	*	*	*	*	*	*	*
MAGNET INSERTS	**Logan Part No.**	**600-045**	**600-046**	**600-047**	**600-048**	**600-049**	**600-050**	**600-051**
(Complete Assembly)	Bowen No.	61836	61848	61840	61850	61852	61866	61872
	Price	$3,967	*	*	*	$6,071	$7,894	*
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-068**	**600-069**	**600-069**	**600-070**	**600-070**	**600-071**	**600-072**
	Bowen No.	61810	61812	61812	61814	61814	61816	61818
	Price	$3,654	*	*	*	$6,034	$7,537	*
ADAPTER	**Logan Part No.**	**E4028**	**E4029**	**E4016**	**E4030**	**E4003**	**E4018**	**E4019**
	Bowen No.	61837	61849	61841	61851	61853	61867	61873
	Price	$291	*	*	*	$329	$378	*

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** Available upon request.*

Special Notes:

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(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

Logan Reverse Circulation Junk Baskets

HOLE SIZE		7-1/2 to 8-1/4	8-3/8 to 9-1/2	9-5/8 to 10-5/8	10-3/4 to 11-5/8	11-3/4 to 12-1/2	12-5/8 to 13-5/8	13-3/4 to 16
BARREL O.D.		7	7-7/8	9-1/8	10-1/8	11	11-7/8	13
MAXIMUM DIAMETER OF FISH		5-3/16	6-1/16	7-1/16	7-11/16	8-5/16	8-11/16	9-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**302-700**	**302-787**	**302-913**	**302-1013**	**302-1100**	**302-1187**	**302-1300**
	Bowen No.	2554	2567	2659	2684	2690	2696	2702
	Price	$20,584	$20,964	$30,700	*	$33,572	*	$57,224
TOP SUB	**Logan Part No.**	**D1007**	**D1008**	**D1009**	**D1010**	**D1011**	**D1012**	**D1013**
	Bowen No.	2493	2568	2660	2685	2691	2697	2703
	Price	$4,268	$4,733	$7,229	*	$8,701	*	$15,086
BARREL	**Logan Part No.**	**D2007**	**D2008**	**D2009**	**D2010**	**D2011**	**D2012**	**D2013**
	Bowen No.	2555	2569	2661	2686	2692	2698	2704
	Price	$9,923	$9,545	$14,279	*	$14,331	*	$25,942
VALVE CUP	**Logan Part No.**	**D3007**	**D3007**	**D3009**	**D3009**	**D3009**	**D3009**	**D3009**
	Bowen No.	2570	2570	2662	2662	2662	2662	2662
	Price	$306	$306	$447	$447	$447	$447	$447
STEEL BALL	**Logan Part No.**	**D4007**	**D4007**	**D4009**	**D4009**	**D4009**	**D4009**	**D4009**
	Bowen No.	2572	2572	2665	2665	2665	2665	2665
	Price	$161	$161	$310	$310	$310	$310	$310
VALVE SEAT	**Logan Part No.**	**D5007**	**D5007**	**D5009**	**D5009**	**D5009**	**D5009**	**D5009**
	Bowen No.	2571	2571	2663	2663	2663	2663	2663
	Price	$272	$272	$564	$564	$564	$564	$564
LIFTING SUB	**Logan Part No.**	**D6006**	**D6008**	**D6009**	**D6009**	**D6009**	**D6009**	**D6009**
	Bowen No.	1849	426	427	427	427	427	427
	Price	$1,271	$1,364	$1,683	$1,683	$1,683	$1,683	$1,683
JUNK CATCHER ASSEMBLY	**Logan Part No.**	**600-022**	**600-023**	**600-024**	**500-019**	**600-026**	**600-027**	**600-028**
	Bowen No.	21725W	18725W	14633W	18945W	21760W	21840W	21770W
(See Note 1)	Price	$2,604	$2,703	$2,960	$4,249	$4,246	*	$5,905
TYPE A MILL SHOE	**Logan Part No.**	**D8007-A**	**D8008-A**	**D8009-A**	**D8010-A**	**D8011-A**	**D8012-A**	**D8013-A**
(Hard faced Mill Teeth)	Bowen No.	2556A	2574A	2668A	2689A	2695A	2701A	2707A
	Price	$2,603	$2,824	$3,012	*	$5,078	*	$7,469

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

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Logan Reverse Circulation Junk Baskets

HOLE SIZE		7-1/2 to 8-1/4	8-3/8 to 9-1/2	9-5/8 to 10-5/8	10-3/4 to 11-5/8	11-3/4 to 12-1/2	12-5/8 to 13-5/8	13-3/4 to 16
BARREL O.D.		7	7-7/8	9-1/8	10-1/8	11	11-7/8	13
MAXIMUM DIAMETER OF FISH		5-3/16	6-1/16	7-1/16	7-11/16	8-5/16	8-11/16	9-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**302-700**	**302-787**	**302-913**	**302-1013**	**302-1100**	**302-1187**	**302-1300**
	Bowen No.	2554	2567	2659	2684	2690	2696	2702

OPTIONAL COMPONENTS

TYPE B MILL SHOE	**Logan Part No.**	**D8007-B**	**D8008-B**	**D8009-B**	**D8010-B**	**D8011-B**	**D8012-B**	**D8013-B**
(Tungsten Carbide	Bowen No.	2556B	2574B	2668B	2689B	2695B	2701B	2707B
Mill Teeth)	Price	$4,141	$4,033	$5,235	*	$6,278	*	$9,249
TYPE C MILL SHOE	**Logan Part No.**	**D8007-C**	**D8008-C**	**D8009-C**	**D8010-C**	**D8011-C**	**D8012-C**	**D8013-C**
(Tungsten Carbide	Bowen No.	2556C	2574C	2668C	2689C	2695C	2701C	2707C
Faced)	Price	$5,338	$4,334	$5,523	*	$6,681	*	$9,739
FINGER SHOES	**Logan Part No.**	**600-107**	**600-108**	**600-109**	**600-110**	**600-111**	**600-112**	**600-113**
(Complete Assembly)	Bowen No.	2740	2741	2742	2743	2744	2745	2746
	Max. Dia. of Fish	6-3/4	7-23/32	9	9-15/16	11	11-7/8	13
	Price	*	*	*	*	*	*	*
BODY	**Logan Part No.**	**D7007**	**D7008**	**D7009**	**D7010**	**D7011**	**D7012**	**D7013**
	Bowen No.	2740-2	2741-2	2742-2	2743-2	2744-2	2745-2	2746-2
	Price	*	*	*	*	*	*	*
REPLACEMENT	**Logan Part No.**	**D10007**	**D10008**	**D10009**	**D10010**	**D10011**	**D10012**	**D10013**
	Bowen No.	2740-1	2741-1	2742-1	2743-1	2744-1	2745-1	2746-1
	Price	*	*	*	*	*	*	*
MAGNET INSERTS	**Logan Part No.**	**600-052**	**600-053**	**600-054**	**600-055**	**600-056**	**600-057**	**600-058**
(Complete Assembly)	Bowen No.	61947	61953	61965	61963	61973	61975	61983
	Price	$9,260	$9,584	$12,539	*	$15,748	*	$21,693
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-073**	**600-074**	**600-075**	**600-075**	**600-076**	**600-076**	**600-077**
	Bowen No.	61820	61822	61826	61826	61828	61828	61830
	Price	$8,808	$9,086	$11,840	$11,840	$14,552	$14,552	$19,755
ADAPTER	**Logan Part No.**	**E4020**	**E4021**	**E4022**	**E4023**	**E4024**	**E4025**	**E4026**
	Bowen No.	61948	61954	61966	61968	61974	61976	61982
	Price	$441	$502	$693	*	$1,204	*	$1,666

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** Available upon request.*

Special Notes:

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(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

Logan Reverse Circulation Junk Baskets

HOLE SIZE		16 to 17-1/2						
BARREL O.D.		15						
MAXIMUM DIAMETER OF FISH		11-1/8						
COMPLETE ASSEMBLY	**Logan Part No.**	**302-1500**						
	Bowen No.	2708						
	Price	$68,352						
TOP SUB	**Logan Part No.**	**D1014**						
	Bowen No.	2709						
	Price	$19,717						
BARREL	**Logan Part No.**	**D2014**						
	Bowen No.	2710						
	Price	$30,109						
VALVE CUP	**Logan Part No.**	**D3009**						
	Bowen No.	2662						
	Price	$446						
STEEL BALL	**Logan Part No.**	**D4009**						
	Bowen No.	2665						
	Price	$310						
VALVE SEAT	**Logan Part No.**	**D5009**						
	Bowen No.	2663						
	Price	$564						
LIFTING SUB	**Logan Part No.**	**D6009**						
	Bowen No.	427						
	Price	$1,600						
JUNK CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**600-029**						
	Bowen No.	21775W						
	Price	$8,877						
TYPE A MILL SHOE *(Hard faced Mill Teeth)*	**Logan Part No.**	**D8014-A**						
	Bowen No.	2713A						
	Price	$10,920						

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Special Notes:

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(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

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Logan Reverse Circulation Junk Baskets

HOLE SIZE		16 to 17-1/2						
BARREL O.D.		15						
MAXIMUM DIAMETER OF FISH		11-1/8						
COMPLETE ASSEMBLY	**Logan Part No.**	**302-1500**						
	Bowen No.	2708						

OPTIONAL COMPONENTS

TYPE B MILL SHOE	**Logan Part No.**	**D8014-B**						
(Tungsten Carbide	Bowen No.	2713B						
Mill Teeth)	Price	$11,374						
TYPE C MILL SHOE	**Logan Part No.**	**D8014-C**						
(Tungsten Carbide	Bowen No.	2713C						
Faced)	Price	$12,070						
FINGER SHOES	**Logan Part No.**	**600-114**						
(Complete Assembly)	Bowen No.	2747						
	Max. Dia. of Fish	15-1/4						
	Price	*						
BODY	**Logan Part No.**	**D7014**						
	Bowen No.	2747-2						
	Price	*						
REPLACEMENT	**Logan Part No.**	**D10014**						
	Bowen No.	2747-1						
	Price	*						
MAGNET INSERTS	**Logan Part No.**	**600-059**						
(Complete Assembly)	Bowen No.	61985						
	Price	$26,738						
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-078**						
	Bowen No.	61832						
	Price	$24,848						
ADAPTER	**Logan Part No.**	**E4027**						
	Bowen No.	61986						
	Price	$1,967						

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Special Notes:

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(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of tandard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Valve Cup

(4) 1 Valve Seat

(5) 1 Steel Ball

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LOGAN FULL FLOW REVERSE CIRCULATION JUNK BASKETS

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Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		4-1/8 to 4-1/2	4-5/8 to 5	6-1/8 to 6-1/2	7-1/2 to 8-1/4	8-3/8 to 9-1/2	9-5/8 to 10-5/8	10-3/4 to 11-5/8
BARREL O.D.		4	4-1/2	5-3/4	7	7-7/8	9-1/8	10-1/8
MAXIMUM DIAMETER OF FISH		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16	7-11/16
COMPLETE ASSEMBLY	**Logan Part No.**	**304-400**	**304-450**	**304-575**	**304-700**	**304-788**	**304-913**	**304-1013**
	Bowen No.	71226	70702	71127	70908	70923	71198	71218
	Price	*	*	$25,341	*	$33,093	*	*
BALL SEAT	**Logan Part No.**	**S1000**	**S1002**	**S1002**	**S1003**	**S1003**	**S1005**	**S1005**
	Bowen No.	70699	70851	70851	67354	67354	67168	67168
	Price	*	*	$2,511	*	$1,172	*	*
SHEAR PIN	**Logan Part No.**	**S2000**	**S2000**	**S2000**	**S2003**	**S2003**	**S2003**	**S2003**
	Bowen No.	70852	70852	70852	67175	67175	67175	67175
	No. Req'd	4	4	4	4	4	4	4
	Price	$41	$41	$41	$41	$41	$41	$41
UPPER JUNK	**Logan Part No.**	**14000-008**	**14000-009**	**500-051**	**14000-011**	**14000-012**	**14000-013**	**14000-014**
CATCHER ASSEMBLY	Bowen No.	22070-W	22075-W	15130-W	22050-W	21640-W	14632-W	25235-W
(See Note 1)	Price	$1,815	$1,982	$2,306	$2,814	$3,160	$2,942	$4,555
LOWER JUNK	**Logan Part No.**	**600-016**	**600-017**	**600-020**	**600-022**	**600-023**	**600-024**	**500-019**
CATCHER ASSEMBLY	Bowen No.	21855-W	21780-W	28349-W	21725-W	18725-W	14633-W	18945-W
(See Note 1)	Price	$1,685	$1,833	$2,306	$2,604	$2,703	$2,960	$4,249
STEEL BALL	**Logan Part No.**	**D4000**	**D4002**	**D4002**	**D4007**	**D4007**	**D4009**	**D4009**
	Bowen No.	6640	4453	4453	2572	2572	2665	2665
	Price	*	$58	$58	$161	$161	*	$420
TOP SUB	**Logan Part No.**	**S4000**	**S4001**	**S4002**	**S4003**	**S4004**	**S4005**	**S4006**
	Bowen No.	71227	71104	71125	70935	70926	71202	71219
	Price	*	*	$3,031	*	$5,015	*	*
BARREL	**Logan Part No.**	**S5000**	**S5001**	**S5002**	**S5003**	**S5004**	**S5005**	**S5006**
	Bowen No.	71230	71116	71115	70911	70924	71203	71220
	Price	*	*	$9,340	*	$12,947	*	*
BALL SEAT RETAINER	**Logan Part No.**	**S6002**	**S6002**	**S6002**	**S6003**	**S6003**	**S6005**	**S6005**
	Bowen No.	70850	70850	70850	67353	67353	67167	67167
	Price	$1,136	$1,136	$1,136	$2,956	$2,956	*	$3,012
FILTER	**Logan Part No.**	**S7002**	**S7002**	**S7002**	**S7003**	**S7003**	**S7005**	**S7005**
	Bowen No.	80768	80768	80768	70731	70731	70764	70764
	Price	$2,400	$2,400	$2,400	$3,051	$3,051	*	$4,012
RETAINER	**Logan Part No.**	**568331**	**568331**	**568331**	**568243**	**568243**	**568248**	**568248**
O-RING SEAL	Bowen No.	27-34	27-34	27-34	30-21	30-21	30-26	30-26
	Price	$3	$3	$3	$9	$9	$12	$12
UPPER SEAT	**Logan Part No.**	**568325**	**568325**	**568325**	**568231**	**568231**	**568235**	**568235**
O-RING SEAL	Bowen No.	27-28	27-28	27-28	30-9	30-9	30-13	30-13
	Price	$3	$3	$3	$3	$3	$7	$7
LOWER SEAT	**Logan Part No.**	**568215**	**568215**	**568215**	**568224**	**568224**	**568229**	**568229**
O-RING SEAL	Bowen No.	27-20	27-20	27-20	30-2	30-2	30-7	30-7
	Price	$3	$3	$3	$3	$3	$3	$3
MILL SHOE A	**Logan Part No.**	**S3000A**	**S3001A**	**S3002A**	**S3003A**	**S3004A**	**S3005A**	**S3006A**
(Hard Faced Mill Teeth)	Bowen No.	71228	70909	71124	72070	72081	71199	72080
	Price	*	*	$2,703	*	$3,304	*	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

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Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		4-1/8 to 4-1/2	4-5/8 to 5	6-1/8 to 6-1/2	7-1/2 to 8-1/4	8-3/8 to 9-1/2	9-5/8 to 10-5/8	10-3/4 to 11-5/8
BARREL O.D.		4	4-1/2	5-3/4	7	7-7/8	9-1/8	10-1/8
MAXIMUM DIAMETER OF FISH		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16	7-11/16
COMPLETE ASSEMBLY	**Logan Part No.**	**304-400**	**304-450**	**304-575**	**304-700**	**304-788**	**304-913**	**304-1013**
	Bowen No.	71226	70702	71127	70908	70923	71198	71218

OPTIONAL COMPONENTS

MILL SHOE B	**Logan Part No.**	**S3000-B**	**S3001-B**	**S3002-B**	**S3003-B**	**S3004-B**	**S3005-B**	**S3006-B**
(Tungsten Carbide	Bowen No.	71228	70909	71124	72070	72081	71199	72080
Mill Teeth)	Price	*	*	$4,180	*	$4,783	*	*
MILL SHOE C	**Logan Part No.**	**S3000-C**	**S3001-C**	**S3002-C**	**S3003-C**	**S3004-C**	**S3005-C**	**S3006-C**
(Tungsten Carbide	Bowen No.	71228	70909	71124	72070	72081	71199	72080
Faced)	Price	*	*	$4,401	*	$5,086	*	*
LIFTING SUB	**Logan Part No.**	**D6000**	**D6002**	**D6004**	**D6006**	**D6008**	**D6009**	**D6009**
	Bowen No.	4568	424	425	1849	426	427	427
	Price	*	*	$1,004	*	$1,293	$2,122	$2,122
PIPE PLUG	**Logan Part No.**	**S9000**	**S9000**	**S9001**	**S9002**	**S9003**	**S9003**	**S9003**
	Bowen No.	61520	61520	61521	61522	61523	61523	61523
	Price	*	*	$34	*	$44	$44	$44
T-WRENCH	**Logan Part No.**	**S10000**	**S10000**	**S10000**	**S10001**	**S10001**	**S10002**	**S10002**
	Bowen No.	72067	72067	72067	72069	72069	72068	72068
	Price	$909	$909	$909	$794	$794	*	$911

FINGER SHOE

COMPLETE ASSEMBLY	**Logan Part No.**	**600-101**	**600-102**	**600-115**	**600-107**	**600-108**	**600-109**	**600-110**
	Bowen No.	7300	4456	2738	2740	2741	2742	2743
	Price	*	*	*	*	*	*	*
BODY	**Logan Part No.**	**D7001**	**D7002**	**D7015**	**D7007**	**D7008**	**D7009**	**D7010**
	Bowen No.	7300-2	4456-2	2738-2	2740-2	2741-2	2742-2	2743-2
	Price	*	*	*	*	*	*	*
REPLACEMENT	**Logan Part No.**	**D10001**	**D10002**	**D10015**	**D10007**	**D10008**	**D10009**	**D10010**
	Bowen No.	7300-1	4456-1	2738-1	2740-1	2741-1	2742-1	2743-1
	Price	*	*	*	*	*	*	*

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		4-1/8 to 4-1/2	4-5/8 to 5	6-1/8 to 6-1/2	7-1/2 to 8-1/4	8-3/8 to 9-1/2	9-5/8 to 10-5/8	10-3/4 to 11-5/8
BARREL O.D.		4	4-1/2	5-3/4	7	7-7/8	9-1/8	10-1/8
MAXIMUM DIAMETER OF FISH		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16	7-11/16
COMPLETE ASSEMBLY	**Logan Part No.**	**304-400**	**304-450**	**304-575**	**304-700**	**304-788**	**304-913**	**304-1013**
	Bowen No.	71226	70702	71127	70908	70923	71198	71218

MAGNET INSERTS

COMPLETE ASSEMBLY	**Logan Part No.**	**...**	**600-047**	**600-050**	**600-052**	**600-053**	**600-054**	**600-055**
	Bowen No.	...	61840	61866	61876	61953	61961	61963
	Price	...	*	$7,894	*	$9,584	*	*
ADAPTER	**Logan Part No.**	**...**	**E4016**	**E4018**	**E4020**	**E4021**	**E4022**	**E4023**
	Bowen No.	...	61841	61867	61948	61954	61966	61968
	Price	...	*	$378	*	$502	*	*
MAGNETIC ASSEMBLY	**Logan Part No.**	**...**	**600-069**	**600-071**	**600-073**	**600-074**	**600-075**	**600-075**
	Bowen No.	...	61812	61816	61820	61822	61826	61826
	Price	...	*	$7,537	*	$9,086	$11,840	*

REPAIR KITS

UPPER CATCHER REPAIR KIT	**Logan Part No.**	**14000-008RK**	**14000-009RK**	**600-020RK**	**14000-011RK**	**14000-012RK**	**14000-013RK**	**14000-014RK**
	Bowen No.	22070-WK	22075-WK	28349-WK	22050-WK	21640-WK	14632-WK	25235-WK
	Price	$505	$596	$816	$848	$802	$824	*
LOWER CATCHER REPAIR KIT	**Logan Part No.**	**600-016RK**	**600-017RK**	**500-051RK**	**600-022RK**	**600-023RK**	**600-024RK**	**500-019RK**
	Bowen No.	21855-WK	21780-WK	15130-WK	21725-WK	18725-WK	14633-WK	18945-WK
	Price	$556	$760	$802	$848	$801	$823	*
VALVE REPAIR KIT	**Logan Part No.**	**14000-032**	**14000-033**	**14000-034**	**14000-035**	**14000-036**	**14000-037**	**14000-038**
	Bowen No.	72064	72062	72063	72058	72061	72065	72059
	Price	*	*	$106	*	$121	*	*

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

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Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		11-3/4 to 12-1/2						
BARREL O.D.		11						
MAXIMUM DIAMETER OF FISH		8-5/16						
COMPLETE ASSEMBLY	**Logan Part No.**	**304-1100**						
	Bowen No.	70910						
	Price	$54,715						
BALL SEAT	**Logan Part No.**	**S1005**						
	Bowen No.	67168						
	Price	$3,686						
SHEAR PIN	**Logan Part No.**	**S2003**						
	Bowen No.	67175						
	No. Req'd	4						
	Price	$81						
UPPER JUNK CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**14000-015**						
	Bowen No.	31046-W						
	Price	$4,955						
LOWER JUNK CATCHER ASSEMBLY *(See Note 1)*	**Logan Part No.**	**600-026**						
	Bowen No.	21760-W						
	Price	$4,246						
STEEL BALL	**Logan Part No.**	**D4009**						
	Bowen No.	2665						
	Price	$310						
TOP SUB	**Logan Part No.**	**S4007**						
	Bowen No.	70920						
	Price	$11,288						
BARREL	**Logan Part No.**	**S5007**						
	Bowen No.	70921						
	Price	$18,906						
BALL SEAT RETAINER	**Logan Part No.**	**S6005**						
	Bowen No.	67167						
	Price	$3,004						
FILTER	**Logan Part No.**	**S7005**						
	Bowen No.	70764						
	Price	$4,006						
RETAINER O-RING SEAL	**Logan Part No.**	**568248**						
	Bowen No.	30-26						
	Price	$12						
UPPER SEAT O-RING SEAL	**Logan Part No.**	**568235**						
	Bowen No.	30-13						
	Price	$7						
LOWER SEAT O-RING SEAL	**Logan Part No.**	**568229**						
	Bowen No.	30-7						
	Price	$3						

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		11-3/4 to 12-1/2						
BARREL O.D.		11						
MAXIMUM DIAMETER OF FISH		8-5/16						
COMPLETE ASSEMBLY	**Logan Part No.**	**304-1100**						
	Bowen No.	70910						
MILL SHOE A	**Logan Part No.**	**S3007-A**						
(Hard Faced Mill Teeth)	Bowen No.	72071						
	Price	$6,926						
MILL SHOE B	**Logan Part No.**	**S3007-B**						
(Tungsten Carbide	Bowen No.	72071						
Mill Teeth)	Price	$8,405						
MILL SHOE C	**Logan Part No.**	**S3007-C**						
(Tungsten	Bowen No.	72071						
Carbide Faced)	Price	$8,841						
LIFTING SUB	**Logan Part No.**	**D6009**						
	Bowen No.	427						
	Price	$1,600						
PIPE PLUG	**Logan Part No.**	**S9003**						
	Bowen No.	61523						
	Price	$44						
T-WRENCH	**Logan Part No.**	**S10002**						
	Bowen No.	72068						
	Price	$977						

FINGER SHOE

COMPLETE ASSEMBLY	**Logan Part No.**	**600-111**						
	Bowen No.	2744						
	Price	*						
BODY	**Logan Part No.**	**D7011**						
	Bowen No.	2744-2						
	Price	*						
REPLACEMENT	**Logan Part No.**	**D10011**						
	Bowen No.	2744-1						
	Price	*						

MAGNET INSERTS

COMPLETE ASSEMBLY	**Logan Part No.**	**600-056**						
	Bowen No.	61973						
	Price	$15,748						
ADAPTER	**Logan Part No.**	**E4024**						
	Bowen No.	61974						
	Price	$1,204						
MAGNETIC ASSEMBLY	**Logan Part No.**	**600-076**						
	Bowen No.	61828						
	Price	$14,552						

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

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Logan Full Flow Reverse Circulation Junk Baskets

HOLE SIZE		10-3/4 to 11-5/8	11-3/4 to 12-1/2					
BARREL O.D.		10-1/8	11					
MAXIMUM DIAMETER OF FISH		7-11/16	8-5/16					
COMPLETE ASSEMBLY	**Logan Part No.**	304-1013	**304-1100**					
	Bowen No.	71218	70910					

REPAIR KITS

UPPER CATCHER REPAIR KIT	**Logan Part No.**	**14000-014RK**	**14000-015RK**					
	Bowen No.	25235-WK	31046-WK					
	Price	*	$1,066					
LOWER CATCHER REPAIR KIT	**Logan Part No.**	**500-019RK**	**600-026RK**					
	Bowen No.	18945-WK	21760-WK					
	Price	$803	$935					
VALVE REPAIR KIT	**Logan Part No.**	**14000-038**	**14000-039**					
	Bowen No.	72059	72060					
	Price	*	$122					

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** Available upon request.*

Special Notes:

(1) For component breakdown of the Junk Catcher Assemblies, refer to Junk Catcher Assemblies chart.

(2) For Type A, B, or C Shoes: unless specified, Shoes will be furnished with the same O.D. as minimum hole size shown. Shoes larger than this will be an additional 10% per 1/4" or portion thereof of standard price.

(3) Finger Shoe replacement is furnished with the same O.D. as standard Shoe unless otherwise specified. Add 5% per 114" of portion thereof for Shoes left oversize.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) O.D. and type of Shoe

Recommended Spare Parts:

(1) 2 Junk Catchers

(2) 2 Mill Shoes

(3) 1 Ball Seat

(4) 1 Ball Seat Retainer

(5) 1 Steel Ball

(6) 4 Valve Repair Kits

(7) 2 Catcher Repair Kits (for each assembly)

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LOGAN JUNK CATCHER ASSEMBLIES

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Logan Junk Catcher Assemblies

INSIDE DIAMETER		2-11/32	2-39/64	2-23/32	2-17/32	2-17/32	2-31/32	3-1/16
OUTSIDE DIAMETER		3-3/32	3-15/64	3-1/4	3-11/32	3-11/32	3-11/16	3-13/16
LENGTH		1-7/8	1-7/8	1-7/8	1-7/8	1-7/8	2-1/4	2-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**600-015**	**600-031**	**500-023**	**14000-008**	**600-016**	**500-024**	**14000-009**
	Bowen No.	21795W	21810W	14593-W	22070-W	21855W	14589-W	22075-W
	Price	$1,685	$1,947	$1,768	$1,815	$1,685	$1,803	$1,982
BODY	**Logan Part No.**	**D11000**	**D11021**	**E7000**	**D11001**	**D11001**	**E7001**	**D11002**
	Bowen No.	56357	45542	45541	68366	68366	45590	45591
	Price	$1,122	$1,122	$1,122	$1,122	$1,122	$1,122	$1,122
FINGER RETAINER	**Logan Part No.**	**D12000**	**D12019**	**E8000**	**D12001**	**D12001**	**E8001**	**D12002**
(stainless steel)	Bowen No.	56358	45538	45543	68367	68367	45562	45592
	Price	$187	$187	$187	$187	$187	$187	$187
SHORT FINGER *	**Logan Part No.**	**E9011**	**E9001**	**E9001**	**E9011**	**E9011**	**E9002**	**E9002**
	Bowen No.	68368	45539	45539	68368	68368	45574	45574
	Code	...	E	E	W-5	W-5	W-3	R
	No. Req'd	4	5	5	8	4	5	10
	Price	$45	$45	$45	$45	$45	$49	$49
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Code	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
LONG FINGER *	**Logan Part No.**	**E11012**	**E11000**	**E11000**	**...**	**E11012**	**E11001**	**...**
	Bowen No.	68369	45540	45540	...	68369	45575	...
	Code	...	F	F	...	...	W-4	...
	No. Req'd	4	5	5	...	4	5	...
	Price	$45	$45	$45	...	$45	$49	...
PIVOT PIN *	**Logan Part No.**	**E12001**	**E12000**	**E12000**	**E12001**	**E12001**	**E12001**	**E12001**
	Bowen No.	45583	45535	45535	45583	45583	45583	45583
	No. Req'd	8	10	10	8	8	10	10
	Price	$8	$8	$8	$8	$8	$8	$8
TORSION SPRING *	**Logan Part No.**	**E13009**	**E13006**	**E13006**	**E13009**	**E13009**	**E13007**	**E13009**
(stainless steel)	Bowen No.	45571	45567	45567	45571	45571	55958	45571
	No. Req'd	8	10	10	8	8	10	10
	Price	$8	$8	$8	$8	$8	$8	$8
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**600-015RK**	**600-031RK**	**500-023RK**	**14000-008RK**	**600-016RK**	**500-024RK**	**14000-009RK**
** Indicates parts*	Bowen No.	21795K	21810K	14593K	22070K	21855K	14589K	22075K
included in kit	Price	$556	$603	$447	$505	$556	$596	$596

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

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Logan Junk Catcher Assemblies

INSIDE DIAMETER		3-1/16	3-13/32	3-13/32	3-9/32	3-13/32	3-21/32	3-3/4
OUTSIDE DIAMETER		3-13/16	3-31/32	3-31/32	4	4-1/16	4-9/32	4-15/32
LENGTH		2-1/2	1-63/64	1-63/64	2-3/8	2-3/8	2-1/4	2-9/16
COMPLETE ASSEMBLY	**Logan Part No.**	**600-017**	**600-032**	**600-033**	**500-050**	**500-025**	**600-018**	**600-019**
	Bowen No.	21780W	21880W	21805W	14598-W	19377-W	21790W	21735W
	Price	$1,832	$2,141	$2,109	$1,947	$1,947	$1,747	$1,770
BODY	**Logan Part No.**	**D11002**	**D11022**	**D11022**	**E70015**	**E7002**	**D11003**	**E7003**
	Bowen No.	45591	45565	45565	45568	45563	45579	45559
	Price	$1,122	$1,122	$1,122	$1,122	$1,122	$1,122	$1,122
FINGER RETAINER	**Logan Part No.**	**D12002**	**D12020**	**D12020**	**E80015**	**E8002**	**D12003**	**E8003**
(stainless steel)	Bowen No.	45592	45566	45566	45569	45564	45580	45560
	Price	$187	$187	$187	$187	$187	$187	$187
SHORT FINGER *	**Logan Part No.**	**E9002**	**E9002**	**E9002**	**E90015**	**E90015**	**E9012**	**E9004**
	Bowen No.	45574	45574	45574	55962	55962	45581	45558
	Code	W-3	R	R	690-W	690-W	W-1	H
	No. Req'd	5	12	6	5	5	6	5
	Price	$49	$49	$49	$49	$49	$60	$60
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Code	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
LONG FINGER *	**Logan Part No.**	**E11001**	**...**	**E11001**	**E11015**	**E11015**	**E11013**	**E11003**
	Bowen No.	45575	...	45575	55963	55963	45582	45561
	Code	W-4	...	W-4	691-W	691-W	W-2	I
	No. Req'd	5	...	6	5	5	6	5
	Price	$49	...	$48	$55	$55	$60	$63
PIVOT PIN *	**Logan Part No.**	**E12001**	**E12001**	**E12001**	**E12002**	**E12002**	**E12001**	**...**
	Bowen No.	45583	45583	45583	55957	55957	45583	...
	No. Req'd	10	12	12	10	10	12	...
	Price	$8	$8	$8	$8	$8	$8	...
TORSION SPRING *	**Logan Part No.**	**E13009**	**E13009**	**E13009**	**E13007**	**E13007**	**E13009**	**E13000**
(stainless steel)	Bowen No.	45571	45571	45571	55958	55958	45571	45520
	No. Req'd	10	12	12	10	10	12	10
	Price	$8	$8	$8	$8	$8	$8	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**600-017RK**	**600-032RK**	**600-033RK**	**500-050RK**	**500-025RK**	**600-018RK**	**600-019RK**
** Indicates parts*	Bowen No.	21780K	21880K	21805K	14598K	19377K	21790K	21735K
included in kit	Price	$760	$681	$715	$728	$760	$897	$583

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

Logan Junk Catcher Assemblies

INSIDE DIAMETER		3-3/4	3-3/4	4-3/32	4-1/16	4-1/16	4-13/32	4-13/32
OUTSIDE DIAMETER		4-15/32	4-15/32	4-3/4	4-7/8	4-7/8	5-5/32	5-5/32
LENGTH		2-9/16	2-9/16	2-1/2	2-25/32	2-25/32	2-13/16	1-13/32
COMPLETE ASSEMBLY	**Logan Part No.**	**600-083**	**500-026**	**600-062**	**500-014**	**500-027**	**600-020**	**600-067**
	Bowen No.	14747-W	14603-W	21820W	14607-W	14608-W	28349W	25250-W
	Price	$1,850	$1,882	$2,371	*	*	$2,306	$2,437
BODY	**Logan Part No.**	**E7003**	**E7003**	**D11015**	**E7004**	**E7004**	**D11004**	**D11019**
	Bowen No.	45559	45559	45595	45555	45555	45511	68375
	Price	$1,122	$1,122	$1,122	*	*	$1,456	$1,463
FINGER RETAINER	**Logan Part No.**	**E8003**	**E8003**	**D12015**	**E8004**	**E8004**	**D12004**	**D12004**
(stainless steel)	Bowen No.	45560	45560	45596	45556	45556	45519	45519
	Price	$187	$187	$187	*	*	$187	$187
SHORT FINGER *	**Logan Part No.**	**E9004**	**E9004**	**E9019**	**E9004**	**E9004**	**E9005**	**E9018**
	Bowen No.	45558	45558	45597	45558	45558	45517	68376
	Code	H	H	X-1	H	H	B	...
	No. Req'd	10	5	6	12	6	8	12
	Price	$60	$60	$60	$60	$60	$60	$93
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Code	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
LONG FINGER *	**Logan Part No.**	**...**	**E11003**	**E11020**	**...**	**E9013**	**E11006**	**...**
	Bowen No.	...	45561	45598	...	45557	45516	...
	Code	...	I	X-2	...	G	A	...
	No. Req'd	...	5	6	...	6	4	...
	Price	...	$63	$65	...	*	$65	...
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**E12010**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	45599	...	...	...	...
	No. Req'd	...	...	12	...	...	...	...
	Price	...	...	$16	...	...	...	...
TORSION SPRING *	**Logan Part No.**	**E13000**	**E13000**	**E13009**	**E13000**	**E13000**	**E13000**	**E13000**
(stainless steel)	Bowen No.	45520	45520	45571	45520	45520	45520	45520
	No. Req'd	10	10	12	12	12	12	12
	Price	$9	$9	$8	$9	$9	$9	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**600-083RK**	**500-026RK**	**600-062RK**	**500-014RK**	**500-027RK**	**600-020RK**	**600-067RK**
** Indicates parts included in kit*	Bowen No.	14747K	14603K	21820K	14607K	14608K	28349K	25250K
	Price	$667	$685	$881	*	*	$814	$1,163

Special Notes:

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

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Logan Junk Catcher Assemblies

INSIDE DIAMETER		4-13/32	4-5/16	4-5/16	4-17/32	4-17/32	4-3/4	4-13/16
OUTSIDE DIAMETER		5-5/32	5-5/16	5-5/16	5-13/32	5-13/32	5-5/8	5-23/32
LENGTH		2-13/16	2-7/8	2-7/8	2-7/8	2-7/8	2-5/8	3-1/16
COMPLETE ASSEMBLY	**Logan Part No.**	**500-051**	**600-065**	**600-066**	**500-015**	**500-028**	**600-021**	**500-016**
	Bowen No.	15130-W	14612-W	14613-W	19382-W	19383-W	21750W	14617-W
	Price	$2,306	$2,306	$2,320	$2,306	*	$2,370	$2,306
BODY	**Logan Part No.**	**D11004**	**D11018**	**D11018**	**E7005**	**E7005**	**D11005**	**E7006**
	Bowen No.	45511	45572	45572	45553	45553	45584	45512
	Price	$1,456	$1,456	$1,456	$1,456	$1,456	$1,456	$1,456
FINGER RETAINER	**Logan Part No.**	**D12004**	**D12017**	**D12017**	**E8005**	**E8005**	**D12005**	**E8006**
(stainless steel)	Bowen No.	45519	45573	45573	45554	45554	45585	45552
	Price	$187	$187	$187	$187	$187	$187	$187
SHORT FINGER *	**Logan Part No.**	**E9005**	**E9005**	**E9005**	**E9005**	**E9005**	**E9005**	**E9005**
	Bowen No.	45517	45517	45517	45517	45517	45517	45517
	Code	B	B	B	B	B	B	B
	No. Req'd	12	12	6	12	6	6	12
	Price	$60	$60	$60	$60	$60	$60	$60
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**E9013**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	45557	...	...	...	...
	Code	...	...	G	...	...	...	...
	No. Req'd	...	...	3	...	...	...	...
	Price	...	...	$65	...	...	...	...
LONG FINGER *	**Logan Part No.**	**...**	**...**	**E11006**	**...**	**E11006**	**E11006**	**...**
	Bowen No.	...	...	45516	...	45516	45516	...
	Code	...	...	A	...	A	A	...
	No. Req'd	...	...	3	...	6	6	...
	Price	...	...	$65	...	$65	$65	...
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
TORSION SPRING *	**Logan Part No.**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**
(stainless steel)	Bowen No.	45520	45520	45520	45520	45520	45520	45520
	No. Req'd	12	12	12	12	12	12	12
	Price	$9	$9	$9	$9	$9	$9	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**500-051RK**	**600-065RK**	**600-066RK**	**500-015RK**	**500-028RK**	**600-021RK**	**500-016RK**
** Indicates parts included in kit*	Bowen No.	15130K	14612K	14613K	19382K	19383K	21750K	14617K
	Price	$802	$802	$824	$802	*	$824	$802

Special Notes:

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

Logan Junk Catcher Assemblies

INSIDE DIAMETER		4-13/16	5-1/4	5-3/16	5-3/16	5-7/16	5-7/16	5-5/8
OUTSIDE DIAMETER		5-23/32	6-1/8	6-1/4	6-1/4	6-3/8	6-3/8	6-19/32
LENGTH		3-1/16	3-5/16	3-5/16	3-5/16	3	3-5/16	2-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**500-029**	**600-063**	**14000-011**	**600-022**	**500-017**	**500-030**	**600-060**
	Bowen No.	14618-W	18935-W	22050-W	21725W	14622-W	14623-W	21865W
	Price	...	...	$2,814	$2,604	$2,636	$2,667	$2,780
BODY	**Logan Part No.**	**E7006**	**D11016**	**D11006**	**D11006**	**E7007**	**E7007**	**D11013**
	Bowen No.	45512	45513	45550	45550	45545	45545	45602
	Price	...	...	$1,668	$1,668	$1,668	$1,668	$1,668
FINGER RETAINER	**Logan Part No.**	**E8006**	**D12016**	**D12006**	**D12006**	**E8007**	**E8007**	**D12014**
(stainless steel)	Bowen No.	45552	45527	45551	45551	45546	45546	45528
	Price	...	...	$187	$187	$187	$187	$187
SHORT FINGER *	**Logan Part No.**	**E9005**	**E9005**	**E9013**	**E9013**	**E9005**	**E9005**	**E9005**
	Bowen No.	45517	45517	45557	45557	45517	45517	45517
	Code	B	B	G	G	B	B	B
	No. Req'd	6	6	12	6	14	7	12
	Price	$60	$60	$65	$65	$60	$60	$60
MEDIUM FINGER *	**Logan Part No.**	**...**	**E11006**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	45516	...	...	...	...	...
	Code	...	A	...	...	...	...	...
	No. Req'd	...	3	...	...	...	...	...
	Price	...	*	...	...	...	...	...
LONG FINGER *	**Logan Part No.**	**E11006**	**E11005**	**...**	**E11005**	**...**	**E11005**	**...**
	Bowen No.	45516	45518	...	45518	...	45518	...
	Code	A	C	...	C	...	C	...
	No. Req'd	6	3	...	6	...	7	...
	Price	$65	$65	...	$65	...	$65	...
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
TORSION SPRING *	**Logan Part No.**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**	**E13000**
(stainless steel)	Bowen No.	45520	45520	45520	45520	45520	45520	45520
	No. Req'd	12	12	12	12	14	14	12
	Price	$9	$9	$9	$9	$9	$9	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**500-029RK**	**600-063RK**	**14000-011RK**	**600-022RK**	**500-017RK**	**500-030RK**	**600-060RK**
** Indicates parts included in kit*	Bowen No.	14618K	18935K	22050K	21725K	14622K	14623K	21865K
	Price	...	...	$848	$848	$933	$960	$802

Special Notes:

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

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Logan Junk Catcher Assemblies

INSIDE DIAMETER		5-5/8	6	6	6-3/16	6-3/16	6-1/2	7-1/16
OUTSIDE DIAMETER		6-19/32	7	7	7-1/8	7-1/8	7-7/16	7-7/8
LENGTH		3-5/8	1-23/32	3-7/16	3-13/16	3-13/16	3-1/2	4-5/16
COMPLETE ASSEMBLY	**Logan Part No.**	**600-061**	**14000-012**	**600-023**	**500-018**	**500-031**	**600-030**	**600-034**
	Bowen No.	18936W	21640-W	18725W	14627-W	14628-W	18720-W	9800W
	Price	$2,860	$3,160	$2,703	$2,960	$3,041	*	*
BODY	**Logan Part No.**	**D11014**	**E7014**	**D11007**	**E7008**	**E7008**	**D11020**	**D11023**
	Bowen No.	45514	68382	45505	45547	45547	45515	68396
	Price	$1,668	$1,516	$1,757	$2,063	$2,063	*	*
FINGER RETAINER	**Logan Part No.**	**D12014**	**D12007**	**D12007**	**E8008**	**E8008**	**D12018**	**D12021**
(stainless steel)	Bowen No.	45528	45506	45506	45548	45548	45529	68397
	Price	$187	$187	$187	$187	$187	*	*
SHORT FINGER *	**Logan Part No.**	**E9005**	**E9016**	**E9014**	**E9006**	**E9006**	**E9014**	**E9010**
	Bowen No.	45517	68383	45508	47670	47670	45508	45525
	Code	B	AH	K	362-W	362-W	K	M
	No. Req'd	6	12	6	12	6	6	6
	Price	$60	$60	$60	$60	$60	$60	*
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Code	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
LONG FINGER *	**Logan Part No.**	**E11005**	**...**	**E11014**	**...**	**E11007**	**E11014**	**E10003**
	Bowen No.	45518	...	45507	...	47669	45507	45510
	Code	C	...	J	...	363-W	J	L
	No. Req'd	6	...	6	...	6	6	6
	Price	$65	...	$60	...	$81	$60	*
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**...**	**E12008**	**E12008**	**...**	**...**
	Bowen No.	...	...	...	45536	45536	...	...
	No. Req'd	...	...	...	12	12	...	...
	Price	...	...	...	$16	$16	...	...
TORSION SPRING *	**Logan Part No.**	**E13000**	**E13002**	**E13004**	**E13001**	**E13001**	**E13004**	**E13002**
(stainless steel)	Bowen No.	45520	45549	45509	45537	45537	45509	45549
	No. Req'd	12	12	12	12	12	12	12
	Price	$9	$9	$9	$11	$11	$9	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**600-061RK**	**14000-012RK**	**600-023RK**	**500-018RK**	**500-031RK**	**600-030RK**	**600-034RK**
** Indicates parts included in kit*	Bowen No.	18936K	21640K	18725K	14627K	14628K	18720K	9800K
	Price	$1,099	$802	$801	$887	$1,007	*	*

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

Logan Junk Catcher Assemblies

INSIDE DIAMETER		7-3/16	7-3/16	7-13/16	7-13/16	8-1/16	8-1/16
OUTSIDE DIAMETER		8-1/8	8-1/8	9-1/32	9-1/32	9-5/16	9-5/16
LENGTH		4-5/16	4-5/16	2-5/16	4-5/8	5	5
COMPLETE ASSEMBLY	**Logan Part No.**	**14000-013**	**600-024**	**14000-014**	**500-019**	**500-054**	**500-032**
	Bowen No.	14632-W	14633W	25235-W	18945-W	14637-W	14638-W
	Price	$2,942	$2,960	*	$4,240	*	$4,539
BODY	**Logan Part No.**	**E7009**	**E7009**	**E7016**	**E7010**	**E7013**	**E7013**
	Bowen No.	45521	45521	68388	45522	45523	45523
	Price	$2,063	$2,063	*	$3,340	*	$3,441
FINGER RETAINER	**Logan Part No.**	**D12008**	**D12008**	**E8010**	**E8010**	**E8013**	**E8013**
(stainless steel)	Bowen No.	45530	45530	45531	45531	45532	45532
	Price	$235	$235	*	$235	*	$235
SHORT FINGER *	**Logan Part No.**	**E9007**	**E9007**	**E9016**	**E11014**	**E9010**	**E9010**
	Bowen No.	45588	45588	68383	45507	45525	45525
	Code	N	P-1	S	J	M	M
	No. Req'd	12	6	12	6	16	8
	Price	$60	$60	*	$60	*	$59
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**E11014**
	Bowen No.	...	...	...	...	...	45507
	Code	...	...	...	...	...	J
	No. Req'd	...	...	...	...	...	4
	Price	...	...	...	...	...	$55
LONG FINGER *	**Logan Part No.**	**...**	**E11008**	**...**	**E11018**	**...**	**E11017**
	Bowen No.	...	45589	...	70277	...	68295
	Code	...	P-2	...	J	...	N
	No. Req'd	...	6	...	6	...	4
	Price	...	$65	...	$65	...	$64
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...
	Price	...	...	...	...	...	...
TORSION SPRING *	**Logan Part No.**	**E13002**	**E13002**	**E13004**	**E13004**	**E13004**	**E13004**
(stainless steel)	Bowen No.	45549	45549	45509	45509	45509	45509
	No. Req'd	12	12	12	12	16	16
	Price	$9	$9	$9	$9	$9	$9
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**14000-013RK**	**600-024RK**	**14000-014RK**	**500-019RK**	**500-054RK**	**500-032RK**
** Indicates parts included in kit*	Bowen No.	14632K	14633K	25235K	18945K	154611K	14638K
	Price	$824	$823	*	$803	*	$1,099

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

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Logan Junk Catcher Assemblies

INSIDE DIAMETER		8-5/16	8-5/16	8-5/16	8-11/16	9-1/8	9-1/8	10-1/8
OUTSIDE DIAMETER		9-3/4	9-3/4	9-3/4	10-3/32	10-7/16	10-7/16	11-3/8
LENGTH		5	5	4-1/2	5-3/32	5-3/16	5-3/16	6
COMPLETE ASSEMBLY	**Logan Part No.**	**14000-015**	**600-026**	**600-064**	**600-027**	**500-020**	**500-033**	**500-021**
	Bowen No.	31046-W	21760W	22000-W	21840W	14642-W	14643-W	14647-W
	Price	$4,955	$4,246	*	*	$4,561	$4,577	*
BODY	**Logan Part No.**	**D11009**	**D11009**	**D11017**	**D11010**	**E7011**	**E7011**	**E7012**
	Bowen No.	45576	45576	45577	45593	45524	45524	45586
	Price	$3,435	$3,435	*	*	$3,435	$3,435	*
FINGER RETAINER	**Logan Part No.**	**D12010**	**D12010**	**D12010**	**D12011**	**E8011**	**E8011**	**E8012**
(stainless steel)	Bowen No.	45578	45578	45578	45594	45533	45533	45587
	Price	$237	$237	$237	*	$296	$296	*
SHORT FINGER *	**Logan Part No.**	**E9010**	**E9010**	**E9010**	**E11014**	**E11014**	**E11014**	**E9009**
	Bowen No.	45525	45525	45525	45507	45507	45507	666
	Code	M	M	M	J	J	J	666-W
	No. Req'd	16	8	16	8	16	8	16
	Price	$60	$60	$60	$60	$60	$60	*
MEDIUM FINGER *	**Logan Part No.**	**...**	**E10003**	**...**	**E10003**	**...**	**E10003**	**...**
	Bowen No.	...	45510	...	45510	...	45510	...
	Code	...	L	...	L	...	L	...
	No. Req'd	...	4	...	4	...	4	...
	Price	...	$65	...	$65	...	$65	...
LONG FINGER *	**Logan Part No.**	**...**	**E11010**	**...**	**E11010**	**...**	**E11010**	**...**
	Bowen No.	...	45526	...	45526	...	45526	...
	Code	...	N	...	N	...	N	...
	No. Req'd	...	4	...	4	...	4	...
	Price	...	$65	...	$65	...	$65	...
PIVOT PIN *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**E12012**
	Bowen No.	...	...	...	...	...	...	45603
	No. Req'd	...	...	...	...	...	...	16
	Price	...	...	...	...	...	...	$28
TORSION SPRING *	**Logan Part No.**	**E13004**	**E13004**	**E13004**	**E13004**	**E13004**	**E13004**	**E13005**
(stainless steel)	Bowen No.	45509	45509	45509	45509	45509	45509	45604
	No. Req'd	16	16	16	16	16	16	16
	Price	$8	$8	$8	$8	$8	$8	*
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257	42257	42257
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$3	$3	$3	$3
REPAIR KIT	**Logan Part No.**	**14000-015RK**	**600-026RK**	**600-064RK**	**600-027RK**	**500-020RK**	**500-033RK**	**500-021RK**
** Indicates parts included in kit*	Bowen No.	31046K	21760K	22000K	21840K	14642K	14643K	14647K
	Price	$1,066	$935	*	*	$1,067	$1,098	*

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

Logan Junk Catcher Assemblies

INSIDE DIAMETER		10-1/8	9-7/8	11-3/16	12-3/8	12-3/8		
OUTSIDE DIAMETER		11-3/8	11-21/32	13-5/8	13-13/16	13-13/16		
LENGTH		6	5-31/32	7-5/16	7-7/8	7-7/8		
COMPLETE ASSEMBLY	**Logan Part No.**	**500-034**	**600-028**	**600-029**	**500-022**	**500-035**		
	Bowen No.	14648-W	21770W	21775W	14652-W	14653-W		
	Price	*	$5,905	$8,877	$10,284	$10,348		
BODY	**Logan Part No.**	**E7012**	**D11011**	**D11012**	**E7015**	**E7015**		
	Bowen No.	45586	64810	45605	68391	68391		
	Price	*	$4,677	$6,573	$9,188	$9,188		
FINGER RETAINER	**Logan Part No.**	**E8012**	**D12012**	**D12013**	**E8014**	**E8014**		
(stainless steel)	Bowen No.	45587	64811	45606	68392	68392		
	Price	*	$299	$299	$326	$326		
SHORT FINGER *	**Logan Part No.**	**E9009**	**E9009**	**E9015**	**E9017**	**E9017**		
	Bowen No.	666	666	45607	68393	68393		
	Code	666-W	666-W	21778-W	...	...		
	No. Req'd	8	8	7	14	7		
	Price	$64	$64	$64	$81	$81		
MEDIUM FINGER *	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	Code	...	...	...	...	...		
	No. Req'd	...	...	...	...	...		
	Price	...	...	...	...	...		
LONG FINGER *	**Logan Part No.**	**E11011**	**E11011**	**E11016**	**...**	**E11019**		
	Bowen No.	667	667	45608	...	68395		
	Code	667-W	667-W	21779-W	...	...		
	No. Req'd	8	8	7	...	7		
	Price	*	*	$195	...	$209		
PIVOT PIN *	**Logan Part No.**	**E12012**	**E12012**	**E12009**	**E12013**	**E12013**		
	Bowen No.	45603	45603	45609	68394	68394		
	No. Req'd	16	16	14	14	14		
	Price	$28	$28	$28	$28	$28		
TORSION SPRING *	**Logan Part No.**	**E13005**	**E13005**	**E13010**	**E13004**	**E13004**		
(stainless steel)	Bowen No.	45604	45604	45610	45509	45509		
	No. Req'd	16	16	14	14	14		
	Price	$11	$11	$11	$11	$11		
RETAINER SCREW *	**Logan Part No.**	**E14000**	**E14000**	**E14000**	**E14000**	**E14000**		
(stainless steel)	Bowen No.	42257	42257	42257	42257	42257		
	No. Req'd	2	2	2	2	2		
	Price	$3	$3	$3	$3	$3		
REPAIR KIT	**Logan Part No.**	**500-034RK**	**600-028RK**	**600-029RK**	**500-022RK**	**500-035RK**		
** Indicates parts included in kit*	Bowen No.	14648K	21770K	21775K	14652K	14653K		
	Price	*	$1,631	$1,581	$1,293	$1,346		

Special Notes:

(1) Code: Each finger is stenciled with a letter or letter-number code. These codes are used in lieu of the part number because of space limitation. See the Finger Code Chart below to cross-reference the code with the part number.

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Finger number and code, when ordering fingers

Recommended Spare Parts:

(1) 2 Sets of Fingers

(2) 4 Sets of Torsion Springs

(3) 1 Set of Pivot Pins

(4) 4 Retainer Screws

Finger Code Chart

Code	Part No.	Code	Part No.	Code	Part No.	Code	Part No.
A	E11006	I	E11003	P-1	E9007	21778-W	E9015
B	E9005	J	E11014	P-2	E11008	21779-W	E11016
C	E11005	K	E9014	W-1	E9012	362-W	E9006
D	—	L	E10003	W-2	E11013	363-W	E11007
E	E9001	M	E9010	W-3	E9002	690-W	E90015
F	E11000	N	E11010	W-4	E11001	691-W	E11015
G	E9013	O	—	X-1	E9019	666-W	E9009
H	E9004	P	—	X-2	E11020	667-W	E11011

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LOGAN FISHING MAGNETS

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Logan Fishing Magnets

HOLE SIZE		1-1/4 to 2	1-5/8 to 2-1/2	2 to 2-3/4	2-3/8 to 3-1/4	2-3/4 to 3-5/8	3 to 3-3/4	3-1/4 to 4-1/8
O.D. OF BODY		1	1-1/4	1-1/2	1-3/4	2-1/4	2-1/2	3
TOP CONNECTION		5/8-11 UNC	5/8 SR	5/8 SR	3/4 SR	3/4 SR	3/4 SR	2-3/8 Tbg
ESTIMATED PULLING CAPACITY (LBS)		4	6	9	12	20	65	70
COMPLETE ASSEMBLY	**Logan Part No.**	**306-100**	**306-125**	**306-150**	**306-175**	**306-225**	**306-250**	**306-300**
	Bowen No.	32060	32080	32100	32120	32150	32170	32180
	Price	*	*	*	*	$6,092	*	*
BODY *	**Logan Part No.**	**...**	**V1000**	**V1001**	**V1002**	**V1003**	**V1004**	**V1005**
	Bowen No.	...	32081	32101	32121	32151	32171	32181
	Price	...	*	*	*	$1,106	*	*
HOUSING *	**Logan Part No.**	**V20005**	**V2000**	**V2001**	**V2002**	**V2003**	**V2004**	**V2005**
	Bowen No.	32062	32082	32102	32122	32152	32172	32182
	Price	*	*	*	*	$554	*	*
POLE PLATE *	**Logan Part No.**	**V30005**	**V3000**	**V3001**	**V3002**	**V3003**	**V3004**	**V3005**
	Bowen No.	32063	32083	32103	32123	32153	32173	32183
	Price	*	*	*	*	$964	*	*
MAGNETIC ELEMENT *	**Logan Part No.**	**V4000**	**V4000**	**V4001**	**V4002**	**V4003**	**V4004**	**V4005**
	Bowen No.	32064	32084	32104	32124	32154	32174	32184
	Price	*	*	*	*	$552	*	*
FLUSH GUIDE	**Logan Part No.**	**...**	**V6000**	**V6001**	**V6002**	**V6003**	**V6004**	**V6005**
	Bowen No.	...	32085	32105	32125	32155	32175	32185
	Price	...	*	*	*	$222	*	*
LIFTING CAP	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Connection	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

OPTIONAL COMPONENTS

CUTLIPPED GUIDE	**Logan Part No.**	**...**	**V6000**	**V6001**	**V6002**	**V6003**	**V6004**	**V6005**
	Bowen No.	...	32085	32105	32125	32155	32175	32185
	Price	...	*	*	*	$368	*	*
MILL GUIDE	**Logan Part No.**	**...**	**V6000**	**V6001**	**V6002**	**V6003**	**V6004**	**V6005**
	Bowen No.	...	32085	32105	32125	32155	32175	32185
	Price	...	*	*	*	$657	*	*
ADAPTER – 5/8" SUCKER ROD	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
ADAPTER – 3/4" SUCKER ROD	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**V7005**
	Bowen No.	...	...	...	...	...	...	70513
	Price	...	...	...	...	...	...	*
KEEPER	**Logan Part No.**	**V90005**	**V9000**	**V9001**	**V9002**	**V9003**	**V9004**	**V9005**
	Bowen No.	...	66005	66008	74731	74732	66014	71716
	Price	**	**	**	**	**	**	**

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** Available upon request.*

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Special Notes:

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(2) Magnets shipped via air freight must include Keepers.

When ordering, please specify:

(1) Name and part number of assembly

(2) O.D. of Body

(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Cut-Lipped Guide

(2) 1 Mill Guide

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Logan Fishing Magnets

HOLE SIZE		4 to 4-1/4	4-1/4 to 4-1/2	4-1/2 to 5	5-1/8 to 5-1/2	5-5/8 to 6	6-1/8 to 6-1/2	6-1/8 to 6-1/2
O.D. OF BODY		3-1/4	3-1/2	4	4-1/2	5	5-1/2	5-3/4
TOP CONNECTION		2-3/8 Tbg	2-3/8 API Reg	2-3/8 API Reg	2-7/8 API Reg	2-7/8 API Reg	3-1/2 API Reg	3-1/2 API Reg
ESTIMATED PULLING CAPACITY (LBS)		85	90	115	160	200	250	250
COMPLETE ASSEMBLY	**Logan Part No.**	**306-325**	**306-350**	**306-400**	**306-450**	**306-500**	**306-550**	**306-575**
	Bowen No.	32190	32210	32230	32240	32260	32270	32280
	Price	*	$6,496	$7,060	$8,000	$7,993	$9,342	$9,433
BODY *	**Logan Part No.**	**V1006**	**V1007**	**V1008**	**V1009**	**V1010**	**V1011**	**V1012**
	Bowen No.	32191	32211	32231	32241	32261	32271	32281
	Price	*	$1,893	$2,149	$2,483	$2,631	$3,272	$3,315
HOUSING *	**Logan Part No.**	**V2006**	**V2007**	**V2008**	**V2009**	**V2010**	**V2011**	**V2012**
	Bowen No.	32192	32212	32232	32242	32262	32272	32282
	Price	*	$752	$833	$954	$943	$1,171	$2,268
POLE PLATE *	**Logan Part No.**	**V3006**	**V3007**	**V3008**	**V3009**	**V3010**	**V3011**	**V3012**
	Bowen No.	32193	32213	32233	32243	32263	32273	32283
	Price	*	$1,219	$1,331	$1,451	$1,436	$1,667	$1,667
MAGNETIC ELEMENT *	**Logan Part No.**	**V4006**	**V4007**	**V4008**	**V4009**	**V4010**	**V4011**	**V4011**
	Bowen No.	32194	32214	32234	32244	32264	32274	32274
	Price	*	$1,636	$1,771	$2,119	$1,951	$2,136	$2,136
FLUSH GUIDE	**Logan Part No.**	**V6006**	**V6007**	**V6008**	**V6009**	**V6010**	**V6011**	**V6012**
	Bowen No.	32195	32215	32235	32245	32265	32275	32285
	Price	*	$339	$317	$336	$366	$1,052	$1,159
LIFTING CAP	**Logan Part No.**	**...**	**V8000**	**V8000**	**V8001**	**V8001**	**V8002**	**V8002**
	Connection	...	2-3/8 API Reg	2-3/8 API Reg	2-7/8 API Reg	2-7/8 API Reg	3-1/2 API Reg	3-1/2 API Reg
	Price	...	$663	$663	$659	$659	$726	$726

OPTIONAL COMPONENTS

CUTLIPPED GUIDE	**Logan Part No.**	**V6006**	**V6007**	**V6008**	**V6009**	**V6010**	**V6011**	**V6012**
	Bowen No.	32195	32215	32235	32245	32265	32275	32285
	Price	*	$421	$448	$449	$509	$602	$637
MILL GUIDE	**Logan Part No.**	**V6006**	**V6007**	**V6008**	**V6009**	**V6010**	**V6011**	**V6012**
	Bowen No.	32195	32215	32235	32245	32265	32275	32285
	Price	*	$690	$703	$718	$836	$1,007	$1,056
ADAPTER — 5/8" SUCKER ROD	**Logan Part No.**	**...**	**...**	**V5008**	**V5009**	**V5009**	**V5011**	**V5011**
	Bowen No.	...	...	62250	62252	62252	62254	62254
	Price	...	...	**	**	**	**	**
ADAPTER — 3/4" SUCKER ROD	**Logan Part No.**	**V7005**	**...**	**V7008**	**V7009**	**V7009**	**V7011**	**V7011**
	Bowen No.	70513	...	62251	62253	62253	62255	62255
	Price	**	...	$1,117	**	**	**	**
KEEPER	**Logan Part No.**	**V9006**	**V9007**	**V9008**	**V9009**	**V9010**	**V9011**	**V9012**
	Bowen No.	66016	66021	66026	66027	66030	66031	74962

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When ordering, please specify:

(1) Name and part number of assembly

(2) O.D. of Body

(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Cut-Lipped Guide

(2) 1 Mill Guide

Logan Fishing Magnets

HOLE SIZE		6-5/8 to 7-1/2	7-5/8 to 8-1/2	8-5/8 to 9-3/4	9-7/8 to 11-5/8	10-1/2 to 11-7/8	11-3/4 to 13	12-1/4 to 14
O.D. OF BODY		6	7	8	9	10	10-1/2	11-1/2
TOP CONNECTION		3-1/2 API Reg	4-1/2 API Reg	4-1/2 API Reg	4-1/2 API Reg	6-5/8 API Reg	6-5/8 API Reg	6-5/8 API Reg
ESTIMATED PULLING CAPACITY (LBS)		250	330	560	680	750	800	800
COMPLETE ASSEMBLY	**Logan Part No.**	**306-600**	**306-700**	**306-800**	**306-900**	**306-1000**	**306-1050**	**306-1150**
	Bowen No.	32290	32300	32310	32330	32340	32350	32370
	Price	*	$10,770	$13,773	$18,740	$20,864	$23,290	$29,584
BODY *	**Logan Part No.**	**V1013**	**V1014**	**V1015**	**V1016**	**V1017**	**V1018**	**V1019**
	Bowen No.	32291	32301	32311	32331	32341	32351	32371
	Price	*	$3,817	$4,556	$6,993	$7,303	$7,886	$9,693
HOUSING *	**Logan Part No.**	**V2013**	**V2014**	**V2015**	**V2016**	**V2017**	**V2018**	**V2019**
	Bowen No.	32292	32302	32312	32332	32342	32352	32372
	Price	*	$1,385	$1,860	$2,176	$3,919	$4,210	$4,720
POLE PLATE *	**Logan Part No.**	**V3013**	**V3014**	**V3015**	**V3016**	**V3017**	**V3017**	**V3019**
	Bowen No.	32293	32303	32313	32333	32343	32343	32373
	Price	*	$1,563	$1,832	$1,984	$2,301	$2,301	$2,760
MAGNETIC ELEMENT *	**Logan Part No.**	**V4013**	**V4014**	**V4015**	**V4016**	**V4017**	**V4017**	**V4019**
	Bowen No.	32294	32304	32314	32334	32344	32344	32374
	Price	*	$2,553	$3,969	$5,918	$6,736	$6,736	$9,859
FLUSH GUIDE	**Logan Part No.**	**V6013**	**V6014**	**V6015**	**V6016**	**V6017**	**V6018**	**V6019**
	Bowen No.	32295	32305	32315	32335	32345	32355	32375
	Price	*	$499	$602	$718	$929	$974	$1,372
LIFTING CAP	**Logan Part No.**	**V8002**	**V8003**	**V8003**	**V8003**	**V8004**	**V8004**	**V8004**
	Connection	3-1/2 API Reg	4-1/2 API Reg	4-1/2 API Reg	4-1/2 API Reg	6-5/8 API Reg	6-5/8 API Reg	6-5/8 API Reg
	Price	*	$958	$958	$958	$1,188	$1,188	$1,188

OPTIONAL COMPONENTS

CUTLIPPED GUIDE	**Logan Part No.**	**V6013**	**V6014**	**V6015**	**V6016**	**V6017**	**V6018**	**V6019**
	Bowen No.	32295	32305	32315	32335	32345	32355	32375
	Price	*	$720	$929	$1,208	$1,485	$1,771	$2,018
MILL GUIDE	**Logan Part No.**	**V6013**	**V6014**	**V6015**	**V6016**	**V6017**	**V6018**	**V6019**
	Bowen No.	32295	32305	32315	32335	32345	32355	32375
	Price	*	$1,092	$1,401	$1,814	$2,362	$2,848	$2,994
ADAPTER — 5/8" SUCKER ROD	**Logan Part No.**	**V5011**	**V5014**	**V5014**	**V5014**	**V5017**	**V5017**	**V5017**
	Bowen No.	62254	62256	62256	62256	62258	62258	62258
	Price	**	**	**	**	**	**	**
ADAPTER — 3/4" SUCKER ROD	**Part No.**	**V7011**	**V7014**	**V7014**	**V7014**	**V7017**	**V7017**	**V7017**
	Bowen No.	62255	62257	62257	62257	62259	62259	62259
	Price	**	**	**	**	**	**	**
KEEPER	**Logan Part No.**	**V9013**	**V9014**	**V9015**	**V9016**	**V9017**	**V9017**	**V9019**
	Bowen No.	66039	56181	66041	66044	66045	66045	66218

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(2) O.D. of Body

(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Cut-Lipped Guide

(2) 1 Mill Guide

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Logan Fishing Magnets

HOLE SIZE		15	17	20
O.D. OF BODY		14	16	19
TOP CONNECTION		6-5/8 API Reg	6-5/8 API Reg	7-5/8 API Reg
ESTIMATED PULLING CAPACITY (LBS)		1,100	1,100	1,470
COMPLETE ASSEMBLY	**Logan Part No.**	**306-1400**	**306-1600**	**306-1900**
	Bowen No.	32380	79183	79189
	Price	$45,062	$61,896	$109,150
BODY *	**Logan Part No.**	**V1020**	**V1021**	**V1022**
	Bowen No.	32381	145730	79190
	Price	$14,627	$27,973	$42,547
HOUSING *	**Logan Part No.**	**V2020**	**V2021**	**V2022**
	Bowen No.	32382	145731	79191
	Price	$6,674	$9,052	$15,136
POLE PLATE *	**LoganPart No.**	**V3020**	**V3021**	**V3022**
	Bowen No.	32383	145732	79192
	Price	$4,823	$6,254	$9,931
MAGNETIC ELEMENT *	**Logan Part No.**	**V4020**	**V4020**	**V4022**
	Bowen No.	32384	32384	79193
	Price	$15,861	$15,861	$41,580
FLUSH GUIDE	**Logan Part No.**	**V6020**	**V6021**	**V6022**
	Bowen No.	32385	79188	79194
	Price	$1,897	$2,256	$3,354
LIFTING CAP	**Logan Part No.**	**V8004**	**V8004**	**V8005**
	Connection	6-5/8 API Reg	6-5/8 API Reg	7-5/8 API Reg
	Price	$1,188	$1,188	$1,244

OPTIONAL COMPONENTS

CUTLIPPED GUIDE	**Logan Part No.**	**V6020**	**V6021**	**V6022**
	Bowen No.	32385	79188	79194
	Price	$3,213	$3,649	$3,044
MILL GUIDE	**Logan Part No.**	**V6020**	**V6021**	**V6022**
	Bowen No.	32385	79188	79194
	Price	$4,002	$4,784	$5,961
ADAPTER — 5/8" SUCKER ROD	**Logan Part No.**	**V5017**	**...**	**...**
	Bowen No.	62258	...	...
	Price	**	...	...
ADAPTER — 3/4" SUCKER ROD	**Logan Part No.**	**V7017**	**...**	**...**
	Bowen No.	62259	...	...
	Price	**	...	...
KEEPER	**Logan Part No.**	**V9020**	**V9021**	**V9022**
	Bowen No.	66219	145867	...

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(2) O.D. of Body

(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Cut-Lipped Guide

(2) 1 Mill Guide

Logan Heavy Duty Ditch Magnets

LENGTH		14"	18"	24"	30"	36"	48"	60"
COMPLETE ASSEMBLY	**Logan Part No.**	**305-014**	**305-018**	**305-024**	**305-030**	**305-036**	**305-048**	**305-060**
	Bowen No.	...	...	152761	...	79162	...	...
	Price	$1,993	$3,568	$3,650	$3,677	$3,802	*	*
KEEPER	**Logan Part No.**	**DMK-014**	**DMK-018**	**DMK-024**	**DMK-030**	**DMK-036**	**DMK-048**	**DMK-060**
	Price Per Set	$561	$691	$838	$1,007	$1,069	*	*

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** Available upon request.*

Special Notes:

(1) Prices shown are for Heavy Duty application. Light Duty prices available upon request.

(2) Magnets shipped via air freight must include a Keeper set.

When ordering, please specify:

(1) Name and part number of assembly

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Notes

Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		3-5/8	4-1/2	5-3/4	6-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**15918**	**15920**	**15923**	**15925**
	Price	*	*	*	*
JET SECTION ASSEMBLY					
Jet Section Assembly		15936	15937	15938	15939
Outside Diameter		3-5/8"	4-1/2"	5-3/4"	6-3/4"
Jet Nozzle Required		4	4	4	4
Top Connection (Pin)		2-3/8" API Reg.	2-7/8"API Reg.	3-1/2" API Reg.	4-1/2"API Reg.
Approx. Piston Shear Press (PSI)		...	...	700 PSI	700 PSI
Top Sub	**Logan Part No.**	**214944**	**214947**	**214949**	**214592**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Lift Cap	**Logan Part No.**	**214943**	**214946**	**214948**	**214591**
(To fit Top Connection)	No. Req'd	1	1	1	1
	Price	*	*	*	*
Drop Ball	**Logan Part No.**	**116122**	**116122**	**114203**	**114203**
	Qty. Req'd	2	2	2	2
	Price	*	*	*	*
Jet Sleeve	**Logan Part No.**	**313413**	**313419**	**313427**	**313433**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Ejector Pump Head	**Logan Part No.**	**313412**	**313418**	**313426**	**313432**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Ejector Pump Head O-Ring	**Logan Part No.**	**11819**	**118199**	**118217**	**119235**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Jet Nozzle	**Logan Part No.**	**118860**	**118570**	**118959**	**118968**
	Qty. Req'd	4	4	1	4
	Price	*	*	*	*
Copper Gasket	**Logan Part No.**	**118861**	**118871**	**118871**	**118969**
	Qty. Req'd	4	4	4	4
	Price	*	*	*	*
Jet Sleeve Set Screw	**Logan Part No.**	**117699**	**119214**	**119214**	**119214**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Jet Nozzle Protector	**Logan Part No.**	**...**	**...**	**118965**	**118965**
	Qty. Req'd	...		4	4
	Price	...		*	*
Flushing Nozzle	**Logan Part No.**	**118863**	**118863**	**118962**	**118962**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Pipe Plug	**Logan Part No.**	**119743**	**119743**	**119744**	**119745**
O-RING SEAL	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Ball Seat Wrench	**Logan Part No.**	**118864**	**118864**	**118864**	**118864**
O-RING SEAL	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Strainer Sleeve Assembly	**Logan Part No.**	**15943**	**15943**	**15944**	**15944**
(Hard Faced Mill Teeth)	Qty. Req'd	1	1	1	1
	Price	*	*	*	*

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**Junk Catcher and Core Catcher Repair Kits consist of the required number of fingers and torsion springs to permit the complete replacement of these parts in one catcher assembly.*

***All Rotary Shoes require two Junk Catchersor a combination of any of the following Junk Catcher, Short Core Catcher. Spacer Ring with a Bearing Assembly. Prices for the complete Assembly reflect an application of Kutrite on the Rotary Shoes. Special 2-114" and 3-118" O.D. Models are available for junk fishing in Slim Hole, tubingless completion.*

Ordering Specifications:

Specify size and type of Top Sub, if other than shown. Specify if other than Kutrite is to be applied to the Rotary Shoe. If Lift Caps are ordered separately, specify thread and whether pin or box.

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		7-7/8	8-3/4	10-1/8
COMPLETE ASSEMBLY	**Logan Part No.**	**15927**	**15929**	**15932**
	Price			
JET SECTION ASSEMBLY				
Jet Section Assembly		15940	15941	15942
Outside Diameter		7-7/8"	8-3/4"	10-1/8"
Jet Nozzle Required		4	5	7
Top Connection (Pin)		4-1/2"API Reg	6-5/8"API Reg.	6-5/8"API Reg.
Approx. Piston Shear Press (PSI)		1000 PSI	1000 PSI	1000 PSI
Top Sub	**Logan Part No.**	**214954**	**214956**	**214953**
	Qty. Req'd	1	1	1
	Price	*	*	*
Lift Cap	**Logan Part No.**	**214951**	**214957**	**214957**
(To fit Top Connection)	No. Req'd	1	1	1
	Price			
Drop Ball	**Logan Part No.**	**114209**	**114209**	**114209**
	Qty. Req'd	2	2	2
	Price	*	*	*
Jet Sleeve	**Logan Part No.**	**313439**	**313445**	**313453**
	Qty. Req'd	1	1	1
	Price	*	*	*
Ejector Pump Head	**Logan Part No.**	**313438**	**313444**	**313452**
	Qty. Req'd	1	1	1
	Price	*	*	*
Ejector Pump Head O-Ring	**Logan Part No.**	**118243**	**118251**	**118261**
	Qty. Req'd	1	1	1
	Price	*	*	*
Jet Nozzle	**Logan Part No.**	**118971**	**118971**	**118971**
	Qty. Req'd	4	5	7
	Price	*	*	*
Copper Gasket	**Logan Part No.**	**118969**	**118969**	**118969**
	Qty. Req'd	4	5	7
	Price	*	*	*
Jet Sleeve Set Screw	**Logan Part No.**	**119214**	**119214**	**119214**
	Qty. Req'd	1	1	1
	Price	*	*	*
Jet Nozzle Protector	**Logan Part No.**	**118977**	**118977**	**118977**
	Qty. Req'd	4	5	7
	Price	*	*	*
Flushing Nozzle	**Logan Part No.**	**118974**	**118974**	**118974**
	Qty. Req'd	1	1	1
	Price	*	*	*
Pipe Plug	**Logan Part No.**	**119745**	**119745**	**119745**
O-RING SEAL	Qty. Req'd	1	1	1
	Price	*	*	*
Ball Seat Wrench	**Logan Part No.**	**118864**	**118864**	**118864**
O-RING SEAL	Qty. Req'd	1	1	1
	Price	*	*	*
Strainer Sleeve Assembly	**Logan Part No.**	**15945**	**15945**	**15945**
(Hard Faced Mill Teeth)	Qty. Req'd	1	1	1
	Price	*	*	*

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Ordering Specifications:

Specify size and type of Top Sub, if other than shown. Specify if other than Kutrite is to be applied to the Rotary Shoe. If Lift Caps are ordered separately, specify thread and whether pin or box.

Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		3-5/8	4-1/2	5-3/4	6-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**15918**	**15920**	**15923**	**15925**
	Price	*	*	*	*
JET SECTION ASSEMBLY					
Jet Section Assembly		15936	15937	15938	15939
Outside Diameter		3-5/8"	4-1/2"	5-3/4"	6-3/4"
Jet Nozzle Required		4	4	4	4
Top Connection (Pin)		2-3/8" API Reg.	2-7/8"API Reg.	3-1/2" API Reg.	4-1/2"API Reg.
Approx. Piston Shear Press (PSI)		...	...	700 PSI	700 PSI
Piston	**Logan Part No.**	**...**	**...**	**118961**	**118961**
	Qty. Req'd			1	1
	Price			*	*
Piston Shear Pins	**Logan Part No.**	**...**	**...**	**119215**	**119215**
	No. Req'd			6	6
	Price			*	*
Piston O-Ring	**Logan Part No.**	**...**	**...**	**118177**	**118177**
	Qty. Req'd			2	2
	Price			*	*
Drop Ball Seat	**Logan Part No.**	**119211**	**119211**	**114220**	**114220**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Ball Seat Retainer	**Logan Part No.**	**118866**	**118866**	**118966**	**118966**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Strainer Sleeve	**Logan Part No.**	**214945**	**214945**	**214950**	**214950**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Strainer Sleeve O-Ring	**Logan Part No.**	**118315**	**118315**	**118185**	**118185**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Seal Bushing	**Logan Part No.**	**118862**	**118862**	**118960**	**118960**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Seal Bushing O-Ring	**Logan Part No.**	**118171**	**118171**	**118177**	**118177**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Seal Bushing Screw	**Logan Part No.**	**119222**	**119222**	**119224**	**119224**
	Qty. Req'd	3	3	3	1
	Price	*	*	*	*
Complete Seal Kit	**Logan Part No.**	**15949**	**15950**	**15951**	**115952**
	Qty. Req'd				
	Price	*	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		7-7/8	8-3/4	10-1/8
COMPLETE ASSEMBLY	**Logan Part No.**	**15927**	**15929**	**15932**
	Price	*	*	*

JET SECTION ASSEMBLY

Jet Section Assembly		15940	15941	15942
Outside Diameter		7-7/8"	8-3/4"	10-1/8"
Jet Nozzle Required		4	5	7
Top Connection (Pin)		4-1/2"API Reg	6-5/8"API Reg.	6-5/8"API Reg.
Approx. Piston Shear Press (PSI)		1000 PSI	1000 PSI	1000 PSI
Piston	**Logan Part No.**	**118973**	**118973**	**118973**
	Qty. Req'd	1	1	1
	Price	*	*	*
Piston Shear Pins	**Logan Part No.**	**119215**	**119215**	**119215**
	No. Req'd	8	8	8
	Price	*	*	*
Piston O-Ring	**Logan Part No.**	**118191**	**118191**	**118191**
	Qty. Req'd	2	2	2
	Price	*	*	*
Drop Ball Seat	**Logan Part No.**	**118697**	**118697**	**118697**
	Qty. Req'd	1	1	1
	Price	*	*	*
Ball Seat Retainer	**Logan Part No.**	**118978**	**118978**	**118978**
	Qty. Req'd	1	1	1
	Price	*	*	*
Strainer Sleeve	**Logan Part No.**	**214955**	**214955**	**214955**
	Qty. Req'd	1	1	1
	Price	*	*	*
Strainer Sleeve O-Ring	**Logan Part No.**	**118201**	**118201**	**118201**
	Qty. Req'd	1	1	1
	Price	*	*	*
Seal Bushing	**Logan Part No.**	**118872**	**118972**	**118972**
	Qty. Req'd	1	1	1
	Price	*	*	*
Seal Bushing O-Ring	**Logan Part No.**	**118191**	**118191**	**118191**
	Qty. Req'd	1	1	1
	Price	*	*	*
Seal Bushing Screw	**Logan Part No.**	**119223**	**119223**	**119223**
	Qty. Req'd	3	3	3
	Price	*	*	*
Complete Seal Kit	**Logan Part No.**	**15953**	**15954**	**15955**
	Qty. Req'd			
	Price	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		3-5/8	4-1/2	5-3/4	6-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**15918**	**15920**	**15923**	**15925**
	Price	*	*	*	*
JET SECTION ASSEMBLY					
Jet Section Assembly		15936	15937	15938	15939
Outside Diameter		3-5/8"	4-1/2"	5-3/4"	6-3/4"
Jet Nozzle Required		4	4	4	4
Top Connection (Pin)		2-3/8" API Reg.	2-7/8"API Reg.	3-1/2" API Reg.	4-1/2"API Reg.
Approx. Piston Shear Press (PSI)		...	...	700 PSI	700 PSI
Copper Gasket	**Logan Part No.**	**118861**	**118871**	**118871**	**118969**
	Qty. Req'd	4	1	4	4
	Price	*	*	*	*
Ejector Pump O-Ring	**Logan Part No.**	**118189**	**118199**	**118217**	**118235**
	No. Req'd	1	1	1	1
	Price	*	*	*	*
Piston O-Ring	**Logan Part No.**	**...**	**...**	**118177**	**118177**
	Qty. Req'd	...	...	3	2
	Price	...	...	*	*
Strainer Sleeve O-Ring	**Logan Part No.**	**118315**	**118315**	**118185**	**118185**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Seal Bushing O-Ring	**Logan Part No.**	**118171**	**118171**	**118177**	**118177**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		7-7/8	8-3/4	10-1/8
COMPLETE ASSEMBLY	**Logan Part No.**	**15927**	**15929**	**15932**
	Price	*	*	*
JET SECTION ASSEMBLY				
Jet Section Assembly		15940	15941	15942
Outside Diameter		7-7/8"	8-3/4"	10-1/8"
Jet Nozzle Required		4	5	7
Top Connection (Pin)		4-1/2"API Reg	6-5/8"API Reg.	6-5/8"API Reg.
Approx. Piston Shear Press (PSI)		1000 PSI	1000 PSI	1000 PSI
Copper Gasket	**Logan Part No.**	**118969**	**118969**	**118969**
	Qty. Req'd	4	5	7
	Price	*	*	*
Ejector Pump O-Ring	**Logan Part No.**	**118243**	**118251**	**118261**
	No. Req'd	1	1	1
	Price	*	*	*
Piston O-Ring	**Logan Part No.**	**118191**	**118191**	**118191**
	Qty. Req'd	2	2	2
	Price	*	*	*
Strainer Sleeve O-Ring	**Logan Part No.**	**118201**	**118201**	**118201**
	Qty. Req'd	1	1	1
	Price	*	*	*
Seal Bushing O-Ring	**Logan Part No.**	**118191**	**118191**	**118191**
	Qty. Req'd	1	1	1
	Price	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		3-5/8	3-5/8	4-1/2	4-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**15918**	**15918**	**15920**	**15920**
	Price	*	*	*	*
JUNK RETAINING ASSEMBLY					
Hole Size		4"-4/1/8"	4-1/4"-4/1/2"	4-7/8"-5"	5-1/8"-5-1/2"
Junk Retaining Assembly		15956	15957	15958	15959
Outside Diameter		3-5/8"	4-1/16"	4-1/2"	4-7/8"
Inside Diameter (Catcher&Shoe)		2-3/4"	3"	3-9/32"	3-21/32"
Junk Sleeve	**Logan Part No.**	**313414**	**313406**	**313420**	**313422**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Bearing Retainer**	**Logan Part No.**	**...**	**...**	**...**	**...**
	No. Req'd	...	...	...	...
	Price	...	...	...	...
Race Ring**	**Logan Part No.**	**...**	**...**	**...**	**...**
	Qty. Req'd	...	...	...	...
	Price	...	...	...	...
Junk Catcher**	**Logan Part No.**	**118867**	**118868**	**118872**	**118873**
	Qty. Req'd	2	2	2	2
	Price	*	*	*	*
Short Junk Catcher**	**Logan Part No.**	**...**	**...**	**...**	**...**
	Qty. Req'd	...	...	...	...
	Price	...	...	...	...
Spacer Ring**	**Logan Part No.**	**119234**	**119235**	**119236**	**119237**
	Qty. Req'd	...	...	...	...
	Price	*	*	*	*
Rotary Shoe	**Logan Part No.**	**313415**	**313417**	**313421**	**313423**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
REPAIR KITS					
Junk Catcher Repair Kit*	**Logan Part No.**	**118901**	**118902**	**118903**	**118904**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Junk Catcher Repair Kit*	**Logan Part No.**	**...**	**...**	**...**	**...**
	Qty. Req'd	...	...	...	...
	Price	...	...	...	...

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		4-1/2	5-3/4	5-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**15920**	**15923**	**15923**
	Price	*	*	*
JUNK RETAINING ASSEMBLY				
Hole Size		5-5/8"-6"	6-1/8"-6-1/2"	6-5/8"-7"
Junk Retaining Assembly		15960	15961	15962
Outside Diameter		5-3/8"	5-3/4"	6-1/4"
Inside Diameter (Catcher&Shoe)		4-1/16"	4-3/8"	4-3/4"
Junk Sleeve	**Logan Part No.**	**313424**	**313428**	**313430**
	Qty. Req'd	1	1	1
	Price	*	*	*
Bearing Retainer**	**Logan Part No.**	**...**	**118932**	**118934**
	No. Req'd	...	1	1
	Price	...	*	*
Race Ring**	**Logan Part No.**	**...**	**118933**	**118935**
	Qty. Req'd	...	2	2
	Price	...	*	*
Junk Catcher**	**Logan Part No.**	**118874**	**118875**	**11887**
	Qty. Req'd	2	1	1
	Price	*	*	*
Short Junk Catcher**	**Logan Part No.**	**...**	**118876**	**118878**
	Qty. Req'd	...	1	1
	Price	...	*	*
Spacer Ring**	**Logan Part No.**	**119238**	**119239**	**119240**
	Qty. Req'd	...	...	...
	Price	*	*	*
Rotary Shoe	**Logan Part No.**	**313425**	**313429**	**313431**
	Qty. Req'd	1	1	1
	Price	*	*	*
REPAIR KITS				
Junk Catcher Repair Kit*	**Logan Part No.**	**118905**	**118906**	**118908**
	Qty. Req'd	1	1	1
	Price	*	*	*
Junk Catcher Repair Kit*	**Logan Part No.**	**...**	**118907**	**118909**
	Qty. Req'd	...	1	1
	Price	...	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		6-3/4	6-3/4	7-7/8	7-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**15925**	**15925**	**15927**	**15927**
	Price	*	*	*	*
JUNK RETAINING ASSEMBLY					
Hole Size		7-1/8"-7-1/2"	8-1/8"-8-3/8"	8-1/2"-9"	9-1/2"-9-7/8"
Junk Retaining Assembly		15963	15964	15965	15966
Outside Diameter		6-3/4"	7-1/4"	7-7/8"	8-3/16"
Inside Diameter (Catcher&Shoe)		5-1/4"	5-5/8"	6-1/16"	6-1/2"
Junk Sleeve	**Logan Part No.**	**313434**	**313436**	**313440**	**313442**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Bearing Retainer**	**Logan Part No.**	**118936**	**118938**	**118940**	**118942**
	No. Req'd	1	1	1	1
	Price	*	*	*	*
Race Ring**	**Logan Part No.**	**118937**	**118939**	**118941**	**118943**
	Qty. Req'd	2	2	2	2
	Price	*	*	*	*
Junk Catcher**	**Logan Part No.**	**118879**	**118881**	**118883**	**118885**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Short Junk Catcher**	**Logan Part No.**	**118880**	**118882**	**118884**	**118886**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Spacer Ring**	**Logan Part No.**	**119241**	**119242**	**119243**	**119244**
	Qty. Req'd				
	Price	*	*	*	*
Rotary Shoe	**Logan Part No.**	**313435**	**313457**	**313441**	**313443**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
REPAIR KITS					
Junk Catcher Repair Kit*	**Logan Part No.**	**118910**	**118912**	**118914**	**118916**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Junk Catcher Repair Kit*	**Logan Part No.**	**118911**	**118913**	**118915**	**118917**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		8-3/4	8-3/4	8-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**15929**	**15929**	**15929**
	Price	*	*	*
JUNK RETAINING ASSEMBLY				
Hole Size		9-1/2"-9-7/8"	10"-10-3/4"	10-7/8"-11-5/8"
Junk Retaining Assembly		15967	15968	15969
Outside Diameter		8-3/4"	9"	9-7/8"
Inside Diameter (Catcher&Shoe)		6-7/8"	7-3/16"	7-3/4"
Junk Sleeve	**Logan Part No.**	**313446**	**313448**	**313450**
	Qty. Req'd	1	1	1
	Price	*	*	*
Bearing Retainer**	**Logan Part No.**	**118952**	**118944**	**118946**
	No. Req'd	1	1	1
	Price	*	*	*
Race Ring**	**Logan Part No.**	**118953**	**118945**	**118947**
	Qty. Req'd	2	2	2
	Price	*	*	*
Junk Catcher**	**Logan Part No.**	**118887**	**118889**	**118891**
	Qty. Req'd	1	1	1
	Price	*	*	*
Short Junk Catcher**	**Logan Part No.**	**118888**	**118890**	**118892**
	Qty. Req'd	1	1	1
	Price	*	*	*
Spacer Ring**	**Logan Part No.**	**119245**	**119246**	**119247**
	Qty. Req'd			
	Price	*	*	*
Rotary Shoe	**Logan Part No.**	**313447**	**313449**	**313451**
	Qty. Req'd	1	1	1
	Price	*	*	*
REPAIR KITS				
Junk Catcher Repair Kit*	**Logan Part No.**	**118918**	**118920**	**118922**
	Qty. Req'd	1	1	1
	Price	*	*	*
Junk Catcher Repair Kit*	**Logan Part No.**	**118919**	**118921**	**118923**
	Qty. Req'd	1	1	1
	Price	*	*	*

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Logan HE Jet Junk Baskets

OUTSIDE DIAMETER - INCHES		H	H	H	H
COMPLETE ASSEMBLY	**Logan Part No.**	**15932**	**15932**	**15932**	**15932**
	Price	*	*	*	*
JUNK RETAINING ASSEMBLY					
Hole Size		11-3/4"-12"	12-1/4"-14-1/4"	14-1/2"-16"	17"-20"
Junk Retaining Assembly		15970	15971	15972	15973
Outside Diameter		10-1/8"	11-1/4"	12-1/4"	14-3/4"
Inside Diameter (Catcher&Shoe)		8-1/16"	9-1/16"	10-1/8"	12-3/8"
Junk Sleeve	**Logan Part No.**	**313454**	**313456**	**313458**	**313460**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Bearing Retainer**	**Logan Part No.**	**118948**	**118950**	**118954**	**118956**
	No. Req'd	1	1	1	1
	Price	*	*	*	*
Race Ring**	**Logan Part No.**	**118949**	**118951**	**118955**	**118957**
	Qty. Req'd	2	2	2	2
	Price	*	*	*	*
Junk Catcher**	**Logan Part No.**	**118893**	**118895**	**118897**	**118899**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Short Junk Catcher**	**Logan Part No.**	**118894**	**118896**	**118898**	**118900**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Spacer Ring**	**Logan Part No.**	**119248**	**119249**	**...**	**...**
	Qty. Req'd	...	...	...	...
	Price	*	*	*	*
Rotary Shoe	**Logan Part No.**	**313155**	**313457**	**313459**	**313461**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
REPAIR KITS					
Junk Catcher Repair Kit*	**Logan Part No.**	**118924**	**118926**	**118928**	**118930**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*
Junk Catcher Repair Kit*	**Logan Part No.**	**118925**	**118927**	**118929**	**118931**
	Qty. Req'd	1	1	1	1
	Price	*	*	*	*

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**Junk Catcher and Core Catcher Repair Kits consist of the required number of fingers and torsion springs to permit the complete replacement of these parts in one catcher assembly.*

***All Rotary Shoes require two Junk Catchersor a combination of any of the following Junk Catcher, Short Core Catcher. Spacer Ring with a Bearing Assembly. Prices for the complete Assembly reflect an application of Kutrite on the Rotary Shoes. Special 2-114" and 3-118" O.D. Models are available for junk fishing in Slim Hole, tubingless completion.*

Ordering Specifications:

Specify size and type of Top Sub, if other than shown. Specify if other than Kutrite is to be applied to the Rotary Shoe. If Lift Caps are ordered separately, specify thread and whether pin or box.

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Notes

LOGAN BI-DIRECTIONAL COILED TUBING JARS

Bi-Directional Coiled Tubing Jar Components

Innovex reserves the right to change or discontinue designs and/or prices without notice.

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LOGAN BI-DIRECTIONAL COILED TUBING JARS

Bi-Directional Coiled Tubing Jar Seal Components

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Logan Bi-Directional Coiled Tubing Jars

OUTSIDE DIAMETER - INCHES		1-11/16	2-1/8	2-7/8
INSIDE DIAMETER - INCHES		17/32	21/32	29/32
CONNECTION SIZE (BOX UP)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
CONNECTION SIZE (PIN DOWN)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
COMPLETE ASSEMBLY	**Logan Part No.**	**616-169**	**616-213**	**616-288**
	Price	$26,366	$24,898	$30,303
COMPONENT PARTS				
TOP SUB	**Logan Part No.**	**CC1000**	**CC1002**	**CC1004**
	Price	$1,263	$1,410	$1,613
TOP SUB SEAL *	**Logan Part No.**	**568122**	**568128**	**568226**
	Price	*	*	*
PRESSURE BODY	**Logan Part No.**	**CC2000**	**CC2002**	**CC2004**
	Price	$4,388	$3,641	$3,842
PRESSURE BODY NON-EXTRUSION RING	**Logan Part No.**	**CC14000**	**CC14002**	**CC14004**
	Price	$207	$207	$40
PRESSURE BODY SEAL PROTECTOR RING *	**Logan Part No.**	**8-025**	**8-128**	**8-226**
	Price	*	*	*
PRESSURE BODY SEAL *	**Logan Part No.**	**568025**	**568128**	**568226**
	Price	*	*	*
PISTON BODY	**Logan Part No.**	**CC3000**	**CC3002**	**CC3004**
	Price	$3,055	$3,140	$2,532
FLOATER BODY	**Logan Part No.**	**CC4000**	**CC4002**	**CC4004**
	Price	$4,109	$3,375	$4,185
FLOATER BODY NON-EXTRUSION RING	**Logan Part No.**	**CC14000**	**CC14002**	**CC14004**
	Price	$207	$207	$40
FLOATER BODY SEAL PROTECTOR RING *	**Logan Part No.**	**8-025**	**8-128**	**8-226**
	Price	*	*	*
FLOATER BODY SEAL *	**Logan Part No.**	**568025**	**568128**	**568226**
	Price	*	*	*
SPLINE BODY	**Logan Part No.**	**CD5000**	**CC5002**	**CC5004**
	Price	$4,303	$2,926	$2,821
MANDREL	**Logan Part No.**	**CD6000**	**CD6002**	**CD6004**
	Price	$4,260	$4,369	$4,491
MANDREL ID SEAL *	**Logan Part No.**	**568118**	**568120**	**568220**
	Price	*	*	*
MANDREL EXTENSION	**Logan Part No.**	**CD7000**	**CD7002**	**CD7004**
	Price	$5,340	$5,246	$6,983
NUT	**Logan Part No.**	**CD8000**	**CC8002**	**CC8004**
	Price	$1,034	$1,055	$1,089
NUT ID SEAL PROTECTOR RING *	**Logan Part No.**	**8-117**	**8-120**	**8-220**
	Price	*	*	*
NUT ID SEAL *	**Logan Part No.**	**568118**	**568120**	**568220**
	Price	*	*	*
NUT OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	No. Req'd	2	2	2
	Price Each	$32	$38	$39
NUT OD SEAL PROTECTOR RING *	**Logan Part No.**	**8-121**	**8-221**	**8-327**
	No. Req'd	2	2	2
	Price	*	*	*
NUT OD SEAL *	**Logan Part No.**	**568914**	**568221**	**568327**
	Price	*	*	*
NUT OD OPTISEAL *	**Logan Part No.**	**CC19000-001**	**CC19002-001**	**CC19004-001**
	Price	$51	$65	$51
UP PISTON	**Logan Part No.**	**CC9000**	**CC9002**	**CC9004**
	Price	$652	$543	$681
DOWN PISTON	**Logan Part No.**	**CC10000**	**CC10002**	**CC10004**
	Price	$652	$543	$681
FLOATER	**Logan Part No.**	**CC11000**	**CC11002**	**CC11004**
	Price	$811	$596	$821
FLOATER ID NON-EXTRUSION RING	**Logan Part No.**	**CC13000**	**CC13002**	**CC13004**
	Price	$60	$34	$40

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Logan Bi-Directional Coiled Tubing Jars

OUTSIDE DIAMETER - INCHES		1-11/16	2-1/8	2-7/8
INSIDE DIAMETER - INCHES		17/32	21/32	29/32
CONNECTION SIZE (BOX UP)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
CONNECTION SIZE (PIN DOWN)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
COMPLETE ASSEMBLY	**Logan Part No.**	**616-169**	**616-213**	**616-288**
	Price	$30,377	$24,959	$30,377
COMPONENT PARTS				
FLOATER ID SEAL PROTECTOR RING *	**Logan Part No.**	**8-117**	**8-120**	**8-220**
	Price	*	*	*
FLOATER ID SEAL *	**Logan Part No.**	**568911**	**568120**	**568220**
	Price	*	*	*
FLOATER ID OPTISEAL *	**Logan Part No.**	**CC19000-002**	**CC22002**	**CC22004**
	Price	$51	$65	$58
FLOATER OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	Price	$32	$38	$39
FLOATER OD SEAL PROTECTOR RING *	**Logan Part No.**	**8-121**	**8-221**	**8-327**
	Price	*	*	*
FLOATER OD SEAL *	**Logan Part No.**	**568914**	**568221**	**568327**
	Price	*	*	*
FLOATER OD OPTISEAL *	**Logan Part No.**	**CC19000-001**	**CC19002-001**	**CC19004-001**
	Price	$51	$51	$51
SPLINE	**Logan Part No.**	**CC12000**	**CC12002**	**CC12004**
	No. Req'd	2	2	4
	Price Each	$38	$38	$40

** NOTE: These items are included in the Seal Kit indicated below.*

REDRESS KIT	**Logan Part No.**	**CC21000**	**CC21002**	**CC21004**
Consists of:	Price	$388	$493	$615
FLOATER ID NON-EXTRUSION RING	**Logan Part No.**	**CC13000**	**CC13002**	**CC13004**
	No. Req'd	1	1	1
	Price Each	$60	$34	$40
PRESSURE & FLOATER BODY OD NON-EXTRUSION RING	**Logan Part No.**	**CC14000**	**CC14002**	**CC14004**
	No. Req'd	2	2	2
	Price Each	$207	$207	$40
FLOATER & NUT OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	No. Req'd	3	3	3
	Price Each	$32	$38	$39
SEAL KIT *	**Logan Part No.**	**CC20000**	**CC20002**	**CC20004**
	No. Req'd	1	1	1
	Price Each	$240	$173	$279
SPLINE	**Logan Part No.**	**CC12000**	**CC12002**	**CC12004**
	No. Req'd	2	2	4
	Price Each	$38	$38	$40

REQUIRED ACCESSORIES				
COMBINATION WRENCH SIZE		0.8125	1	1-3/8
FOR MANDREL EXTENSION - INCHES	No. Req'd	2	2	2
SIX-POINT SOCKET SIZE FOR NUT - INCHES		0.875	1-1/8	1-1/2
FLOATER ID SETTING TOOL	**Logan Part No.**	**CC17000**	**CC17002**	**CC17004**
	Price	...	...	...
FLOATER REMOVAL TOOL	**Logan Part No.**	**CC18000**	**CC18002**	**CC18004**
	Price	...	...	...
POLYPAK STRETCHER *	**Logan Part No.**	**CD11000**	**CD11002**	**CD11004**
	Price	...	...	...
POLYPAK INSTALLATION TOOL *	**Logan Part No.**	**CD12000**	**CD12002**	**CD12004**
	Price	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** Used for installing seals onto OD of Nut and Floater.*

LOGAN BI-DIRECTIONAL COILED TUBING ENERGIZERS

Bi-Directional Coiled Tubing Energizer Components

Innovex reserves the right to change or discontinue designs without notice.

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BI-DIRECTIONAL COILED TUBING ENERGIZERS

Bi-Directional Coiled Tubing Energizer Seal Components

Innovex reserves the right to change or discontinue designs without notice.

Logan Bi-Directional Coiled Tubing Energizers

OUTSIDE DIAMETER - INCHES		1-11/16	2-1/8	2-7/8
INSIDE DIAMETER - INCHES		9/16	21/32	29/32
CONNECTION SIZE (BOX UP)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
CONNECTION SIZE (PIN DOWN)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
COMPLETE ASSEMBLY	**Logan Part No.**	**617-169**	**617-213**	**617-288**
	Price	$26,319	$24,247	$29,011
COMPONENT PARTS				
TOP SUB	**Logan Part No.**	**CC1000**	**CC1002**	**CC1004**
	Price	$1,263	$1,410	$1,613
TOP SUB SEAL *	**Logan Part No.**	**568122**	**568128**	**568226**
	Price	*	*	*
UPPER PRESSURE BODY	**Logan Part No.**	**CC2000**	**CC2002**	**CC2004**
	Price	$4,388	$3,641	$3,842
UPPER PRESSURE BODY NON-EXTRUSION RING	**Logan Part No.**	**CC14000**	**CC14002**	**CC14004**
	Price	$207	$207	$40
UPPER PRESSURE BODY OD SEAL PROTECTOR RING *	**Logan Part No.**	**8-025**	**8-128**	**8-226**
	Price	*	*	*
UPPER PRESSURE BODY OD SEAL *	**Logan Part No.**	**568025**	**568128**	**568226**
	Price	*	*	*
UPPER PRESSURE BODY ID NON-EXTRUSION RING	**Logan Part No.**	**CD4000**	**CD4002**	**CD4004**
	No. Req'd	2	2	2
	Price Each	$22	$40	$39
UPPER PRESSURE BODY ID SEAL PROTECTOR RING *	**Logan Part No.**	**8-120**	**8-217**	**8-223**
	No. Req'd	2	2	2
	Price	*	*	*
UPPER PRESSURE BODY ID SEAL *	**Logan Part No.**	**568120**	**568216**	**568224**
	Price	*	*	*
LOWER PRESSURE BODY	**Logan Part No.**	**CD3000**	**CD3002**	**CD3004**
	Price	$4,260	$3,940	$4,938
SPLINE BODY	**Logan Part No.**	**CD5000**	**CC5002**	**CC5004**
	Price	$2,496	$2,926	$2,821
MANDREL	**Logan Part No.**	**CD6000**	**CD6002**	**CD6004**
	Price	$4,897	$4,759	$5,354
MANDREL ID SEAL *	**Logan Part No.**	**568118**	**568120**	**568220**
	Price	*	*	*
MANDREL OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	List Price	$32	$38	$39
MANDREL OD SEAL PROTECTOR RING *	**Logan Part No.**	**8-121**	**8-221**	**8-327**
	List Price	*	*	*
MANDREL OD SEAL *	**Logan Part No.**	**568914**	**568221**	**568327**
	List Price	*	*	*
MANDREL OD POLYPAK *	**Logan Part No.**	**BD209-11**	**BD209-13**	**BD209-12**
	List Price	$75	$77	$83
MANDREL EXTENSION	**Logan Part No.**	**CD7000**	**CD7002**	**CD7004**
	Price	$6,657	$5,125	$7,427
NUT	**Logan Part No.**	**CD8000**	**CC8002**	**CC8004**
	Price	$983	$1,034	$1,089
NUT ID SEAL PROTECTOR RING *	**Logan Part No.**	**8-118**	**8-120**	**8-220**
	Price	*	*	*
NUT ID SEAL *	**Logan Part No.**	**568118**	**568120**	**568220**
	Price	*	*	*
NUT OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	No. Req'd	2	2	2
	Price Each	$32	$38	$39
NUT OD SEAL PROTECTOR RING	**Logan Part No.**	**8-121**	**8-221**	**8-327**
	No. Req'd	2	2	2
	Price Each	*	*	*
NUT OD SEAL	**Logan Part No.**	**568118**	**568120**	**568220**
	Price	...	...	...
NUT OD OPTISEAL *	**Logan Part No.**	**CC19000-001**	**CC19002-001**	**CC19004-001**
	Price	$51	$51	$51

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*** These items are included in the Seal Kit indicated on Sheet 4 of 4.*

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Logan Bi-Directional Coiled Tubing Energizers

OUTSIDE DIAMETER - INCHES		1-11/16	2-1/8	2-7/8
INSIDE DIAMETER - INCHES		17/32	21/32	29/32
CONNECTION SIZE (BOX UP)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
CONNECTION SIZE (PIN DOWN)		1" AMMT	1-1/2 AMMT	2-3/8 PAC
COMPLETE ASSEMBLY	**Logan Part No.**	**617-169**	**617-213**	**617-288**
	Price	$30,377	$24,959	$30,377

REDRESS KIT	**Logan Part No.**	**CD10000**	**CD10002**	**CD10004**
Consists of:	Price	$444	$385	$465
UPPER PRESSURE BODY OD NON-EXTRUSION RING	**Logan Part No.**	**CC14000**	**CC14002**	**CC14004**
	No. Req'd	1	1	1
	Price Each	$207	$207	$40
NUT & MANDREL OD NON-EXTRUSION RING	**Logan Part No.**	**CC15000**	**CC15002**	**CC15004**
	No. Req'd	2	2	2
	Price Each	$32	$38	$39
UPPER PRESSURE ID NON-EXTRUSION RING	**Logan Part No.**	**CD4000**	**CD4002**	**CD4004**
	No. Req'd	3	3	3
	Price Each	17	31	30
SEAL KIT	**Logan Part No.**	**CD9000**	**CD9002**	**CD9004**
	No. Req'd	1	1	1
	Price Each	$110	$144	$90
SPLINE	**Logan Part No.**	**CC12000**	**CC12002**	**CC12004**
	No. Req'd	2	2	4
	Price Each	$38	$38	$40

REQUIRED ACCESSORIES				
COMBINATION WRENCH SIZE		13/16	1	1-3/8
FOR MANDREL EXTENSION - INCHES	No. Req'd	2	2	2
SIX-POINT SOCKET SIZE FOR NUT - INCHES		7/8	1-1/8	1-1/2
FLOATER REMOVAL TOOL *	**Logan Part No.**	**CC18000**	**CC18002**	**CC18004**
	Price	**...**	**...**	**...**
POLYPAK STRETCHER	**Logan Part No.**	**CD11000**	**CD11002**	**CD11004**
	Price	**...**	**...**	**...**
POLYPAK INSTALLATION TOOL	**Logan Part No.**	**CD12000**	**CD12002**	**CD12004**
	Price	**...**	**...**	**...**
UPPER PRESSURE BODY SETTING TOOL	**Logan Part No.**	**CD13000**	**CD13002**	**CD13004**
	Price	**...**	**...**	**...**
SAFETY SUB	**Logan Part No.**	**CD15000**	**CD15002**	**CD15004**
	Price	**...**	**...**	**...**

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** Available upon request.*

*** Used for removing Nut from Upper Pressure Body.*

LOGAN SUPERIOR HYDRAULIC FISHING JARS

Metal Parts (Upper Half)

Metal Parts (Lower Half)

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LOGAN SUPERIOR HYDRAULIC FISHING JARS

Polypaks and Seals (Upper Half)

LOGAN SUPERIOR HYDRAULIC FISHING JARS

Polypaks and Seals (Lower Half)

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Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		1-13/16 WFJ	2-3/8 EUE	2-3/8 API Reg	2-7/8 PAC	2-3/8 API IF	2-7/8 Reg	2-3/8 EUE
OUTSIDE DIAMETER — INCHES		1-13/16	3-1/16	3-1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER — INCHES		5/16	1-1/2	1	1-1/2	1-1/2	1-1/4	1-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**611-181**	**611-306**	**611-312-001**	**611-313 -001**	**611-375 -001**	**611-377**	**611-376**
	Price	*	$31,680	$33,860	$33,860	$35,151	$35,151	$35,151
COMPONENTS								
MANDREL	**Logan Part No.**	**BD1000**	**BD15**	**BD10**	**BD15**	**BD11**	**BD11**	**BD18**
	Price	*	$4,263	$3,133	$4,310	$4,158	$4,158	$3,888
MANDREL SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**568225**	**568225**	**...**
	No. Req'd	...	...	...	...	1	1	...
	Price	...	...	...	...	$3	$3	...
MANDREL EXTENSION	**Logan Part No.**	**BD2000**	**BD25**	**BD20**	**BD25**	**BD21**	**BD21**	**BD28**
	Price	*	$3,186	$3,236	$3,186	$3,665	$3,665	$1,395
MANDREL EXTENSION SEAL	**Logan Part No.**	**568020**	**568225**	**568224**	**568225**	**...**	**...**	**568229**
	No. Req'd	1	1	1	1	...	...	1
	Price	$3	$3	$3	$3	...	...	$3
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**...**	**BD205-2**	**BD205-2**	**BD205-2**	**BD201-2**	**BD201-2**	**AQ29003**
	No. Req'd	...	1	2	1	2	2	2
	Price	...	$22	$22	$22	$17	$17	$24
MANDREL EXTENSION WIPER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL IMPACT SLEEVE	**Logan Part No.**	**...**	**BD35**	**BD30-001**	**BD35-002**	**...**	**...**	**...**
		...	$253	$421	$292	...	...	...
SPLINE BODY	**Logan Part No.**	**BD4000**	**BD45**	**BD40-001**	**BD45-001**	**BD41-001**	**BD41-001**	**BD48**
	Price	*	$3,625	$3,612	$5,501	$4,193	$4,193	$2,957
SPLINE BODY SEAL	**Logan Part No.**	**568219**	**568230**	**568230**	**568230**	**568234**	**568234**	**568235**
	No. Req'd	1	1	1	1	1	1	1
	Price	$3	$3	$3	$3	$4	$4	$4
SPLINE BODY POLYPAK	**Logan Part No.**	**...**	**BD205-1**	**BD205-1**	**BD205-1**	**BD202-3**	**BD202-3**	**BX144-3**
	No. Req'd	...	2	2	2	2	2	2
	Price	...	$21	$21	$21	$21	$21	$14
BALANCE BODY	**Logan Part No.**	**...**	**BD55**	**BD50-001**	**BD55-003**	**BD51-001**	**BD51-001**	**BD58**
	Price	...	$4,660	$3,808	$4,660	$4,351	$4,351	$5,315
CONNECTOR BODY	**Logan Part No.**	**...**	**BD65**	**BD60-001**	**BD65-003**	**BD61-001**	**BD61-001**	**BD68**
	Price	...	$2,190	$1,813	$3,534	$2,702	$2,702	$5,172
CONNECTOR BODY SEAL (LARGE)	**Logan Part No.**	**...**	**568230**	**568230**	**568230**	**568234**	**568234**	**568235**
	No. Req'd	...	2	2	2	2	2	2
	Price	...	$3	$3	$3	$4	$4	$4
CONNECTOR BODY SEAL (SMALL)	**Logan Part No.**	**...**	**568228**	**568228**	**568228**	**568232**	**568232**	**568233**
	No. Req'd	...	2	2	2	1	1	1
	Price	...	$3	$3	$3	$3	$3	$4
CONNECTOR BODY WIPER	**Logan Part No.**	**...**	**...**	**...**	**...**	**BD71-001**	**BD71-001**	**BD78**
	Price	...	...	...	...	$38	$38	$39
CONNECTOR BODY ID POLYPAK (SMALL)	**Logan Part No.**	**...**	**BD205-3**	**BD200-3**	**BD205-3**	**BD201-3**	**BD201-3**	**BD208-3**
	No. Req'd	...	3	3	3	4	4	4
	Price	...	$37	$17	$37	$16	$16	$17
CONNECTOR BODY ID POLYPAK (LARGE)	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	**...**	**...**	**...**	**...**	**AQ29003**	**AQ29003**	**AQ29003**
	No. Req'd	...	...	...	...	2	2	2
	Price	...	...	...	...	$24	$24	$24

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, Floater Body, and Washpipe Body.

Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		1-13/16 WFJ	2-3/8 EUE	2-3/8 API Reg	2-7/8 PAC	2-3/8 API IF	2-7/8 Reg	2-3/8 EUE
OUTSIDE DIAMETER — INCHES		1-13/16	3-1/16	3 -1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER — INCHES		5/16	1-1/2	1	1-1/2	1-1/2	1-1/4	1-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**611-181**	**611-306**	**611-312-001**	**611-313 -001**	**611-375-001**	**611-377**	**611-376**
COMPONENTS								
CONNECTOR BODY	**Logan Part No.**	**...**	**8-228**	**8-228**	**8-228**	**L375-34**	**L375-34**	**L375-36**
SEAL PROTECTOR RING	**No. Req'd**	...	2	2	2	2	2	2
	Price	...	$4	$4	$4	$20	$20	$20
CONNECTOR BODY ID	**Logan Part No.**	**...**	**L365-32**	**L365-30**	**L365-32**	**BD231-001**	**BD231-001**	**L365-36**
NON-EXTRUSION RING	No. Req'd	...	1	2	1	2	2	2
	Price	...	$150	$48	$150	$136	$136	$40
CONNECTOR BODY ID	**Logan Part No.**	*	*	AG1000-3013	*	*	*	*
NON-EXTRUSION RING	Price	*	*	$983	*	*	*	*
SETTING TOOL								
CONNECTOR BODY OD	**Logan Part No.**	**...**	**...**	**BD240-001**	**...**	**...**	**...**	**...**
NON-EXTRUSION RING	**No. Req'd**	...	...	1	...	...	...	...
(LARGE)	Price	...	...	$27	...	...	...	...
CONNECTOR BODY OD	**Logan Part No.**	**...**	**L366-33.5**	**BD250-001**	**L366-33.5**	**...**	**...**	**...**
NON-EXTRUSION RING	No. Req'd	...	2	1	2	...	...	...
(SMALL)	Price	...	$48	$136	$48	...	...	...
PRESSURE BODY	**Logan Part No.**	**BD8000**	**BD85**	**BD80-001**	**BD85-003**	**BD81-001**	**BD81-001**	**BD88**
	Price	*	$2,940	$3,953	$3,423	$3,778	$3,778	$4,496
FLOATER BODY	**Logan Part No.**	**...**	**BD95**	**BD90-001**	**BD95-003**	**BD91-001**	**BD91-001**	**BD98**
	Price	...	$3,116	$2,800	$2,977	$3,512	$3,512	$3,854
FLOATER BODY SEAL	**Logan Part No.**	**...**	**568230**	**568230**	**568230**	**568234**	**568234**	**568235**
(LARGE)	No. Req'd	...	1	1	1	1	1	1
	Price	...	$3	$3	$3	$4	$4	$4
FLOATER BODY SEAL	**Logan Part No.**	**...**	**568228**	**568228**	**568228**	**568232**	**568232**	**568233**
(SMALL)	No. Req'd	...	1	1	1	1	1	1
	Price	...	$3	$3	$3	$3	$3	$4
FLOATER BODY	**Logan Part No.**	**...**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**
FILL PLUG	No. Req'd	...	2	2	2	2	2	2
	Price	...	$19	$22	$22	$22	$22	$22
FLOATER BODY	**Logan Part No.**	**...**	**568006**	**568006**	**568006**	**568006**	**568006**	**568006**
FILL PLUG SEAL	No. Req'd	...	2	2	2	2	2	2
	Price	...	$2	$2	$2	$2	$2	$2
FLOATER	**Logan Part No.**	**BD1100**	**BD115**	**BD110-001**	**BD115-002**	**BD111-001**	**BD111-001**	**BD118**
	Price	*	$293	$392	$337	$790	$790	$518
FLOATER SEAL	**Logan Part No.**	**568123**	**568228**	**568228**	**568228**	**568232**	**568232**	**568233**
(LARGE)	No. Req'd	3	3	1	3	1	1	1
	Price	$3	$3	$3	$3	$3	$3	$4
FLOATER SEAL	**Logan Part No.**	**568120**	**568226**	**568224**	**568226**	**568228**	**568230**	**568230**
(SMALL)	No. Req'd	4	3	1	3	1	1	1
	Price	$3	$3	$3	$3	$3	$3	$3
FLOATER OD	**Logan Part No.**	**...**	**...**	**BD200-4**	**...**	**BD201-2**	**BD201-2**	**AQ29003**
POLYPAK	No. Req'd	...	...	2	...	2	2	2
	Price	...	...	$19	...	$17	$17	$24
FLOATER ID	**Logan Part No.**	**...**	**...**	**BD200-3**	**...**	**BD201-3**	**BD201-3**	**BD208-3**
POLYPAK	No. Req'd	...	...	2	...	2	2	2
	Price	...	...	$17	...	$16	$16	$17
FLOATER OD	**Logan Part No.**	**...**	**...**	**...**	**...**	**8-232**	**8-232**	**...**
PARBAK RING	No. Req'd	...	...	...	...	1	1	...
	Price	...	...	...	...	$2	$2	...
FLOATER ID	**Logan Part No.**	**...**	**8-226**	**...**	**8-226**	**8-228**	**8-228**	**...**
PARBAK RING	No. Req'd	...	3	...	3	1	1	...
	Price	...	$2	...	$2	$4	$4	...
FLOATER	**Logan Part No.**	**...**	**BD295**	**BD290**	**BD295**	**BD291**	**BD291**	**BD298**
POSITIONING TOOL	Price	...	$1,248	$1,683	$1,248	$1,177	$1,177	$960

Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		1-13/16 WFJ	2-3/8 EUE	2-3/8 API Reg	2-7/8 PAC	2-3/8 API IF	2-7/8 Reg	2-3/8 EUE
OUTSIDE DIAMETER — INCHES		1-13/16	3-1/16	3 -1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER — INCHES		5/16	1-1/2	1	1-1/4	1-1/2	1-1/2	1-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**611-181**	**611-306**	**611-312**	**611-313-001**	**611-375-001**	**611-377**	**611-376**
COMPONENTS								
SEAL BODY	**Logan Part No.**	**BD1200**	**BD125**	**BD120-001**	**BD125-002**	**BD121-001**	**BD121-001**	**BD128**
	Price	*	$813	$840	$1,089	$962	$962	$828
SEAL BODY SEAL	**Logan Part No.**	**568020**	**568225**	**568130**	**568225**	**568227**	**568227**	**568143**
	No. Req'd	1	1	1	1	1	1	1
	Price	$3	$3	$3	$3	$3	$3	$4
NON-EXTRUSION RING	**Logan Part No.**	**...**	**BD265-001**	**BD260-001**	**BD265-001**	**L370-5**	**L370-5**	**BD268**
	No. Req'd	...	1	1	1	1	1	1
	Price	...	$32	$122	$83	$143	$143	$19
SEAL PROTECTOR RING	**Logan Part No.**	**...**	**BD285-001**	**8-130**	**BD285-001**	**8-227**	**8-227**	**8-143**
	No. Req'd	...	1	1	1	1	1	1
	Price	...	$22	$2	$27	$2	$2	$2
SETTING TOOL	**Logan Part No.**	**AG1000-19**	**AG1000-30.25**	**AG1000-29.25**	**AG1000-30.25**	**AG1000-33.5**	**AG1000-33.5**	**AG1000-35.5**
	Price	*	$984	$983	$983	$983	$983	$1,010
CONE	**Logan Part No.**	**BD1300**	**BD135**	**BD130-001**	**BD135-001**	**BD131-001**	**BD131-001**	**BD138**
	Price	...	$834	$1,861	$898	$1,861	$1,861	$1,110
BYPASS RING	**Logan Part No.**	**...**	**BD155**	**BD150-001**	**BD155-001**	**BD151-001**	**BD151-001**	**BD158**
	Price	...	$152	$281	$207	$286	$286	$383
WASHPIPE	**Logan Part No.**	**BD1600**	**BD165**	**BD160-002**	**BD165**	**BD161-003**	**BD161-003**	**BD168**
	Price	*	$1,606	$3,229	$1,606	$3,369	$3,369	$2,531
WASHPIPE SEAL (LARGE)	**Logan Part No.**	**568020**	**...**	**568130**	**...**	**568227**	**568227**	**568143**
	No. Req'd	1	...	1	...	1	1	1
	Price	$3	...	$3	...	$3	$3	$4
WASHPIPE SEAL (SMALL)	**Logan Part No.**	**...**	**568224**	**568221**	**568224**	**568225**	**568225**	**568228**
	No. Req'd	...	1	1	1	1	1	1
	Price	...	$3	$3	$3	$3	$3	$3
WASHPIPE BODY	**Logan Part No.**	**BD1700**	**BD170**	**BD170-001**	**BD175-003**	**BD171-001**	**BD171-001**	**BD178**
	Price	*	$1,719	$1,977	$2,226	$3,146	$3,146	$3,967
WASHPIPE BODY SEAL (LARGE)	**Logan Part No.**	**568219**	**568230**	**568230**	**568230**	**568234**	**568234**	**568235**
	No. Req'd	1	1	1	1	1	1	1
	Price	$3	$3	$3	$3	$4	$4	$4
WASHPIPE BODY SEAL (SMALL)	**Logan Part No.**	**568027**	**568228**	**568228**	**568228**	**568232**	**568232**	**568233**
	No. Req'd	1	1	1	1	1	1	1
	Price	$3	$3	$3	$3	$3	$3	$4
REDRESS KITS ***	**Logan Part No.**		**BD185**	**BD180**	**BD185**	**BD181**	**BD181**	**BD188**
	Price	...	$225	$216	$225	$319	$319	$292
COMPLETE O-RING KIT	**Logan Part No.**	**BD1900**	**BD195**	**BD190-001**	**BD195-002**	**BD191-001**	**BD191-001**	**BD198**
	Price	*	$38	$19	$60	$32	$32	$28
COMPLETE POLYPAK KIT	**Logan Part No.**	**BD5000**	**BD205**	**BD200**	**BD205**	**BD201**	**BD201**	**BD208**
	Price	*	$100	$185	$100	$161	$161	$244
Consists of:								
SPLINE BODY POLYPAK	**Logan Part No.**	**...**	**BD205-1**	**BD205-1**	**BD205-1**	**BD202-3**	**BD202-3**	**BX144-3**
	No. Req'd	...	2	2	2	2	2	2
	Price	...	$17	$17	$21	$21	$21	$14
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**...**	**BD205-2**	**BD205-2**	**BD205-2**	**BD201-2**	**BD201-2**	**AQ29003**
	No. Req'd	...	1	2	1	2	2	2
	Price	...	$19	$19	$22	$17	$17	$24
CONNECTOR BODY ID POLYPAK (SMALL)	**Logan Part No.**	**...**	**BD205-3**	**BD200-3**	**BD205-3**	**BD201-3**	**BD201-3**	**BD208-3**
	No. Req'd	...	3	3	3	4	4	4
	Price	...	$37	$17	$43	$16	$16	$17
CONNECTOR BODY ID POLYPAK (LARGE)	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

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Special Notes:
(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, Floater Body, and Washpipe Body.

Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		1-13/16 WFJ	2-3/8 EUE	2-3/8 API Reg	2-7/8 PAC	2-3/8 API IF	2-7/8 Reg	2-3/8 EUE
OUTSIDE DIAMETER — INCHES		1-13/16	3-1/16	3 -1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER — INCHES		5/16	1-1/2	1	1-1/4	1-1/2	1-1/2	1-7/8
COMPLETE ASSEMBLY	**Logan Part No.**	**611-181**	**611-306**	**611-312**	**611-313-001**	**611-375-001**	**611-377**	**611-376**
COMPONENTS								
CONNECTOR BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**AQ29003**	**AQ29003**	**AQ29003**
OD POLYPAK	No. Req'd	...	...	...	...	2	2	2
	Price	...	...	...	...	$24	$24	$24
FLOATER OD	**Logan Part No.**	**...**	**...**	**BD200-4**	**...**	**BD201-2**	**BD201-2**	**AQ29003**
POLYPAK	No. Req'd	...	...	2	...	2	2	2
	Price	...	...	$19	...	$17	$17	$24
FLOATER ID	**Logan Part No.**	**...**	**...**	**BD200-3**	**...**	**BD201-3**	**BD201-3**	**BD208-3**
POLYPAK	No. Req'd	...	...	2	...	2	2	2
	Price	...	...	$17	...	$16	$16	$17
MANDREL	**Logan Part No.**	**...**	**BD205-6**	**BD200-6**	**BD205-6**	**BD201-6**	**BD201-6**	**BD208-6**
EXTENSION	No. Req'd	...	1	2	1	1	1	1
ASSEMBLY SLEEVE †	Price	...	$423	$367	$423	$549	$549	$252
JAR LUBE	**Logan Part No.**	**49844-A**	**49844-B**	**49844-C**	**49844-D**			
	Price	1 Gallon $62	5 Gallons $303	20 Gallons $1,805	55 Gallons $3,320			

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** Available upon request.*

**** Redress Kits include O-Ring Packing Sets, Polypak Kits, and Connector Body Wipers.*

† Mandrel Extension Assembly Sleeve is not included in the Redress Kit. Must be purchased separately.

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, Floater Body, and Washpipe Body.

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Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	4-1/2 API IF	5-1/2 API Reg	5-1/2 API Reg
OUTSIDE DIAMETER — INCHES		4-1/4	4-1/2	4-3/4	6-1/4	6-3/4	7-3/4
INSIDE DIAMETER — INCHES		2	2-3/8	2-1/4	2-1/4	2-3/4	3-1/16
COMPLETE ASSEMBLY	**Logan Part No.**	**611-425-001**	**611-450**	**611-475-002**	**611-625**	**611-675**	**611-775**
	Price	$37,618	$46,774	$43,196	$57,319	$58,602	$73,289
COMPONENTS							
MANDREL	**Logan Part No.**	**BD16-001**	**BD19**	**BD12-002**	**BD13**	**BD14**	
	Price	$5,498	$6,141	$7,296	$8,148	*	$11,921
MANDREL SEAL	**Logan Part No.**	**568229**	**568238**	**568232**	**568236**	*	**568348**
	No. Req'd	1	1	1	1	*	1
	Price	$3	$4	$3	$4	*	$11
MANDREL EXTENSION	**Logan Part No.**	**BD26-001**	**BD29**	**BD22-002**	**BD23**	**BD27**	**BD24**
	Price	$4,071	$4,211	$3,632	$4,893	*	$8,054
MANDREL EXTENSION SEAL	**Logan Part No.**	**...**	**...**	**...**	**568234**	*	**568341**
	No. Req'd	...	...	...	1	*	1
	Price	...	...	...	$4	*	$7
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-2**	**BD202-2**	**BD203-2**	*	**BD204-2**
	No. Req'd.	2	2	2	2	...	2
	Price	$14	$21	$22	$37	*	$63
MANDREL EXTENSION WIPER	**Logan Part No.**	**...**	**...**	**...**	**BD223**	*	**BD224**
	No. Req'd	...	...	...	...	*	1
	Price	...	...	...	$31	*	$35
MANDREL IMPACT SLEEVE	**Logan Part No.**	**...**	**...**	**BD32-001**	**...**	**BD37**	**...**
	Price	...	...	$719	...	*	...
SPLINE BODY	**Logan Part No.**	**BD46-001**	**BD49**	**BD42-002**	**BD43**	**BD47**	**BD44**
	Price	$4,024	$5,543	$4,421	$4,937	*	$9,798
SPLINE BODY SEAL	**Logan Part No.**	**568238**	**568240**	**568242**	**568250**	*	**568362**
	No. Req'd	1	1	1	1	*	1
	Price	$4	$7	$7	$7	*	$16
SPLINE BODY POLYPAK	**Logan Part No.**	**BD202-2**	**BD209-1**	**BD202-1**	**BD203-1**	*	**BD204-1**
	No. Req'd	2	2	2	2	*	2
	Price	$22	$22	$29	$43	*	$65
BALANCE BODY	**Logan Part No.**	**BD56-001**	**BD59**	**BD52-002**	**BD53**	**BD57**	**BD54**
	Price	$3,526	$4,153	$4,821	$5,058	*	$8,800
CONNECTOR BODY	**Logan Part No.**	**BD66-001**	**BD69**	**BD62-002**	**BD63**	**BD67**	**BD64**
	Price	$3,079	*	$2,702	$3,551	*	$7,151
CONNECTOR BODY SEAL (LARGE)	**Logan Part No.**	**568238**	**568240**	**568242**	**568253**	*	**568362**
	No. Req'd	2	2	2	2	*	2
	Price	$4	$7	$7	$14	*	$16
CONNECTOR BODY SEAL (SMALL)	**Logan Part No.**	**568236**	**568239**	**568239**	**568250**	*	**568361**
	No. Req'd	1	1	1	1	*	1
	Price	$4	$4	$4	$11	*	$16
CONNECTOR BODY WIPER	**Logan Part No.**	**BD76-001**	**BD79**	**BD72-001**	**BD73**	**BD77**	**BD74**
	Price	$37	$37	$41	$31	*	$35
CONNECTOR BODY ID POLYPAK (SMALL)	**Logan Part No.**	**AQ29003**	**BX144-3**	**BD202-3**	**BD203-3**	*	**...**
	No. Req'd	4	4	2	4	*	...
	Price	$24	$14	$21	$28	*	...
CONNECTOR BODY ID POLYPAK (LARGE)	**Logan Part No.**	**...**	**...**	**BD202-4**	**...**	*	**BD204-3**
	No. Req'd	...	...	2	...	*	4
	Price	...	...	$27	...	*	$38

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Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-7/8 API IF	2-7/8 EUE IF	3-1/2 API IF	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg
OUTSIDE DIAMETER — INCHES		4-1/4	4-1/2	4-3/4	6-1/4	6-3/4	7-3/4
INSIDE DIAMETER — INCHES		2	2-3/8	2-1/4	2-1/4	2-3/4	3-1/16
COMPLETE ASSEMBLY	**Logan Part No.**	**611-425-001**	**611-450**	**611-475-002**	**611-625**	**611-675**	**611-775**
COMPONENTS							
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-4**	**BD202-5**	**BD203-5**	**	**BD204-2**
	No. Req'd	2	2	2	2	*	2
	Price	$17	$35	$24	$38	*	$63
CONNECTOR BODY SEAL PROTECTOR RING	**Logan Part No.**	**...**	**L375-41**	**...**	**...**	*	**BD274**
	No. Req'd	...	2	...	...	*	2
	Price	...	$12	...	$20	*	$32
CONNECTOR BODY ID NON-EXTRUSION RING	**Logan Part No.**	**BD236-001**	**L365-41**	**BD232-001**	**BD233**	*	**BD234**
	No. Req'd	2	2	2	2	*	2
	Price	$35	$41	$185	$39	*	$45
CONNECTOR BODY ID NON-EXTRUSION RING SETTING TOOL	**Logan Part No.**	*	*	**AG1000-40**	*	*	**AG1000-52**
	Price	*	*	$1,047	*	*	$1,178
CONNECTOR BODY OD NON-EXTRUSION RING (LARGE)	**Logan Part No.**	**...**	**...**	**...**	**...**	*	**...**
	No. Req'd	...	...	...	...	*	...
	Price	...	...	...	...	*	...
CONNECTOR BODY OD NON-EXTRUSION RING (SMALL)	**Logan Part No.**	**...**	**...**	**...**	**...**	**	**...**
	No. Req'd	...	...	...	...	...	...
	Price	...	...	...	...	*	...
PRESSURE BODY	**Logan Part No.**	**BD86-001**	**BD89**	**BD82-002**	**BD83**	**BD87**	**BD84**
	Price	$4,362	$4,816	$4,200	$5,546	*	$10,388
FLOATER BODY	**Logan Part No.**	**BD96-001**	**BD99**	**BD92-002**	**BD93**	**BD97**	**BD94**
	Price	$3,944	$5,144	$3,609	$4,127	*	$6,898
FLOATER BODY SEAL (LARGE)	**Logan Part No.**	**568238**	**568240**	**568242**	**568253**	**	**568362**
	No. Req'd	1	1	1	1	...	1
	Price	$4	$7	$7	$13	*	$16
FLOATER BODY SEAL (SMALL)	**Logan Part No.**	**568236**	**568238**	**568239**	**568250**	**	**568361**
	No. Req'd	1	1	1	1	...	1
	Price	$4	$4	$58	$4	*	$16
FLOATER BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**	**AG10002**
	No. Req'd	2	2	2	2	...	2
	Price	$22	$22	$22	$22	*	$22
FLOATER BODY FILL PLUG SEAL	**Logan Part No.**	**568006**	**568006**	**568006**	**568006**	**	**568006**
	No. Req'd	2	2	2	2	...	2
	Price	$2	$2	$2	$2	*	$2
FLOATER	**Logan Part No.**	**BD116-001**	**BD119**	**BD112-001**	**BD113**	**BD117**	**BD114**
	Price	$385	$1,264	$404	$751	*	$1,275
FLOATER SEAL (LARGE)	**Logan Part No.**	**568236**	**568238**	**568341**	**568351**	**	**568361**
	No. Req'd	1	1	1	1	...	1
	Price	$4	$4	$4	$11	*	$16
FLOATER SEAL (SMALL)	**Logan Part No.**	**568232**	**568235**	**568337**	**268-343**	**	**568349**
	No. Req'd	1	1	1	1	...	1
	Price	$3	$3	$3	$3	*	$11
FLOATER OD POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-2**	**BD202-2**	**BD203-2**	**	**BD204-4**
	No. Req'd	2	2	2	2	...	2
	Price	$17	$21	$22	$37	*	$73
FLOATER ID POLYPAK	**Logan Part No.**	**AQ29003**	**BX144-3**	**BD202-3**	**BD203-3**	**	**BD204-3**
	No. Req'd	2	2	2	2	...	2
	Price	$24	$14	$21	$28	*	$38

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Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg
OUTSIDE DIAMETER — INCHES		4-1/4	4-1/2	4-3/4	6-1/4	6-3/4	7-3/4
INSIDE DIAMETER — INCHES		2	2-3/8	2-1/4	2-1/4	2-3/4	3-1/16
COMPLETE ASSEMBLY	**Logan Part No.**	**611-425-001**	**611-450**	**611-475-002**	**611-625**	**611-675**	**611-775**
COMPONENTS							
FLOATER OD PARBAK RING	**Logan Part No.**	**...**	**...**	**...**	**...**	*	**...**
	No. Req'd	...	...	...	...	*	...
	Price	...	...	...	...	*	...
FLOATER ID PARBAK RING	**Logan Part No.**	**...**	**...**	**...**	**...**	*	**...**
	No. Req'd	...	...	...	...	*	...
	Price	...	...	...	...	*	...
FLOATER POSITIONING TOOL	**Logan Part No.**	**BD296**	**BD299**	**BD292**	**BD293**	**BD297**	**BD294**
	Price	$1,574	$2,374	$1,692	$1,817	*	$3,277
SEAL BODY	**Logan Part No.**	**BD126-002**	**BD129**	**BD122-001**	**BD123**	**BD127**	**BD124**
	Price	$916	$1,701	$916	$873	*	$1,485
SEAL BODY SEAL	**Logan Part No.**	**568231**	**568234**	**568234**	**568341**	*	**568347**
	No. Req'd	1	1	1	1	*	1
	Price	$3	$4	$4	$7	*	$11
NON-EXTRUSION RING	**Logan Part No.**	**L370-9**	**L370-12**	**L370-12**	**L365-44**	*	**BD264**
	No. Req'd	1	1	1	1	...	1
	Price	$50	$28	$85	$40	*	$40
SEAL PROTECTOR RING	**Logan Part No.**	**L376-9**	**L376-12**	**L388-12**	**L375-44**	**	**BD284**
	No. Req'd	1	1	1	1	...	1
	Price	$20	$11	$13	$23	*	$28
SETTING TOOL	**Logan Part No.**	**AG1000-37**	**AG1000-38**	**AG1000-40**	**AG1000-44**	*	**AG1000-50**
	Price	$983	$983	$1,047	$1,178	*	$1,178
CONE	**Logan Part No.**	**BD136-001**	**BD139**	**BD132-001**	**BD133**	**BD137**	**BD134**
	Price	$1,799	$2,252	$1,675	$2,205	*	$2,712
BYPASS RING	**Logan Part No.**	**BD156-001**	**BD159**	**BD152-002**	**BD153**	**BD157**	**BD154**
	Price	$302	$824	$1,644	$314	...	$532
WASHPIPE	**Logan Part No.**	**BD166-002**	**BD169**	**BD162-002**	**BD163**	**BD167**	**BD164**
	Price	$4,566	$4,113	$4,773	$2,727	*	$5,067
WASHPIPE SEAL (LARGE)	**Logan Part No.**	**568231**	**568234**	**568234**	**568238**	*	**568347**
	No. Req'd	1	1	1	1	*	1
	Price	$3	$4	$4	$4	*	$11
WASHPIPE SEAL (SMALL)	**Logan Part No.**	**568229**	**569-232**	**568232**	**...**	*	**...**
	No. Req'd	1	1	1	...	*	...
	Price	$3	$3	$3	...	*	...
WASHPIPE BODY	**Logan Part No.**	**BD176-001**	**BD179**	**BD172-002**	**BD173**	**BD177**	**BD174**
	Price	$3,002	$2,745	$2,631	$3,237	*	$6,411
WASHPIPE BODY SEAL (LARGE)	**Logan Part No.**	**568238**	**568240**	**568242**	**568253**	*	**568362**
	No. Req'd	1	1	1	1	*	1
	Price	$4	$7	$7	$14	*	$16
WASHPIPE BODY SEAL (SMALL)	**Logan Part No.**	**568236**	**568238**	**568239**	**568250**	*	**568361**
	No. Req'd	1	1	1	1	*	1
	Price	$4	$4	$4	$11	*	$16

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Logan Superior Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg
OUTSIDE DIAMETER — INCHES		4-1/4	4-1/2	4-3/4	6-1/4	6-3/4	7-3/4
INSIDE DIAMETER — INCHES		2	2-3/8	2-1/4	2-1/4	2-3/4	3-1/16
COMPLETE ASSEMBLY	**Logan Part No.**	**611-425-001**	**611-450**	**611-475-002**	**611-625**	**611-675**	**611-775**
COMPONENTS							
REDRESS KITS *	**Logan Part No.**	**BD186**	**BD189**	**BD182**	**BD183**	**BD187**	**BD184**
	Price	$279	$322	$373	$591	*	$909
COMPLETE O-RING KIT	**Logan Part No.**	**BD196-001**	**BD199**	**BD192-002**	**BD193**	**BD197**	**BD194**
	Price	$38	$34	$52	$48	*	$69
COMPLETE POLYPAK KIT	**Logan Part No.**	**BD206**	**BD209**	**BD202**	**BD203**	**BD207**	**BD204**
	Price	$223	$299	$283	$593	*	*
Consists of:							
SPLINE BODY POLYPAK	**Logan Part No.**	**BD202-2**	**BD209-1**	**BD202-1**	**BD203-1**	**	**BD204-1**
	No. Req'd	2	2	2	2	...	2
	Price	$22	$22	$29	$43	*	$65
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-2**	**BD202-2**	**BD203-2**	**	**BD204-2**
	No. Req'd	2	2	2	2	...	2
	Price	$17	$21	$22	$37	*	$63
CONNECTOR BODY ID POLYPAK (SMALL)	**Logan Part No.**	**AQ29003**	**BX144-3**	**BD202-3**	**BD203-3**	**	**BD204-3**
	No. Req'd	4	4	2	4	...	4
	Price	$24	$14	$21	$28	*	$38
CONNECTOR BODY ID POLYPAK (LARGE)	**Logan Part No.**	**...**	**...**	**BD202-4**	**...**	*	**...**
	No. Req'd	...	...	2	...	*	...
	Price	...	...	$27	...	*	...
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-4**	**BD202-5**	**BD203-5**	*	**BD204-2**
	No. Req'd	2	2	2	2	*	2
	Price	$17	$35	$24	$38	*	$63
FLOATER OD POLYPAK	**Logan Part No.**	**BX144-3**	**BD209-2**	**BD202-2**	**BD203-2**	*	**BD204-4**
	No. Req'd	2	2	2	2	*	2
	Price	$17	$21	$22	$37	*	$73
FLOATER ID POLYPAK	**Logan Part No.**	**AQ29003**	**BX144-3**	**BD202-3**	**BD203-3**	*	**BD204-3**
	No. Req'd	2	2	2	2	*	2
	Price	$24	$14	$21	$28	*	$38
MANDREL EXTENSION ASSEMBLY SLEEVE †	**Logan Part No.**	**BD206-6**	**BD209-6**	**BD202-6**	**BD203-6**	*	**BD204-6**
	No. Req'd	1	1	2	1	*	1
	Price	$549	*	$508	$1,981	*	$432
JAR LUBE	**Logan Part No.**	**49844A**	**49844B**	**49844C**	**49844D**		
		1 Gallon	5 Gallons	20 Gallons	55 Gallons		
	Price	$62	$303	$1,805	$3,320		

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Notes

LOGAN SUPERIOR ENERGIZERS

Metal Parts (Upper Half)

Metal Parts (Lower Half)

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LOGAN SUPERIOR ENERGIZERS

Polypaks and Seals (Upper Half)

Polypaks and Seals (Lower Half)

Logan Superior Energizers

TOOL JOINT CONNECTION		2-3/8 API REG	2-3/8 EUE & 2-7/8 PAC	2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	3-1/2 API IF	4-1/2 API IF
OUTSIDE DIAMETER — INCHES		3-1/8	3-1/16 & 3-1/8	3-3/4	3-3/4	4-1/4	4-3/4	6-1/4
INSIDE DIAMETER — INCHES		1	1-1/2	1-1/2	1-7/8	2	2-1/4	2-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**614-312-001**	**614-306 & 614-313**	**614-375-001**	**614-376**	**614-425**	**614-475-001**	**614-625**
	Price	$28,364	$28,364	$28,940	$28,940	$31,435	$36,523	$57,148

COMPONENTS

MANDREL	**Logan Part No.**	**BX10-001**	**BX11**	**BX12**	**BX18**	**BX13**	**BX14-001**	**BX15**
	Price	$3,815	$5,496	$4,509	*	$6,632	$5,562	$8,244
MANDREL SEAL	**Logan Part No.**	**...**	**568225**	**568225**	*****	**568229**	**568232**	**568236**
	No. Req'd	...	1	1	*	1	1	1
	Price	...	$3	$3	*	$3	$3	$3
SPLINE BODY	**Logan Part No.**	**BX20-001**	**BX21**	**BX22-001**	**BX28**	**BX23**	**BX24-001**	**BX25**
	Price	$2,773	$2,773	$3,543	*	$3,816	$4,566	$7,207
SPLINE BODY SEAL	**Logan Part No.**	**568230**	**568230**	**568234**	*****	**568238**	**568242**	**568254**
	No. Req'd	1	1	1	*	1	1	1
	Price	$3	$3	$3	*	$3	$7	$13
SPLINE BODY POLYPAK	**Logan Part No.**	**BD205-1**	**BD205-1**	**BD202-3**	*****	**BD202-2**	**BD202-1**	**BD203-1**
	No. Req'd	2	2	2	*	2	2	2
	Price	$21	$21	$22	*	$19	$24	$43
MANDREL SLEEVE	**Logan Part No.**	**BX30-001**	**BX31**	**...**	**BX38**	**...**	**BX34-001**	**...**
	Price	$489	$303	...	*	...	$804	...
BALANCE BODY	**Logan Part No.**	**BX40-001**	**BX41**	**BX42-001**	**BX48**	**BX43**	**BX44-001**	**BX45**
	Price	$3,293	$3,951	$3,328	*	$3,665	$4,699	$6,052
MANDREL EXTENSION	**Logan Part No.**	**BX50-001**	**BX51**	**BX52-001**	**BX58**	**BX53**	**BX54-001**	**BX55**
	Price	$4,021	$5,121	$5,121	*	$4,549	$5,512	$8,651
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**BD205-2**	**BD205-2**	**BD201-2**	*****	**BX144-3**	**BD202-2**	**BD203-2**
	No. Req'd	2	2	2	*	2	2	2
	Price	$22	$22	$17	*	$16	$19	$35
PISTON ASSEMBLY	**Logan Part No.**	**BX60**	**BX61**	**BX62**	**BX68**	**BX63**	**BX64**	**BX65**
Consists of:	Price	$480	*	$847	*	$741	$637	$1,139
PACKING SET	**Logan Part No.**	**BX60-1-001**	**BX61-1**	**BX62-1-001**	**BX68-1**	**BX63-1**	**BX64-1**	**BX65-1**
	Price	$291	$324	$235	*	$326	$346	$787
PACKING MALE ADAPTER	**Logan Part No.**	**BX60-2-001**	**BX61-2**	**BX62-2-001**	**BX68-2**	**BX63-2**	**BX64-2**	**BX65-2**
	Price	$289	$405	$475	*	$134	$100	$343
PACKING SPACER RING	**Logan Part No.**	**BX60-3-001**	**BX61-3**	**BX62-3-001**	**BX68-3**	**BX63-3**	**BX64-3**	**BX65-3**
	Price	$265	$196	$215	*	$134	$100	$162
CONNECTOR BODY	**Logan Part No.**	**BX70-001**	**BX71**	**BX72-001**	**BX78**	**BX73**	**BX74-001**	**BX75**
	Price	$2,008	$3,357	$2,799	*	$3,007	$3,145	$4,285
CONNECTOR BODY WIPER	**Logan Part No.**	**...**	**...**	**BD71-001**	*****	**BD76**	**BX84-001**	**BD73**
	Price	...	...	$38	*	$33	$111	$31
CONNECTOR BODY ID POLYPAK	**Logan Part No.**	**BD200-3**	**BD205-3**	**BD201-3**	*****	**AQ29005**	**BX144-3**	**BD203-3**
	No. Req'd	3	3	3	*	3	3	3
	Price	$17	$43	$16	*	$20	$14	$29
CONNECTOR BODY ID NON-EXTRUSION RING	**Logan Part No.**	**L365-30**	**L365-32**	**BD231-001**	******	**BD236**	**BX154-001**	**BD233**
	No. Req'd	2	2	3	...	3	3	3
	Price	$38	$47	$29	*	$27	$33	$63

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Logan Superior Energizers

TOOL JOINT CONNECTION		2-3/8 API Reg	2-3/8 EUE & 2-7/8 PAC	2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	3-1/2 API IF	4-1/2 API IF
OUTSIDE DIAMETER — INCHES		3-1/8	3-1/16 & 3-1/8	3-3/4	3-3/4	4-1/4	4-3/4	6-1/4
INSIDE DIAMETER — INCHES		1	1-1/2	1-1/2	1-7/8	2	2-1/4	2-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**614-312-001**	**614-306 & 614-313**	**614-375-001**	**614-376**	**614-425**	**614-475-001**	**614-625**

COMPONENTS (CONTINUED)

CONNECTOR BODY SEAL PROTECTOR RING	**Logan Part No.**	*	**8-228**	*	*	*	**L375-41**	**BD273**
	No. Req'd	*	2	*	*	*	3	3
	Price	*	$4	*	*	*	$12	$20
CONNECTOR BODY OD PARBAK RING	**Logan Part No.**	*	...	...	*	...	...	...
	No. Req'd	*	...	...	*	...	...	...
	Price		...	...	*	...	...	...
CONNECTOR BODY OD NON-EXTRUSION RING	**Logan Part No.**	**BX160-001**	**L366-33.5**	...	*	...	*	...
	No. Req'd	1	2	...	*	...	*	...
	Price	$44	$48	...	*	...	*	...
CONNECTOR BODY SEAL (SMALL)	**Logan Part No.**	**568330**	**568228**	**568232**	*	**568236**	**568239**	**568250**
	No. Req'd	2	2	1	*	1	1	1
	Price	$3	$3	$3	*	$4	$4	$11
CONNECTOR BODY SEAL (LARGE)	**Logan Part No.**	**568230**	**568230**	**568234**	*	**568238**	**568242**	**568252**
	No. Req'd	2	2	2	*	2	2	2
	Price	$3	$3	$4	*	$4	$4	$13
CONNECTOR BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10000**	**AG10002**	*	**AG10002**	**AG10002**	**AG10002**
	No. Req'd	2	2	2	*	2	2	2
	Price	$22	$19	$22	*	$22	$23	$22
CONNECTOR BODY FILL PLUG SEAL	**Logan Part No.**	**568006**	**568005**	**568006**	*	**568006**	**568006**	**568006**
	No. Req'd	2	2	2	*	2	2	2
	Price	$2	$10	$2	*	$2	$2	$2
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	...	...	**AQ29003**	*	**AQ29005**	**BD202-5**	**BD203-5**
	No. Req'd	...	...	2	*	2	2	2
	Price	...	...	$24	*	$22	$27	$38
PRESSURE BODY	**Logan Part No.**	**BX90-001**	**BX91**	**BX92-001**	**BX98**	**BX93**	**BX94-001**	**BX95**
	Price	$2,915	$4,565	$6,584	*	$5,236	$6,779	$9,472
PRESSURE BODY FILL PLUG	**Logan Part No.**	**AG10004**	**AG10004**	**AG10004**	*	**AG10000**	**AG10000**	**AG10000**
	No. Req'd	1	1	1	*	1	1	1
	Price	$3	$3	$3	*	$19	$19	$21
PRESSURE BODY FILL PLUG SEAL	**Logan Part No.**	...	...	...	*	**568005**	**568005**	**568005**
	No. Req'd	...	...	...	*	1	1	1
	Price	...	...	...	*	$10	$10	$10
WASHPIPE	**Logan Part No.**	**BX100-003**	**BX101**	**BX102-005**	**BX108**	**BX103**	**BX104-003**	**BX105**
	Price	$2,212	$1,825	$2,317	*	$1,448	$3,205	$2,109
WASHPIPE SEAL (LARGE)	**Logan Part No.**	**568130**	...	**568227**	*	**568231**	**568234**	**568238**
	No. Req'd	1	...	1	*	1	1	1
	Price	$3	...	$3	*	$3	$4	$4
WASHPIPE SEAL (SMALL)	**Logan Part No.**	**568221**	**568224**	**568225**	**	**568229**	**568232**	**568234**
	No. Req'd	1	1	1	...	1	1	1
	Price	$3	$3	$3	*	$3	$3	$4

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Logan Superior Energizers

TOOL JOINT CONNECTION		2-3/8 API Reg	2-3/8 EUE & 2-7/8 PAC	2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	3-1/2 API IF	4-1/2 API IF
OUTSIDE DIAMETER — INCHES		3-1/8	3-1/16 & 3-1/8	3-3/4	3-3/4	4-1/4	4-3/4	6-1/4
INSIDE DIAMETER — INCHES		1	1-1/2	1-1/2	1-7/8	2	2-1/4	2-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**614-312-001**	**614-306 & 614-313**	**614-375-001**	**614-376**	**614-425**	**614-475-001**	**614-625**

COMPONENTS (CONTINUED)

WASHPIPE BODY	**Logan Part No.**	**BX110-001**	**BX111**	**BX112-001**	**BX118**	**BX113**	**BX114-001**	**BX115**
	Price	$2,808	$2,267	$2,941	*	$2,692	$3,445	$3,065
WASHPIPE BODY SEAL (LARGE)	**Logan Part No.**	**568230**	**568230**	**568234**	*	**568238**	**568242**	**568252**
	No. Req'd	1	1	1	*	1	1	1
	Price	$3	$3	$4	*	$3	$7	$13
WASHPIPE BODY SEAL (SMALL)	**Logan Part No.**	**568228**	**568228**	**568232**	*	**568236**	**568240**	**568250**
	No. Req'd	1	1	1	*	1	1	1
	Price	$3	$3	$3	*	$4	$7	$11
WASHPIPE BODY POLYPAK	**Logan Part No.**	**BD200-3**	**BD200-3**	**BD201-3**	*	**AQ29003**	**BX144-3**	**BD203-3**
	No. Req'd	2	2	2	*	2	2	2
	Price	$17	$14	$13	*	$24	$19	$28
REDRESS KITS *	**Logan Part No.**	**BX120**	**BX121**	**BX122**	**BX128**	**BX123**	**BX124**	**BX125**
	Price	$389	$554	$487	*	$602	$630	$1,189
O-RING PACKING SET	**Logan Part No.**	**BX130-001**	**BX131**	**BX132-001**	**BX138**	**BX133**	**BX134-001**	**BX135**
	Price	$53	$50	$41	*	$28	$50	$49
POLYPAK KIT	**Logan Part No.**	**BX140**	**BX141**	**BX142**	**BX148**	**BX143**	**BX144**	**BX145**
	Price	$135	$119	$169	*	$225	$205	$336
SPLINE BODY POLYPAK	**Logan Part No.**	**BD205-1**	**BD205-1**	**BD202-3**	*	**BD202-2**	**BD202-1**	**BD203-1**
	No. Req'd	2	2	2	*	2	2	2
	Price	$21	$17	$21	*	$19	$32	$43
MANDREL EXTENSION POLYPAK	**Logan Part No.**	**BD205-2**	**BD205-2**	**BD201-2**	*	**BX144-3**	**BD202-2**	**BD203-2**
	No. Req'd	2	1	2	*	2	2	2
	Price	$22	$19	$17	*	$14	$23	$37
CONNECTOR BODY ID POLYPAK	**Logan Part No.**	**BD200-3**	**BD205-3**	**BD201-3**	*	**AQ29005**	**BX144-3**	**BD203-3**
	No. Req'd	3	3	3	*	3	3	3
	Price	$17	$37	$16	*	$22	$19	$28
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	**...**	**...**	**AQ29003**	*	**AQ29005**	**BD202-5**	**BD203-5**
	No. Req'd	...	...	2	*	2	2	2
	Price	...	...	$24	*	$22	$27	$38
WASHPIPE BODY POLYPAK	**Logan Part No.**	**BD200-3**	**BD205-3**	**BD201-3**	*	**AQ29003**	**BX144-3**	**BD203-3**
	No. Req'd	2	2	2	*	2	2	2
	Price	$17	$37	$16	*	$24	$19	$28
MANDREL EXTENSION ASSEMBLY SLEEVE	**Logan Part No.**	**BX140-5**	**BD205-6**	**BD201-6**	**	**BD202-6**	**BX144-5**	**BD203-6**
	No. Req'd	1	1	1	...	1	1	1
	Price	$172	$423	$549	*	$508	$350	*
ENERGIZER FLUID	**Logan Part No.**	**50529-A**	**50529-C**	**50529-D**	**50529-E**			
		1 Gallon	5 Gallons	30 Gallons	55 Gallons			
	Price	$258	$536	$3,226	$4,989			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

† Mandrel Extension Assembly Sleeve is not included in the Redress Kit. Must be purchased separately.

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, and Washpipe Body.

(2) Redress Kits include O-Ring Packing Sets, Polypak Kits, and Connector Body Wipers.

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Logan Superior Energizers

TOOL JOINT CONNECTION		5-1/2 API Reg	6-5/8 API Reg					
OUTSIDE DIAMETER — INCHES		6-3/4	7-3/4					
INSIDE DIAMETER — INCHES		2-3/4	3-1/16					
COMPLETE ASSEMBLY	**Logan Part No.**	**614-675**	**614-775**					
	Price	$61,244	$87,472					

COMPONENTS

MANDREL	**Logan Part No.**	**BX16**	**BX17**					
	Price	*	$11,885					
MANDREL SEAL	**Logan Part No.**	*	*					
	No. Req'd	*	1					
	Price	*	$10					
SPLINE BODY	**Logan Part No.**	**BX26**	**BX27**					
	Price	*	$8,203					
SPLINE BODY SEAL	**Logan Part No.**	*	**568362**					
	No. Req'd	*	1					
	Price	*	$16					
SPLINE BODY POLYPAK	**Logan Part No.**	**	**BD204-1**					
	No. Req'd	*	2					
	Price	*	$65					
MANDREL SLEEVE	**Logan Part No.**	**BX36**	**BX37**					
	Price	*	*					
BALANCE BODY	**Logan Part No.**	**BX46**	**BX47**					
	Price	*	*					
MANDREL EXTENSION	**Logan Part No.**	**BX56**	**BX57**					
	Price	*	$14,965					
MANDREL EXTENSION POLYPAK	**Logan Part No.**	*	**BD204-2**					
	No. Req'd	*	1					
	Price	*	$63					
MANDREL EXTENSION WIPER	**Logan Part No.**	...	**BD224**					
	Price	...	$35					
CONNECTOR BODY	**Logan Part No.**	**BX76**	**BX77**					
	Price	*	$7,171					
CONNECTOR BODY WIPER	**Logan Part No.**	**BX86**	**BD74**					
	Price	*	$34					
CONNECTOR BODY ID POLYPAK	**Logan Part No.**	*	**BD204-3**					
	No. Req'd	*	6					
	Price	*	$38					
PISTON ASSEMBLY	**Logan Part No.**	**BX66**	**BX67**					
	Price	*	$2,555					
PACKING SET	**Logan Part No.**	**BX66-1**	**BX67-1**					
	Price	*	$1,942					
PACKING MALE ADAPTER	**Logan Part No.**	**BX66-2**	**BX67-2**					
	Price	*	$230					
PACKING SPACER RING	**Logan Part No.**	**BX66-3**	**BX67-3**					
	Price	*	$278					

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, and Washpipe Body.

(2) Redress Kits include O-Ring Packing Sets, Polypak Kits, and Connector Body Wipers.

Logan Superior Energizers

TOOL JOINT CONNECTION		5-1/2 API Reg	6-5/8 API Reg					
OUTSIDE DIAMETER — INCHES		6-3/4	7-3/4					
INSIDE DIAMETER — INCHES		2-3/4	3-1/16					
COMPLETE ASSEMBLY	**Logan Part No.**	614-675	614-775					

COMPONENTS

CONNECTOR BODY ID NON-EXTRUSION RING	**Logan Part No.**	*	**BD234-001**					
	No. Req'd	*	4					
	Price	*	$45					
CONNECTOR BODY SEAL PROTECTOR RING	**Logan Part No.**	*	**BD274**					
	No. Req'd	*	4					
	Price	*	$32					
CONNECTOR BODY OD PARBAK RING	**Logan Part No.**	*	**BD204-2**					
	No. Req'd	*	1					
	Price	*	$63					
CONNECTOR BODY OD NON-EXTRUSION RING	**Logan Part No.**	*	**...**					
	No. Req'd	*	...					
	Price	*	...					
CONNECTOR BODY SEAL (SMALL)	**Logan Part No.**	*	**BD204-3**					
	No. Req'd	*	...					
	Price	*	$38					
CONNECTOR BODY SEAL (LARGE)	**Logan Part No.**	*	**568362**					
	No. Req'd	*	1					
	Price	*	$16					
CONNECTOR BODY FILL PLUG	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
CONNECTOR BODY FILL PLUG SEAL	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
PRESSURE BODY	**Logan Part No.**	**BX96**	**BX97**					
	Price	*	$13,351					
PRESSURE BODY FILL PLUG	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
PRESSURE BODY FILL PLUG SEAL	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
WASHPIPE	**Logan Part No.**	**BX106**	**BX107**					
	Price	...	$3,127					

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Special Notes:

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Logan Superior Energizers

TOOL JOINT CONNECTION		5-1/2 API Reg	6-5/8 API Reg					
OUTSIDE DIAMETER — INCHES		6-3/4	7-3/4					
INSIDE DIAMETER — INCHES		2-3/4	3-1/16					
COMPLETE ASSEMBLY	**Logan Part No.**	**614-675**	**614-775**					
COMPONENTS								
WASHPIPE SEAL (LARGE)	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
WASHPIPE SEAL (SMALL)	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
WASHPIPE BODY	**Logan Part No.**	**BX116**	**BX117**					
	Price	*	$7,363					
WASHPIPE BODY SEAL (LARGE)	**Logan Part No.**	*	*					
	Price	*	*					
WASHPIPE BODY SEAL (SMALL)	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
WASHPIPE BODY POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
REDRESS KITS *	**Logan Part No.**	**BX126**	**BX127**					
	Price	*	$2,759					
O-RING PACKING SET	**Logan Part No.**	**BX136**	**BX137**					
	Price	*	$45					
POLYPAK KIT	**Logan Part No.**	**BX146**	**BX147**					
	Price	*	$637					
SPLINE BODY POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
MANDREL EXTENSION POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
CONNECTOR BODY ID POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
CONNECTOR BODY OD POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
WASHPIPE BODY POLYPAK	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
MANDREL EXTENSION ASSEMBLY SLEEVE	**Logan Part No.**	*	*					
	No. Req'd	*	*					
	Price	*	*					
ENERGIZER FLUID	**Logan Part No.**	**50529-A**	**50529-C**					
		1 Gallon	5 Gallons					
	Price	$126	$536					

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** Available upon request.*

† Mandrel Extension Assembly Sleeve is not included in the Redress Kit. Must be purchased separately.

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Spline Body, Balance Body, Connector Body, Pressure Body, and Washpipe Body.

(2) Redress Kits include O-Ring Packing Sets, Polypak Kits, and Connector Body Wipers.

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LOGAN Z TYPE HYDRAULIC FISHING JARS

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		7/8 Sucker Rod	1-13/16 Wilson FJ	1-1/4 API Reg	2-3/8 PH6 5.9# Hyd Bx	2-3/8 EUE	2-3/8 API Reg	2-7/8 API Reg
OUTSIDE DIAMETER (INCHES)		1-5/8	1-13/16	2-1/4	2-29/32	3-1/16	3-1/8	3-3/4
INSIDE DIAMETER (INCHES)		1/4	5/16	3/8	1	1-1/2	1	1-1/4
TYPE JAR		Sub	Special Mandrel	Integral	Sub	Sub Mandrel	Integral Mandrel	Integral
COMPLETE ASSEMBLY	**Logan Part No.**	**605-000**	**605-001**	**605-002**	**605-003**	**605-004**	**605-005**	**605-006**
	Bowen No.	70822	74723	54020	68010	55670	52504	52506
	Price	*	$18,674	$20,949	$21,904	$26,738	$24,162	$25,792
TOP SUB	**Logan Part No.**	**AG3000**	**AG3001**	**...**	**AG3003**	**AG3004**	**...**	**...**
	Bowen No.	70823	21156	...	68015	55889	...	...
	Price	*	$665	...	$959	$1,294	...	...
MANDREL	**Logan Part No.**	**AG4000**	**AG4001**	**AG4002**	**AG4003**	**AG4004**	**AG4005**	**AG4006**
	Bowen No.	70825	21155	18780	68014	55888	38056	38041
	Price	*	$3,883	$44,756	$4,032	$4,805	$6,504	$8,000
PISTON ASSEMBLY	**Logan Part No.**	**26000-018**	**26000-019**	**26000-020**	**26000-021**	**26000-022**	**26000-023**	**26000-024**
(Ring Type Standard)	Bowen No.	70853	74725	59585	68019	56368	61282	68128
	Price	*	$922	$861	$1,512	$1,862	$1,102	$1,014
MANDREL BODY	**Logan Part No.**	**AG5000**	**AG5001**	**AG5002**	**AG5003**	**AG5004**	**AG5005**	**AG5006**
	Bowen No.	70824	21153	56571	68013	55887	52764	52770
	Price	*	$4,896	$5,022	$4,201	$4,408	$5,130	$5,158
MIDDLE BODY	**Logan Part No.**	**AG6000**	**AG6001**	**AG6002**	**AG6003**	**AG6004**	**AG6005**	**AG6006**
	Bowen No.	70826	74724	18777	68012	55886	42737	38044
	Price	*	$3,883	$4,627	$3,803	$4,543	$4,545	$4,844
WASHPIPE BODY	**Logan Part No.**	**AG7000**	**AG7001**	**AG7002**	**AG7003**	**AG7004**	**AG7005**	**AG7006**
	Bowen No.	70829	21151	18776	68011	55885	38064	38045
	Price	*	$3,219	$3,331	$3,294	$3,111	$3,399	$3,520
KNOCKER	**Logan Part No.**	**...**	**...**	**AG8002**	**...**	**...**	**AG8005**	**AG8006**
	Bowen No.	...	...	18781	...	...	38060	38049
	Price	...	...	$606	...	...	$667	$712
WASHPIPE	**Logan Part No.**	**AG9000**	**AG9001**	**AG9002**	**AG9003**	**AG9004**	**AG9005**	**AG9006**
	Bowen No.	70828	21154	18779	68016	55890	42738	38046
	Price	*	$1,293	$1,400	$1,720	$1,395	$1,546	$1,669
MANDREL BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10002**	**AG10000**	**AG10000**	**AG10002**	**AG10002**
	Bowen No.	617	617	329	617	617	329	329
	Price	$19	$19	$22	$19	$19	$22	$22
MIDDLE BODY FILL PLUG	**Logan Part No.**	**...**	**...**	**AG10000**	**AG10004**	**AG10004**	**AG10000**	**AG10000**
	Bowen No.	...	...	617	10641	10641	617	617
	Price	...	...	$19	$3	$3	$19	$19
PACKING SET	**Logan Part No.**	**26000-036**	**26000-037**	**26000-038**	**26000-039**	**26000-040**	**26000-041**	**26000-042**
	Bowen No.	70961	74802	18793	68017	55924	44622	38048
	Price	$32	$33	$33	$40	$35	$37	$37

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit

(2) 1 Washpipe

(3) 2 Piston Assemblies

(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings

(6) 4 Mandrel Body Fill Plugs

(7) 4 Middle Body Fill Plugs

(8) 8 Packing Sets

(9) 1 Mandrel Body Setting Tool

(10) 1 Piston Setting Tool

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		7/8 Sucker Rod	1-13/16 Wilson FJ	1-1/4 API Reg	2-3/8 PH6 5.9# Hyd Bx	2-3/8 EUE	2-3/8 API Reg	2-7/8 API Reg
OUTSIDE DIAMETER (INCHES)		1-5/8	1-13/16	2-1/4	2-29/32	3-1/16	3-1/8	3-3/4
INSIDE DIAMETER (INCHES)		1/4	5/16	3/8	1	1-1/2	1	1-1/4
TYPE JAR		Sub	Special Mandrel	Integral	Sub	Sub Mandrel	Integral Mandrel	Integral
COMPLETE ASSEMBLY	**Logan Part No.**	**605-000**	**605-001**	**605-002**	**605-003**	**605-004**	**605-005**	**605-006**
	Bowen No.	70822	74723	54020	68010	55670	52504	52506
MANDREL NON-EXTRUSION RING	**Logan Part No.**	**L365-16**	**L365-17**	**L365-24**	**L365-30.5**	**L364-32.5**	**L365-32**	**L365-35**
	Bowen No.	365-16	365-17	365-24	365-30.5	364-32.5	365-32	365-35
	No. Req'd	8	4	4	8	8	8	8
	Price	$33	$37	$39	$39	$39	$39	$40
MANDREL SEAL PROTECTOR RING	**Logan Part No.**	**L375-16**	**L375-17**	**L375-24**	**L375-30.5**	**L375-32.5**	**L375-32**	**L375-35**
	Bowen No.	375-16	375-17	375-24	375-30.5	375-32.5	375-32	375-35
	No. Req'd	8	4	4	8	8	8	8
	Price	$4	$7	$11	$10	$10	$8	$20
MANDREL BODY NON-EXTRUSION RING	**Logan Part No.**	**...**	**...**	**L56542**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	56542	...	...	...	...
	Price	...	...	$52	...	...	...	...
MANDREL BODY INSERT	**Logan Part No.**	**AG11000**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	71254	...	...	...	...	...	...
	Price	*	...	...	...	...	...	...
MANDREL BODY SEAL PROTECTOR RING	**Logan Part No.**	**...**	**...**	**L227-27.25**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	227-27.25	...	...	...	...
	Price	...	...	$8	...	...	...	...

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit

(2) 1 Washpipe

(3) 2 Piston Assemblies

(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings

(6) 4 Mandrel Body Fill Plugs

(7) 4 Middle Body Fill Plugs

(8) 8 Packing Sets

(9) 1 Mandrel Body Setting Tool

(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		7/8 Sucker Rod	1-13/16 Wilson FJ	1-1/4 API Reg	2-3/8 PH6 5.9# Hyd Bx	2-3/8 EUE	2-3/8 API Reg	2-7/8 API Reg
OUTSIDE DIAMETER (INCHES)		1-5/8	1-13/16	2-1/4	2-29/32	3-1/16	3-1/8	3-3/4
INSIDE DIAMETER (INCHES)		1/4	5/16	3/8	1	1-1/2	1	1-1/4
TYPE JAR		Sub	Special Mandrel	Integral	Sub	Sub Mandrel	Integral Mandrel	Integral
COMPLETE ASSEMBLY	**Logan Part No.**	**605-000**	**605-001**	**605-002**	**605-003**	**605-004**	**605-005**	**605-006**
	Bowen No.	70822	74723	54020	68010	55670	52504	52506
RING TYPE	**Logan Part No.**	**26000-018**	**26000-019**	**26000-020**	**26000-021**	**26000-022**	**26000-023**	**26000-024**
PISTON ASSEMBLY	Bowen No.	70853	74725	59585	68019	56368	61282	68128
Consists of:	Price	*	$922	$861	$1,512	$1,862	$1,102	$1,015
PISTON	**Logan Part No.**	**AG15000**	**...**	**AG15002**	**...**	**...**	**AG15005**	**AG15006**
	Bowen No.	70827	...	59586	...	...	61283	68127
	Price	*	...	$712	...	...	$846	$846
WAVE SPRING	**Logan Part No.**	**L66164**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	66164	...	...	...	...	...	...
	No. Req'd	2	...	...	...	...	...	...
	Price	*	...	...	...	...	...	...
PISTON RING	**Logan Part No.**	**...**	**...**	**L18783**	**...**	**...**	**L61284**	**L61287**
	Bowen No.	...	...	18783	...	...	61284	61287
	No. Req'd	...		4			4	2
	Price	...	...	$52	...	...	$52	$65
SEAL	**Logan Part No.**	**...**	**...**	**568214**	**...**	**...**	**568223**	**568226**
	Bowen No.	...	...	568214	...	...	568223	568226
	Price	...	...	$3	...	...	$3	$3
NON-EXTRUSION RING	**Logan Part No.**	**...**	**...**	**L365-19**	**L370-1.5**	**L370-3.5**	**L370-1**	**L370-4**
	Bowen No.	...	...	365-19	370-1.5	370-3.5	370-1	370-4
	Price	...	...	$39	$37	$37	$35	$35
SEAL	**Logan Part No.**	**...**	**...**	**L375-19**	**L376-1.5**	**L376-3.5**	**L376-1**	**L376-4**
PROTECTOR RING	Bowen No.	...	...	375-19	376-1.5	376-3.5	376-1	376-4
	Price	...	...	$8	$8	$8	$8	$8
CONE TYPE	**Logan Part No.**	**...**	**26000-019**	**...**	**...**	**...**	**...**	**...**
PISTON ASSEMBLY	Bowen No.	...	74725	...	...	...	...	...
Consists of:	Price	...	$922	...	...	...	...	...
CONE	**Logan Part No.**	**...**	**AG14001**	**...**	**AG14003**	**AG14004**	**...**	**...**
	Bowen No.	...	74726	...	68020	55891	...	...
	Price	...	$594	...	$927	$1,071	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**AG13001**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	74727	...	...	...	...	...
	Price	...	$102	...	...	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**AG12001**	**...**	**AG12003**	**AG12004**	**...**	**...**
	Bowen No.	...	74728	...	68021	55892	...	...
	Price	...	$228	...	$541	$712	...	...
SEAL BODY SEAL	**Logan Part No.**	**...**	**568020**	**...**	**568224**	**568226**	**...**	**...**
	Bowen No.	...	568020	...	568224	568226	...	...
	Price	...	$2	...	$3	$3	...	...

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool.

Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		7/8 Sucker Rod	1-13/16 Wilson FJ	1-1/4 API Reg	2-3/8 PH6 5.9# Hyd Bx	2-3/8 EUE	2-3/8 API Reg	2-7/8 API Reg
OUTSIDE DIAMETER (INCHES)		1-5/8	1-13/16	2-1/4	2-29/32	3-1/16	3-1/8	3-3/4
INSIDE DIAMETER (INCHES)		1/4	5/16	3/8	1	1-1/2	1	1-1/4
TYPE JAR		Sub	Special Mandrel	Integral	Sub	Sub Mandrel	Integral Mandrel	Integral
COMPLETE ASSEMBLY	**Logan Part No.**	**605-000**	**605-001**	**605-002**	**605-003**	**605-004**	**605-005**	**605-006**
	Bowen No.	70822	74723	54020	68010	55670	52504	52506

OPTIONAL

MANDREL BODY SETTING TOOL	**Logan Part No.**	**AG1000-16**	**AG1000-17**	**AG1000-24**	**AG1000-29.5**	**AG1000-32.5**	**AG1000-32**	**AG1000-35**
	Bowen No.	22709-16	22709-17	22709-24	22709-29.5	22709-32.5	22709-32	22709-35
	Price	$246	*	$917	$877	$983	$983	$996
PISTON SETTING TOOL	**Logan Part No.**	**...**	**...**	**AG1000-19**	**AG1000-30.5**	**AG1000-31**	**AG1000-29**	**AG1000-32**
	Bowen No.	...	...	22709-19	22709-30.5	22709-31	22709-29	22709-32
	Price	...	...	$918	$983	$984	$917	$983
SERVICE KIT	**Logan Part No.**	**26000-054**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Bowen No.	21279	55403	55403	55403	55403	55403	55403
	Price	*	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012
HI-TEMPERATURE PACKING SET	**Logan Part No.**	**...**	**26000-73**	**26000-074**	**...**	**26000-076**	**26000-077**	**26000-078**
	Bowen No.	...	149945	149884	...	148247	73659	80004
	Price	...	*	*	...	*	$148	*
PACKING SET	**Logan Part No.**	**26000-036**	**26000-037**	**26000-038**	**26000-039**	**26000-040**	**26000-041**	**26000-042**
Consists of:	Bowen No.	70961	74802	18793	68017	55924	44622	38048
	Price	$33	$33	$33	$40	$35	$37	$39
MANDREL/ WASHPIPE SEAL	**Logan Part No.**	**568211**	**568212**	**568219**	**568328**	**568330**	**568329**	**568332**
	Bowen No.	568211	568212	568219	568328	568330	568329	568332
	No. Req'd	4	4	4	4	4	4	4
	Price	$3	$3	$3	$3	$3	$3	$3
LARGE MIDDLE BODY SEAL	**Logan Part No.**	**568216**	**568019**	**568224**	**568036**	**568038**	**568231**	
	Bowen No.	568216	568019	568224	568036	568038	568231	568235
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$3	$3	$4	$4	$3	$4
SMALL MIDDLE BODY SEAL	**Logan Part No.**	**568214**	**568027**	**568228**	**568035**	**568036**	**568228**	**568233**
	Bowen No.	568214	568027	568228	568035	568036	568228	568233
	No. Req'd	3	3	3	3	3	3	3
	Price	$3	$3	$3	$4	$4	$3	$4
WASHPIPE SEAL	**Logan Part No.**	**...**	**568115**	**568210**	**568224**	**568226**	**568220**	**568222**
	Bowen No.	...	568115	568210	568224	568226	568220	568222
	Price	...	$3	$3	$3	$3	$3	$3

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit

(2) 1 Washpipe

(3) 2 Piston Assemblies

(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings

(6) 4 Mandrel Body Fill Plugs

(7) 4 Middle Body Fill Plugs

(8) 8 Packing Sets

(9) 1 Mandrel Body Setting Tool

(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		7/8 Sucker Rod	1-13/16 Wilson FJ	1-1/4 API Reg	2-3/8 PH6 5.9# Hyd Bx	2-3/8 EUE	2-3/8 API Reg	2-7/8 API Reg
OUTSIDE DIAMETER (INCHES)		1-5/8	1-13/16	2-1/4	2-29/32	3-1/16	3-1/8	3-3/4
INSIDE DIAMETER (INCHES)		1/4	5/16	3/8	1	1-1/2	1	1-1/4
TYPE JAR		Sub	Special Mandrel	Integral	Sub	Sub Mandrel	Integral Mandrel	Integral
COMPLETE ASSEMBLY	**Logan Part No.**	**605-000**	**605-001**	**605-002**	**605-003**	**605-004**	**605-005**	**605-006**
	Bowen No.	70822	74723	54020	68010	55670	52504	52506
MANDREL BODY FILL PLUG SEAL	**Logan Part No.**	**568005**	**568005**	**568006**	**568005**	**568006**	**568006**	**568006**
	Bowen No.	568005	568005	568006	568005	568006	568006	568006
	Price	$2	$2	$2	$2	$2	$2	$2
MIDDLE BODY FILL PLUG SEAL	**Logan Part No.**	**...**	**...**	**568005**	**...**	**...**	**568005**	**568005**
	Bowen No.	...	...	568005	...	...	568005	568005
	Price	...	...	$2	...	...	$2	$2
PISTON SEAL	**Logan Part No.**	**...**	**...**	**568214**	**...**	**...**	**568223**	**568226**
	Bowen No.	...	...	568214	...	...	568223	568226
	Price	...	...	$3	...	...	$3	$3
MIDDLE BODY / MANDREL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
WASHPIPE / MIDDLE BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
BACK-UP RINGS	**Logan Part No.**	**8-024**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	8-024	...	...	...	...	...	...
	Price	$3	...	...	...	...	...	...
MANDREL SEAL	**Logan Part No.**	**568015**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	568015	...	...	...	...	...	...
	Price	$2	...	...	...	...	...	...
MANDREL BODY SEAL	**Logan Part No.**	**568024**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	568024	...	...	...	...	...	...
	Price	$2	...	...	...	...	...	...

JAR LUBE	**Logan Part No.**	**49842-A**	**49842-B**	**49842-C**	**49842-D**			
	Bowen No.	49842-A	49842-B	49842-C	49842-D			
		1 Gallon	5 Gallons	20 Gallons	55 Gallons			
	Price	$62	$303	$1,805	$3,320			

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Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool.

Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API FH	3-1/2 API IF	3-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	4-3/4
INSIDE DIAMETER (INCHES)		1-1/2	1-7/8	1-15/16	2-3/8	1-1/2	2	2-1/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-007**	**605-008**	**605-009**	**605-010**	**605-011**	**605-012**	**605-018**
	Bowen No.	52528	52497	52502	52653	52530	52500	...
	Price	$24,983	*	$27,851	*	$29,236	$29,237	$29,236
TOP SUB	**Logan Part No.**	**AG3007**	**AG3008**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	37412	20156	...	...	...	...	...
	Price	$824	$825	...	...	...	...	...
MANDREL	**Logan Part No.**	**AG4007**	**AG4008**	**AG4009**	**AG4010**	**AG4011**	**AG4012**	**AG40125**
	Bowen No.	37411	20155	44484	35850	25965	38115	38115
	Price	$6,936	*	$8,696	*	$8,797	$8,797	$8,797
PISTON ASSEMBLY	**Logan Part No.**	**26000-025**	**26000-026**	**26000-027**	**26000-028**	**26000-029**	**26000-030**	**26000-030**
(Ring Type Standard)	Bowen No.	61288	61285	68420	69421	55285	55193	55193
	Price	$1,565	*	$1,378	*	$1,705	$1,214	$1,214
MANDREL BODY	**Logan Part No.**	**AG5007**	**AG5008**	**AG5009**	**AG5010**	**AG5011**	**AG5012**	**AG5012**
	Bowen No.	52771	52772	52780	52815	52749	52833	52833
	Price	$5,158	*	$5,437	*	$5,744	$5,744	$5,744
MIDDLE BODY	**Logan Part No.**	**AG6007**	**AG6007**	**AG6009**	**AG6010**	**AG6011**	**AG6012**	**AG6012**
	Bowen No.	20152	20152	41840	35853	25962	38112	38112
	Price	$4,885	*	$5,050	*	$5,437	$5,441	$5,441
WASHPIPE BODY	**Logan Part No.**	**AG7007**	**AG7008**	**AG7009**	**AG7010**	**AG7011**	**AG7012**	**AG70125**
	Bowen No.	37407	20151	44487	35854	25961	38111	38111
	Price	$3,527	*	$4,008	*	$4,479	$4,479	$4,479
KNOCKER	**Logan Part No.**	**...**	**...**	**AG8009**	**AG8010**	**AG8011**	**AG8012**	**AG8012**
	Bowen No.	...	...	44490	35857	25966	38116	38116
	Price	...	...	$732	$784	$784	$784	$784
WASHPIPE	**Logan Part No.**	**AG9007**	**AG9008**	**AG9009**	**AG9010**	**AG9011**	**AG9012**	**AG90125**
	Bowen No.	37410	20154	44488	35855	25964	38114	38114
	Price	$1,669	*	$1,764	*	$1,815	$1,815	$1,815
MANDREL BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**
	Bowen No.	329	329	329	329	329	329	329
	Price	$19	$19	$19	$19	$19	$19	$19
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10002**	**AG10002**	**AG10002**
	Bowen No.	617	617	617	617	329	329	329
	Price	$16	$16	$16	$16	$19	$19	$19
PACKING SET	**Logan Part No.**	**26000-043**	**26000-044**	**26000-045**	**26000-046**	**26000-047**	**26000-048**	**26000-048**
	Bowen No.	37415	20163	44491	35858	25892	38120	38120
	Price	$37	*	$39	*	$48	$45	$45

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Special Notes:

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(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit

(2) 1 Washpipe

(3) 2 Piston Assemblies

(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings

(6) 4 Mandrel Body Fill Plugs

(7) 4 Middle Body Fill Plugs

(8) 8 Packing Sets

(9) 1 Mandrel Body Setting Tool

(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API FH	3-1/2 API FH	3-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	4-3/4
INSIDE DIAMETER (INCHES)		1-1/2	1-7/8	1-15/16	2-3/8	1-1/2	2	2-1/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-007**	**605-008**	**605-009**	**605-010**	**605-011**	**605-012**	**605-018**
	Bowen No.	52528	52497	52502	52653	52530	52500	...
MANDREL	**Logan Part No.**	**L365-36**	**L365-36**	**L365-40**	**L365-42**	**L365-40**	**L365-41**	**L365-41**
NON-EXTRUSION RING	Bowen No.	365-36	365-36	365-40	365-42	365-40	365-41	365-41
(8 req'd)	Price	$40	$40	$40	$40	$40	$41	$41
MANDREL SEAL	**Logan Part No.**	**L375-36**	**L375-36**	**L375-40**	**L375-42**	**L375-40**	**L375-41**	**L375-41**
PROTECTOR RING	Bowen No.	375-36	375-36	375-40	375-42	375-40	375-41	375-41
(8 req'd)	Price	$20	$20	$20	$20	$20	$12	$12
MANDREL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
NON-EXTRUSION RING	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
INSERT	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
PROTECTOR RING	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
RING TYPE	**Logan Part No.**	**26000-025**	**26000-026**	**26000-027**	**26000-028**	**26000-029**	**26000-030**	**26000-030**
PISTON ASSEMBLY	Bowen No.	61288	61285	68420	68421	55285	55193	55193
Consists of:	Price	$1,565	*	$1,378	*	$1,705	$1,214	$1,214
PISTON	**Logan Part No.**	**AG15007**	**AG15008**	**AG15009**	**AG15010**	**AG15011**	**AG15012**	**AG15012**
	Bowen No.	61289	61286	68413	68415	55286	55194	55194
	Price	$1,327	*	$1,140	*	$1,546	$1,312	$1,312
WAVE SPRING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
(2 req'd)	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
PISTON RING	**Logan Part No.**	**L61287**	**L61287**	**L68414**	**L68416**	**L25968**	**L25293**	**L25293**
	Bowen No.	61287	61287	68414	68416	25968	25293	25293
	No. Req'd	4	4	3	3	2	2	2
	Price	$65	$65	$65	$58	$58	$58	$58
SEAL	**Logan Part No.**	**568228**	**568229**	**568231**	**568233**	**568231**	**568232**	**568232**
	Bowen No.	568228	568229	568231	568233	568231	568232	568232
	Price	$3	$3	$3	$4	$3	$3	$3
NON-EXTRUSION RING	**Logan Part No.**	**L370-6**	**L52495**	**L370-9**	**L370-11**	**L370-8.5**	**L370-10**	**L370-10**
	Bowen No.	370-6	52495	370-9	370-11	370-8.5	370-10	370-10
	Price	$35	$52	$23	$35	$37	$35	$35
SEAL PROTECTOR	**Logan Part No.**	**L376-6**	**L52496**	**L376-9**	**L376-11**	**L376-8.5**	**L376-10**	**L376-10**
RING	Bowen No.	376-6	52496	376-9	376-11	376-8.5	376-10	376-10
	Price	$8	$51	$10	$8	$10	$8	$8

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool.

Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API FH	3-1/2 API FH	3-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	4-3/4
INSIDE DIAMETER (INCHES)		1-1/2	1-7/8	1-15/16	2-3/8	1-1/2	2	2-1/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-007**	**605-008**	**605-009**	**605-010**	**605-011**	**605-012**	**605-018**
	Bowen No.	52528	52497	52502	52653	52530	52500	...
CONE TYPE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
PISTON ASSEMBLY	Bowen No.	...	...	...	...	...	...	...
Consists of:	Price	...	...	...	...	...	...	...
CONE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
SEAL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

OPTIONAL

MANDREL BODY SETTING TOOL	**Logan Part No.**	**AG1000-36**	**AG1000-36**	**AG1000-40**	**AG1000-42**	**AG1000-40**	**AG1000-41**	**AG1000-41**
	Bowen No.	22709-36	22709-36	22709-40	22709-42	22709-40	22709-41	22709-41
	Price	$1,009	$1,009	$1,047	$1,047	$1,047	$1,047	$1,047
PISTON SETTING TOOL	**Logan Part No.**	**AG1000-34**	**AG2000**	**AG1000-37**	**AG1000-39**	**AG1000-36.5**	**AG1000-38**	**AG1000-38**
	Bowen No.	22709-34	54922	22709-37	22709-39	22709-36.5	22709-38	22709-38
	Price	$996	$983	$983	$1,047	$1,009	$983	$983
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Bowen No.	55403	55403	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012
HI-TEMPERATURE PACKING SET	**Logan Part No.**	**...**	**...**	**26000-081**	**...**	**26000-083**	**26000-084**	**26000-084**
	Bowen No.	...	...	78330	...	80115	80005	80005
	Price	...	...	*	...	*	*	*

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit

(2) 1 Washpipe

(3) 2 Piston Assemblies

(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings

(6) 4 Mandrel Body Fill Plugs

(7) 4 Middle Body Fill Plugs

(8) 8 Packing Sets

(9) 1 Mandrel Body Setting Tool

(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API FH	3-1/2 API FH	3-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	4-3/4
INSIDE DIAMETER (INCHES)		1-1/2	1-7/8	1-15/16	2-3/8	1-1/2	2	2-1/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-007**	**605-008**	**605-009**	**605-010**	**605-011**	**605-012**	**605-018**
	Bowen No.	52528	52497	52502	52653	52530	52500	...
PACKING SET	**Logan Part No.**	**26000-043**	**26000-044**	**26000-045**	**26000-046**	**26000-047**	**26000-048**	**26000-048**
Consists of:	Bowen No.	37415	20163	44491	35858	25892	38120	38120
	Price	$37	$37	$39	$47	$48	$45	$45
MANDREL /	**Logan Part No.**	**568333**	**568333**	**568337**	**568339**	**568337**	**568338**	**568338**
WASHPIPE SEAL	Bowen No.	568333	568333	568337	568339	568337	568338	568338
(4 req'd)	Price	$3	$3	$4	$4	$4	$4	$4
LARGE MIDDLE	**Logan Part No.**	**568235**	**568235**	**568239**	**568241**	**568241**	**568241**	**568241**
BODY SEAL	Bowen No.	568235	568235	568239	568241	568241	568241	568241
(2 req'd)	Price	$4	$4	$4	$7	$7	$7	$7
SMALL MIDDLE	**Logan Part No.**	**568233**	**568233**	**568237**	**568239**	**568239**	**568239**	**568239**
BODY SEAL	Bowen No.	568233	568233	568237	568239	568239	568239	568239
(3 req'd)	Price	$4	$4	$4	$4	$4	$4	$4
WASHPIPE SEAL	**Logan Part No.**	**568224**	**568227**	**568227**	**568233**	**568228**	**568228**	**568228**
	Bowen No.	568224	568227	568227	568233	568228	568228	568228
	Price	$3	$3	$3	$4	$3	$3	$3
MANDREL BODY	**Logan Part No.**	**568006**	**568006**	**568006**	**568006**	**568006**	**568006**	**568006**
FILL PLUG SEAL	Bowen No.	568006	568006	568006	568006	568006	568006	568006
	Price	$2	$2	$2	$2	$2	$2	$2
MIDDLE BODY	**Logan Part No.**	**568005**	**568005**	**568005**	**568005**	**568006**	**568006**	**568006**
FILL PLUG SEAL	Bowen No.	568005	568005	568005	568005	568006	568006	568006
	Price	$10	$10	$10	$10	$2	$2	$2
PISTON SEAL	**Logan Part No.**	**568228**	**568229**	**568231**	**568233**	**568231**	**568232**	**568232**
	Bowen No.	568228	568229	568231	568233	568231	568232	568232
	Price	$3	$3	$3	$4	$3	$3	$3
MIDDLE BODY /	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
MANDREL BODY SEAL	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
WASHPIPE / MIDDLE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
BODY SEAL	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
BACK-UP RINGS	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool.

Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		4-1/2 API FH	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg
OUTSIDE DIAMETER (INCHES)		6	6-1/4 & 6-1/2	6-3/4	7-3/4 & 8	9
INSIDE DIAMETER (INCHES)		2	2-1/4	2-3/8	3-1/16	3-3/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-013**	**605-014**	**605-015**	**605-016**	**605-017**
	Bowen No.	52498	52544	52680	52711	68346
	Price	*	$38,646	$41,439	$49,656	$89,280
TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...-	...	...
	Price	...	...	...	...	...
MANDREL	**Logan Part No.**	**AG4013**	**AG4014**	**AG4015**	**AG4016**	**AG4017**
	Bowen No.	14715	12375	11131	15156	66352
	Price	*	$11,259	$13,937	$15,606	$30,204
PISTON ASSEMBLY	**Logan Part No.**	**26000-031**	**26000-032**	**26000-033**	**26000-034**	**26000-035**
(Ring Type Standard)	Bowen No.	55246	55212	55335	68924	66355
	Price	*	$1,733	$1,465	$1,578	$2,649
MANDREL BODY	**Logan Part No.**	**AG5013**	**AG5014**	**AG5015**	**AG5016**	**AG5017**
	Bowen No.	52834	52835	52836	53088	66354
	Price	*	$5,632	$6,060	$6,087	$13,895
MIDDLE BODY	**Logan Part No.**	**AG6013**	**AG6014**	**AG6015**	**AG6016**	**AG6017**
	Bowen No.	14712	12372	11133	15158	66347
	Price	*	$7,486	$9,030	$9,684	$24,214
WASHPIPE BODY	**Logan Part No.**	**AG7013**	**AG7014**	**AG7015**	**AG7016**	**AG7017**
	Bowen No.	14711	12371	701	15164	66350
	Price	*	$5,230	$6,033	$6,562	$7,864
KNOCKER	**Logan Part No.**	**AG8013**	**AG8014**	**AG8015**	**AG8016**	**AG8017**
	Bowen No.	14717	12377	11134	15159	66348
	Price	*	$882	$991	$1,127	$1,902
WASHPIPE	**Logan Part No.**	**AG9013**	**AG9014**	**AG9015**	**AG9016**	**AG9017**
	Bowen No.	14714	12374	704	15163	66349
	Price	*	$2,205	$2,479	$3,214	$6,156
MANDREL BODY FILL PLUG	**Logan Part No.**	**AG10003**	**AG10003**	**AG10003**	**AG10003**	**AG10003**
	Bowen No.	508	508	508	508	508
	Price	$17	$17	$17	$17	$17
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**
	Bowen No.	329	329	329	329	329
	Price	$22	$22	$22	$22	$22
PACKING SET	**Logan Part No.**	**26000-049**	**26000-050**	**26000-051**	**26000-052**	**26000-053**
	Bowen No.	14720	12383	9738	20980	66359
	Price	$62	$77	$92	$121	$132
MANDREL NON-EXTRUSION RING	**Logan Part No.**	**L453**	**L365-48**	**L365-50.75**	**L365-59**	**L365-65**
	Bowen No.	453	365-48	708	365-59	365-65
	No. Req'd	8	8	8	8	8
	Price	$51	$45	$49	$68	$68
MANDREL SEAL PROTECTOR RING	**Logan Part No.**	**L449**	**L375-48**	**L375-50.75**	**L375-59**	**L375-65**
	Bowen No.	449	375-48	709	375-59	375-65
	No. Req'd	8	8	8	8	8
	Price	$14	$14	$21	$34	$69
MANDREL BODY NON-EXTRUSION RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request. + See notes on Sheet 12 of 14.*

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		4-1/2 API FH	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg
OUTSIDE DIAMETER (INCHES)		6	6-1/4 & 6-1/2	6-3/4	7-3/4 & 8	9
INSIDE DIAMETER (INCHES)		2	2-1/4	2-3/8	3-1/16	3-3/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-013**	**605-014**	**605-015**	**605-016**	**605-017**
	Bowen No.	52498	52544	52680	52711	68346
MANDREL BODY INSERT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
MANDREL BODY SEAL PROTECTOR RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
RING TYPE PISTON ASSEMBLY	**Logan Part No.**	**26000-031**	**26000-032**	**26000-033**	**26000-034**	**26000-035**
	Bowen No.	55246	55212	55335	68924	66355
Consists of:	Price	*	$1,733	$1,465	$1,578	$2,649
PISTON	**Logan Part No.**	**AG15013**	**AG15014**	**AG15015**	**AG15016**	**AG15017**
	Bowen No.	55247	55213	55339	68925	66357
	Price	*	$1,260	$1,225	$1,231	$2,163
WAVE SPRING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	No. Req'd	...	...	...	...	...
	Price	...	...	...	...	...
PISTON RING	**Logan Part No.**	**L1999**	**L12379**	**L719**	**L15162**	**L66356**
	Bowen No.	1999	12379	719	15162	66356
	No. Req'd	1	2	2	4	5
	Price	$68	$62	$71	$59	$104
SEAL	**Logan Part No.**	**568236**	**568237**	**568239**	**568426**	**568430**
	Bowen No.	568236	568237	568239	568426	568430
	Price	$4	$4	$4	$11	$14
NON-EXTRUSION RING	**Logan Part No.**	**L370-13.75**	**L370-15**	**L370-17**	**L365-53**	**L365-57**
	Bowen No.	370-13.75	370-15	370-17	365-53	365-57
	Price	$40	$40	$40	$45	$52
SEAL PROTECTOR RING	**Logan Part No.**	**L376-13.75**	**L376-15**	**L376-17**	**L375-53**	**L375-57**
	Bowen No.	376-13.75	376-15	376-17	375-53	375-57
	Price	$12	$12	$13	$22	$24
CONE TYPE PISTON ASSEMBLY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
Consists of:	Price	...	...	...	...	...
CONE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
SEAL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

* *Available upon request.*

\+ *While assembly reflects two Outside Diameters, the price shown represents the smallest OD listed. An oversize fee will apply for any size above the smallest outside diameter. See "Special Notes" below with reference to this issue.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Outside diameter, if other than standard

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Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		4-1/2 API FH	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg
OUTSIDE DIAMETER (INCHES)		6	6-1/4 & 6-1/2	6-3/4	7-3/4 & 8	9
INSIDE DIAMETER (INCHES)		2	2-1/4	2-3/8	3-1/16	3-3/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-013**	**605-014**	**605-015**	**605-016**	**605-017**
	Bowen No.	52498	52544	52680	52711	68346

OPTIONAL

MANDREL BODY SETTING TOOL	**Logan Part No.**	**AG1001**	**AG1000-48**	**AG1000-51**	**AG1000-59**	**AG1000-65**
	Bowen No.	448	22709-48	22709-51	22709-59	22709-65
	Price	*	$1,178	$1,178	$1,336	$1,336
PISTON SETTING TOOL	**Logan Part No.**	**AG1000-41.75**	**AG2001**	**AG1000-45**	**AG1000-53**	**AG1000-57**
	Bowen No.	22709-41.75	54309	22709-45	22709-53	22709-57
	Price	*	$852	$1,178	$1,178	$1,336
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Bowen No.	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012
HI-TEMPERATURE PACKING SET	**Logan Part No.**	**26000-085**	**26000-086**	**26000-087**	**26000-088**	**...**
	Bowen No.	148246	79015 & 147932	9738/006	20980/006 & 007	...
	Price	*	*	*	*	...
PACKING SET	**Logan Part No.**	**26000-049**	**26000-050**	**26000-051**	**26000-052**	**26000-053**
Consists of:	Bowen No.	14720	12383	9738	20980	66359
	Price	$62	$77	$92	$121	$132
MANDREL / WASHPIPE SEAL	**Logan Part No.**	**568344**	**568345**	**568348**	**568432**	**568438**
(4 req'd)	Bowen No.	568344	568345	568348	568432	568438
	Price	$7	$8	$10	$14	$16
LARGE MIDDLE BODY SEAL	**Logan Part No.**	**568248**	**568252**	**568256**	**568261**	**568265**
(2 req'd)	Bowen No.	568248	568252	568256	568261	568265
	Price	$11	$13	$16	$16	$19
SMALL MIDDLE BODY SEAL	**Logan Part No.**	**568246**	**568250**	**568254**	**568259**	**...**
(3 req'd)	Bowen No.	568246	568250	568254	568259	...
	Price	$10	$11	$14	$16	...
WASHPIPE SEAL	**Logan Part No.**	**568234**	**568235**	**568235**	**568242**	**568246**
	Bowen No.	568234	568235	568235	568242	568246
	Price	$4	$4	$4	$7	$10
MANDREL BODY FILL PLUG SEAL	**Logan Part No.**	**568011**	**568011**	**568011**	**568011**	**568011**
	Bowen No.	568011	568011	568011	568011	568011
	Price	$2	$2	$2	$2	$2
MIDDLE BODY FILL PLUG SEAL	**Logan Part No.**	**568006**	**568006**	**568006**	**568006**	**568011**
	Bowen No.	568006	568006	568006	568006	568011
	Price	$2	$2	$2	$2	$2
PISTON SEAL	**Logan Part No.**	**568236**	**568237**	**568239**	**568426**	**568430**
	Bowen No.	568236	568237	568239	568426	568430
	Price	$4	$4	$4	$11	$14

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

Logan Z Type Hydraulic Fishing Jars

TOOL JOINT CONNECTION		4-1/2 API FH	4-1/2 API IF	5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg
OUTSIDE DIAMETER (INCHES)		6	6-1/4 & 6-1/2	6-3/4	7-3/4 & 8	9
INSIDE DIAMETER (INCHES)		2	2-1/4	2-3/8	3-1/16	3-3/4
TYPE JAR		Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel	Integral Mandrel
COMPLETE ASSEMBLY	**Logan Part No.**	**605-013**	**605-014**	**605-015**	**605-016**	**605-017**
	Bowen No.	52498	52544	52680	52711	68346
MIDDLE BODY / MANDRELBODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**568441**
	Bowen No.	...	...	...	...	568441
	Price	...	...	...	...	$17
WASHPIPE / MIDDLE BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**568263**
	Bowen No.	...	...	...	...	568263
	Price	...	...	...	...	$17
BACK-UP RINGS	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
MANDREL SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...
MANDREL BODY SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...
	Price	...	...	...	...	...

JAR LUBE	**Logan Part No.**	**49842-A**	**49842-B**	**49842-C**	**49842-D**
	Bowen No.	49842-A	49842-B	49842-C	49842-D
		1 Gallon	5 Gallons	20 Gallons	55 Gallons
	Price	$62	$303	$1,805	$3,320

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Special Notes:

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(2) Packing Sets include all seals necessary to dress the tool.

Non-Extrusion Rings and Seal Protector Rings are not included, and must be ordered separately.

(3) Service Kit does not include any Seal Setting Tools, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard

Recommended Spare Parts:

(1) 1 Service Kit
(2) 1 Washpipe
(3) 2 Piston Assemblies
(4) 16 Non-Extrusion Rings (5)16 Seal Protector Rings
(6) 4 Mandrel Body Fill Plugs
(7) 4 Middle Body Fill Plugs
(8) 8 Packing Sets
(9) 1 Mandrel Body Setting Tool
(10) 1 Piston Setting Tool

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LOGAN Z TYPE ENERGIZERS

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Logan Z Type Energizers

TOOL JOINT CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 PH6 5.9# HYD	2-3/8 API Reg	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	2-29/32	3-1/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		5/16	3/8	1	1	1-1/2	1-7/8
JARS USED WITH		74723	54020	68010	52504	52528	52497
TOTAL STROKE TO SOLID (INCHES)		6	6	12-3/4	8-3/4	7-7/8	7-5/8
COMPLETE ASSEMBLY	**Logan Part No.**	**606-001**	**606-002**	**606-003**	**606-004**	**606-005**	**606-006**
	Bowen No.	64460	50640	68262	55867	55747	50660
	Price	*	$22,233	$26,797	$26,610	$28,126	*
TOP SUB	**Logan Part No.**	**AG3001**	**...**	**AG3003**	**...**	**AG3007**	**AG3008**
	Bowen No.	21156	...	68015	...	37412	20156
	Price	...	...	$959	...	$824	*
MANDREL	**Logan Part No.**	**AH3001**	**AH3002**	**AH3003**	**AH3004**	**AH3005**	**AH3006**
	Bowen No.	64461	50641	68267	55869	55749	50661
	Price	*	$6,463	$7,105	$8,782	$9,819	*
PISTON ASSEMBLY	**Logan Part No.**	**27000-018**	**27000-019**	**27000-020**	**27000-021**	**27000-022**	**27000-023**
	Bowen No.	64455	64317	68268	64234	64211	64330
	Price	*	$410	$459	$468	$491	*
MANDREL BODY INSERT	**Logan Part No.**	**AH4001**	**AH4002**	**AH4003**	**AH4004**	**AH4005**	**AH4005**
	Bowen No.	50634	50642	68266	50650	50283	50283
	Price	*	$904	$1,186	$1,225	$1,225	$1,225
MANDREL BODY EXTENSION	**Logan Part No.**	**...**	**...**	**AH5003**	**...**	**...**	**...**
	Bowen No.	...	...	68265	...	...	...
	Price	...	...	$5,216	...	...	...
MANDREL BODY	**Logan Part No.**	**AH6001**	**AH6002**	**AH6003**	**AH6004**	**AH6006**	**AH6006**
	Bowen No.	50635	50643	68264	50651	50284	50284
	Price	*	$5,027	$4,690	$5,551	$5,801	$5,801
MIDDLE BODY	**Logan Part No.**	**AH7001**	**AH7002**	**AH7003**	**AH7004**	**AH7005**	**AH7005**
	Bowen No.	50636	50644	68263	55870	55748	55748
	Price	*	$3,290	$4,291	$3,770	$3,770	$3,770
WASHPIPE BODY	**Logan Part No.**	**AG7001**	**AG7002**	**AG7003**	**AG7005**	**AG7007**	**AG7008**
	Bowen No.	21151	18776	68011	38064	37407	20151
	Price	*	$3,331	$3,294	$3,399	$3,520	*
KNOCKER	**Logan Part No.**	**...**	**AG8002**	**...**	**AG8005**	**...**	**...**
	Bowen No.	...	18781	...	38060	...	...
	Price	...	$526	...	$667	...	...
WASHPIPE	**Logan Part No.**	**AG9001**	**AG9002**	**AG9003**	**AG9005**	**AG9007**	**AG9008**
	Bowen No.	21154	18779	68016	42738	37410	20154
	Price	*	$1,400	$1,720	$1,546	$1,669	*
MANDREL BODY INSERT FILL PLUG	**Logan Part No.**	**AG10000**	**AG10002**	**AG10000**	**AG10002**	**AG10002**	**AG10002**
	Bowen No.	617	329	617	329	329	329
	No. Req'd	2	2	2	2	2	2
	Price	$19	$22	$19	$22	$22	$22
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10004**	**AG10000**	**AG10004**	**AG10000**	**AG10000**	**AG10000**
	Bowen No.	10641	617	10641	617	617	617
	Price	$3	$19	$3	$19	$19	$19

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(3) Outside diameter, if other than standard

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Logan Z Type Energizers

TOOL JOINT CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 PH6 5.9# HYD	2-3/8 API Reg	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	2-29/32	3-1/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		5/16	3/8	1	1	1-1/2	1-7/8
JARS USED WITH		74723	54020	68010	52504	52528	52497
TOTAL STROKE TO SOLID (INCHES)		6	6	12-3/4	8-3/4	7-7/8	7-5/8
COMPLETE ASSEMBLY	**Logan Part No.**	**606-001**	**606-002**	**606-003**	**606-004**	**606-005**	**606-006**
	Bowen No.	64460	50640	68262	55867	55747	50660
MANDREL BODY INSERT NON-EXTRUSION RING	**Logan Part No.**	**...**	**L56542**	**...**	**...**	**...**	**...**
	Bowen No.	...	56542	...	...	...	...
	Price	...	$52	...	...	...	...
MIDDLE BODY INSERT SEAL RING	**Logan Part No.**	**L8-027**	**L227-27.25**	**...**	**...**	**...**	**...**
	Bowen No.	8-027	227-27.25	...	...	...	...
	No. Req'd	2	2	...	...	...	...
	Price	$4	$4	...	...	...	...
MANDREL & WASHPIPE NON-EXTRUSION RING	**Logan Part No.**	**L365-17**	**L365-24**	**L365-30.5**	**L365-32**	**L365-36**	**L365-36**
	Bowen No.	365-17	365-24	365-30.5	365-32	365-36	365-36
	No. Req'd	8	8	8	8	8	8
	Price	$39	$39	$39	$39	$40	$40
MANDREL & WASHPIPE SEAL PROTECTOR RING	**Logan Part No.**	**L375-17**	**L375-24**	**L375-30.5**	**L375-32**	**L375-36**	**L375-36**
	Bowen No.	375-17	375-24	375-30.5	375-32	375-36	375-36
	No. Req'd	8	8	8	8	8	8
	Price	$8	$11	$10	$8	$20	$20

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(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) Outside diameter, if other than standard

Logan Z Type Energizers

TOOL JOINT CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 PH6 5.9# HYD	2-3/8 API Reg	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	2-29/32	3-1/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		5/16	3/8	1	1	1-1/2	1-7/8
JARS USED WITH		74723	54020	68010	52504	52528	52497
TOTAL STROKE TO SOLID (INCHES)		6	6	12-3/4	8-3/4	7-7/8	7-5/8
COMPLETE ASSEMBLY	**Logan Part No.**	**606-001**	**606-002**	**606-003**	**606-004**	**606-005**	**606-006**
	Bowen No.	64460	50640	68262	55867	55747	50660

OPTIONAL

MANDREL BODY SETTING TOOL	**Logan Part No.**	**AG1000-17**	**AG1000-24**	**AG1000-30.5**	**AG1000-32**	**AG1000-36**	**AG1000-36**
	Bowen No.	22709-17	22709-24	22709-30.5	22709-32	22709-36	22709-36
	Price	$302	$917	$983	$983	$1,009	$1,009
PISTON ASSEMBLY	**Logan Part No.**	**27000-018**	**27000-019**	**27000-020**	**27000-021**	**27000-022**	**27000-023**
Consists of:	Bowen No.	64455	64317	68268	64234	64211	64330
	Price	$479	$410	$459	$468	$491	*
UPPER ADAPTER	**Logan Part No.**	**AH12001**	**AH12002**	**AH12003**	**AH12004**	**AH12005**	**AH12006**
	Bowen No.	64456	64318	68270	64236	64213	64331
	Price	$156	$156	$156	$156	$156	*
PACKING	**Logan Part No.**	**AH13001**	**AH13002**	**AH13003**	**AH13004**	**AH13005**	**AH13006**
	Bowen No.	64458	64320	68271	64237	64214	64333
	Price	$181	$129	$160	$177	$201	*
LOWER ADAPTER	**Logan Part No.**	**AH14001**	**AH14002**	**AH14003**	**AH14004**	**AH14005**	**AH14006**
	Bowen No.	64457	64319	68269	64235	64212	64332
	Price	$144	$144	$144	$148	$148	*
CONE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
O-RING SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...

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Special Notes:

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Logan Z Type Energizers

TOOL JOINT CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 PH6 5.9# HYD	2-3/8 API Reg	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	2-29/32	3-1/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		5/16	3/8	1	1	1-1/2	1-7/8
JARS USED WITH		74723	54020	68010	52504	52528	52497
TOTAL STROKE TO SOLID (INCHES)		6	6	12-3/4	8-3/4	7-7/8	7-5/8
COMPLETE ASSEMBLY	**Logan Part No.**	**606-001**	**606-002**	**606-003**	**606-004**	**606-005**	**606-006**
	Bowen No.	64460	50640	68262	55867	55747	50660
O-RING PACKING SET	**Logan Part No.**	**27000-035**	**27000-036**	**27000-037**	**27000-038**	**27000-039**	**27000-040**
Consists of:	Bowen No.	50638	50835	68272	55873	55816	55497
	Price	$32	$39	$39	$47	$49	$45
WASHPIPE SEAL	**Logan Part No.**	**568115**	**568210**	**568224**	**568220**	**568224**	**568227**
	Bowen No.	568115	568210	568224	568220	568224	568227
	Price	$3	$3	$3	$3	$3	$3
MANDREL & WASHPIPE SEAL	**Logan Part No.**	**568212**	**568219**	**568328**	**568329**	**568333**	**568333**
	Bowen No.	568212	568219	568328	568329	568333	568333
	No. Req'd	2	4	5	4	4	3
	Price	$3	$3	$3	$3	$3	$3
MANDREL BODY & MIDDLE BODY SEAL – LARGE	**Logan Part No.**	**568219**	**568224**	**568036**	**568231**	**568235**	**568235**
	Bowen No.	568219	568224	568036	568231	568235	568235
	No. Req'd	3	3	4	3	3	3
	Price	$3	$3	$4	$3	$4	$4
MANDREL BODY & MIDDLE BODY SEAL – SMALL	**Logan Part No.**	**568027**	**568222**	**568035**	**568228**	**568233**	**568233**
	Bowen No.	568027	568222	568035	568228	568233	568233
	No. Req'd	3	3	8	5	5	5
	Price	$3	$3	$4	$3	$4	$4
MANDREL BODY INSERT FILL PLUG SEAL	**Logan Part No.**	**...**	**568006**	**568005**	**568006**	**568006**	**568006**
	Bowen No.	...	568006	568005	568006	568006	568006
	No. Req'd	...	2	2	2	2	2
	Price	...	$2	$2	$2	$2	$2
MIDDLE BODY FILL PLUG SEAL	**Logan Part No.**	**568005**	**568005**	**...**	**568005**	**568005**	**568005**
	Bowen No.	568005	568005	...	568005	568005	568005
	Price	$2	$2	...	$2	$2	$2
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Bowen No.	55403	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012

ENERGIZER FLUID	**Logan Part No.**	**50529-C**	**50529-D**	**50529-E**
	Bowen No.	50529-C	50529-D	50529
		5 Gallons	30 Gallons	55 Gallons
	Price	$581	$3,395	$5,514

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(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Back-up Rings are not included, and must be ordered separately.

(3) Service Kit does not include Mandrel Body Seal Setting Tool, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) Outside diameter, if other than standard

Logan Z Type Energizers

TOOL JOINT CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4 & 6-1/2
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	1-1/2	2	2	2-1/4
JARS USED WITH		52506	52502	52653	52530	52500	52498	52544
TOTAL STROKE TO SOLID (INCHES)		8-1/4	8-5/8	10-3/8	8-7/8	10-1/8	8-5/8	13
COMPLETE ASSEMBLY	**Logan Part No.**	**606-007**	**606-008**	**606-009**	**606-010**	**606-011**	**606-012**	**606-013**
	Bowen No.	55895	55664	50708	50700	55812	55860	55905
	Price	$30,170	$33,175	*	$36,757	$38,771	*	$58,300
TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL	**Logan Part No.**	**AH3007**	**AH3008**	**AH3009**	**AH3010**	**AH3011**	**AH3012**	**AH3013**
	Bowen No.	55897	55769	50709	50701	55817	55862	55908
	Price	$11,808	$12,636	*	$14,596	$14,004	*	$20,503
PISTON ASSEMBLY	**Logan Part No.**	**27000-024**	**27000-025**	**27000-026**	**27000-027**	**27000-028**	**27000-029**	**27000-030**
	Bowen No.	64248	64206	64340	64995	64264	64268	64272
	Price	$530	$556	*	$610	$531	*	$1,014
MANDREL BODY INSERT	**Logan Part No.**	**AH4008**	**AH4009**	**AH4010**	**AH4011**	**AH4012**	**AH4013**	**AH4014**
	Bowen No.	50591	49412	50710	50702	49394	49635	50598
	Price	$1,225	$1,306	*	$1,410	$135	*	$2,293
MANDREL BODY EXTENSION	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL BODY	**Logan Part No.**	**AH6007**	**AH6008**	**AH6009**	**AH6010**	**AH6011**	**AH6012**	**AH6013**
	Bowen No.	50589	50371	50711	50703	50374	49634	50597
	Price	$5,801	$6,225	*	$7,398	$7,097	*	$16,505
MIDDLE BODY	**Logan Part No.**	**AH7007**	**AH7008**	**AH7009**	**AH7010**	**AH7011**	**AH7012**	**AH7013**
	Bowen No.	55898	55660	50712	50704	55814	55863	55920
	Price	$3,770	$5,410	*	$4,613	$4,425	*	$5,205
WASHPIPE BODY	**Logan Part No.**	**AG7006**	**AG7009**	**AG7010**	**AG7011**	**AG7012**	**AG7013**	**AG7014**
	Bowen No.	38045	44487	35854	25961	38111	14711	12371
	Price	$3,520	$4,008	*	$4,479	$4,479	*	$5,230
KNOCKER	**Logan Part No.**	**AG8006**	**AH9008**	**AG8010**	**AG8011**	**AG8012**	**AG8013**	**AG8014**
	Bowen No.	38049	51185	35857	25966	38116	14717	12377
	Price	$712	$859	*	$784	$784	*	$882
WASHPIPE	**Logan Part No.**	**AG9006**	**AG9009**	**AH10009**	**AG9011**	**AG9012**	**AG9013**	**AH10013**
	Bowen No.	38046	44488	64344	25964	38114	14714	55907
	Price	$1,669	$1,764	*	$1,815	$1,815	*	$2,430
MANDREL BODY INSERT FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10003**	**AG10003**
	Bowen No.	329	329	329	329	329	508	508
	No. Req'd	2	2	2	2	2	2	2
	Price	$22	$22	$22	$22	$22	$17	$17
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10000**	**AG10002**	**AG10000**	**AG10002**	**AG10002**
	Bowen No.	617	617	617	329	617	329	329
	Price	$19	$19	$19	$22	$19	$22	$22

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Logan Z Type Energizers

TOOL JOINT CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4 & 6-1/2
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	1-1/2	2	2	2-1/4
JARS USED WITH		52506	52502	52653	52530	52500	52498	52544
TOTAL STROKE TO SOLID (INCHES)		8-1/4	8-5/8	10-3/8	8-7/8	10-1/8	8-5/8	13
COMPLETE ASSEMBLY	**Logan Part No.**	**606-007**	**606-008**	**606-009**	**606-010**	**606-011**	**606-012**	**606-013**
	Bowen No.	55895	55664	50708	50700	55812	55860	55905
MANDREL BODY INSERT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
NON-EXTRUSION RING	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MIDDLE BODY INSERT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
SEAL RING	Bowen No.	...	...	...	...	...	...	...
(2 req'd)	Price	...	...	...	...	...	...	...
MANDREL & WASHPIPE	**Logan Part No.**	**L365-35**	**L365-40**	**L365-42**	**L365-40**	**L365-41**	**L453**	**L365-48**
NON-EXTRUSION RING	Bowen No.	365-35	365-40	365-42	365-40	365-41	453	365-48
(8 req'd)	Price	$40	$40	$40	$40	$40	$41	$51
MANDREL & WASHPIPE	**Logan Part No.**	**L375-35**	**L375-40**	**L375-42**	**L375-40**	**L375-41**	**L449**	**L375-48**
SEAL PROTECTOR RING	Bowen No.	375-35	375-40	375-42	375-40	375-41	449	375-48
(8 req'd)	Price	$20	$20	$20	$20	$12	$14	$14

OPTIONAL

MANDREL BODY	**Logan Part No.**	**AG1000-35**	**AG1000-40**	**AG1000-42**	**AG1000-40**	**AG1000-41**	**AG1001**	**AG1000-48**
SETTING TOOL	Bowen No.	22709-35	22709-40	22709-42	22709-40	22709-41	448	22709-48
	Price	$996	$1,047	*	$1,047	$1,047	*	$1,178
PISTON ASSEMBLY	**Logan Part No.**	**27000-024**	**27000-025**	**27000-026**	**27000-027**	**27000-028**	**27000-029**	**27000-030**
Consists of:	Bowen No.	64248	64206	64340	64995	64264	64268	64272
	Price	$530	$556	*	$610	$531	*	$1,014
UPPER ADAPTER	**Logan Part No.**	**AH12007**	**AH12008**	**AH12009**	**AH12010**	**AH12011**	**AH12012**	**AH12013**
	Bowen No.	64250	64208	64341	64997	64266	64269	64273
	Price	$156	$162	*	$162	$144	*	$253
PACKING	**Logan Part No.**	**AH13007**	**AH13008**	**AH13009**	**AH13010**	**AH13011**	**AH13012**	**AH13013**
	Bowen No.	64251	64209	64343	64998	64267	64271	64275
	Price	$237	$258	*	$284	$253	*	$570
LOWER ADAPTER	**Logan Part No.**	**AH14007**	**AH14008**	**AH14009**	**AH14010**	**AH14011**	**AH14012**	**AH14013**
	Bowen No.	64249	64207	64342	64996	64265	64270	64274
	Price	$148	$156	*	$156	$138	*	$196
CONE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
O-RING SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

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(3) Name and number of any desired spares

(4) Outside diameter, if other than standard

Logan Z Type Energizers

TOOL JOINT CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4 & 6-1/2
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	1-1/2	2	2	2-1/4
JARS USED WITH		52506	52502	52653	52530	52500	52498	52544
TOTAL STROKE TO SOLID (INCHES)		8-1/4	8-5/8	10-3/8	8-7/8	10-1/8	8-5/8	13
COMPLETE ASSEMBLY	**Logan Part No.**	**606-007**	**606-008**	**606-009**	**606-010**	**606-011**	**606-012**	**606-013**
	Bowen No.	55895	55664	50708	50700	55812	55860	55905
O-RING PACKING SET	**Logan Part No.**	**27000-041**	**27000-042**	**27000-043**	**27000-044**	**27000-045**	**27000-046**	**27000-047**
Consists of:	Bowen No.	55902	55666	50840	50841	55815	55866	55919
	Price	$51	$52	$55	$55	$50	$89	$89
WASHPIPE SEAL	**Logan Part No.**	**568222**	**568227**	**568233**	**568228**	**568228**	**568234**	**568232**
	Bowen No.	568222	568227	568233	568228	568228	568234	568232
	Price	$3	$3	$4	$3	$3	$4	$3
MANDREL	**Logan Part No.**	**568332**	**568327**	**568339**	**568337**	**568338**	**568344**	**568345**
& WASHPIPE SEAL	Bowen No.	568332	568327	568339	568337	568338	568344	568345
	No. Req'd	4	4	4	4	4	4	4
	Price	$3	$3	$4	$4	$4	$7	$8
MANDREL BODY	**Logan Part No.**	**568235**	**568239**	**568241**	**568241**	**568241**	**568248**	**568252**
& MIDDLE BODY SEAL	Bowen No.	568235	568239	568241	568241	568241	568248	568252
– LARGE	No. Req'd	3	3	3	3	3	3	3
	Price	$4	$4	$7	$7	$7	$11	$13
MANDREL BODY	**Logan Part No.**	**568233**	**568237**	**568239**	**568239**	**568239**	**568246**	**568250**
& MIDDLE BODY SEAL	Bowen No.	568233	568237	568239	568239	568239	568246	568250
– SMALL	No. Req'd	5	5	5	5	5	3	5
	Price	$4	$4	$4	$4	$4	$10	$11
MANDREL BODY INSERT	**Logan Part No.**	**568006**	**568006**	**568006**	**568006**	**568006**	**568011**	**568011**
FILL PLUG SEAL	Bowen No.	568006	568006	568006	568006	568006	568011	568011
	No. Req'd	2	2	2	2	2	2	2
	Price	$2	$2	$2	$2	$2	$2	$2
MIDDLE BODY	**Logan Part No.**	**568005**	**568005**	**568005**	**568006**	**568005**	**568006**	**568006**
FILL PLUG SEAL	Bowen No.	568005	568005	568005	568006	568005	568006	568006
	Price	$2	$2	$2	$2	$2	$2	$2
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Bowen No.	55403	55403	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012

ENERGIZER FLUID	**Logan Part No.**	**50529-A**	**50529-C**	**50529-D**	**50529-E**			
	Bowen No.	50529-A	50529-C	50529-D	50529			
		1 Gallon	5 Gallons	30 Gallons	55 Gallons			
	Price	$126	$536	$3,396	$4,989			

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Logan Z Type Energizers

TOOL JOINT CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg				
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4 & 8	9				
INSIDE DIAMETER (INCHES)		2-3/8	3-1/16	3-3/4				
JARS USED WITH		52680	52711	66346				
TOTAL STROKE TO SOLID (INCHES)		13	13	13				
COMPLETE ASSEMBLY	**Logan Part No.**	**606-014**	**606-015**	**606-016**				
	Bowen No.	50720	55910	66372				
	Price	*	$75,779	*				
TOP SUB	**Logan Part No.**	**...**	**...**	**...**				
	Bowen No.	...	...	...				
	Price	...	...	...				
MANDREL	**Logan Part No.**	**AH3014**	**AH3015**	**AH3016**				
	Bowen No.	50721	50146	66376				
	Price	*	$25,693	*				
PISTON ASSEMBLY	**Logan Part No.**	**27000-031**	**27000-032**	**27000-033**				
	Bowen No.	64240	64276	66382				
	Price	*	$1,985	*				
MANDREL BODY INSERT	**Logan Part No.**	**AH4015**	**AH4016**	**AH4017**				
	Bowen No.	50722	50149	66380				
	Price	*	$2,735	*				
MANDREL BODY EXTENSION	**Logan Part No.**	**...**	**...**	**...**				
	Bowen No.	...	...	...				
	Price	...	...	...				
MANDREL BODY	**Logan Part No.**	**AH6014**	**AH6015**	**AH6016**				
	Bowen No.	50723	50147	66377				
	Price	*	$16,845	*				
MIDDLE BODY	**Logan Part No.**	**AH7014**	**AH7015**	**AH7016**				
	Bowen No.	50724	55911	66373				
	Price	*	$8,055	*				
WASHPIPE BODY	**Logan Part No.**	**AG7015**	**AG7016**	**AG7017**				
	Bowen No.	701	15164	66350				
	Price	*	$7,654	*				
KNOCKER	**Logan Part No.**	**AG8015**	**AH9015**	**AG8017**				
	Bowen No.	11134	50150	66348				
	Price	$965	$1,136	$1,782				
WASHPIPE	**Logan Part No.**	**AG9015**	**AH10015**	**AG9017**				
	Bowen No.	704	55912	66349				
	Price	*	$3,538	*				
MANDREL BODY INSERT FILL PLUG	**Logan Part No.**	**AG10003**	**AG10003**	**AG10003**				
	Bowen No.	508	508	508				
	No. Req'd	2	2	2				
	Price	$16	$16	$16				
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**...**				
	Bowen No.	329	329	...				
	Price	$22	$22	...				

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Logan Z Type Energizers

TOOL JOINT CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4 & 8	9
INSIDE DIAMETER (INCHES)		2-3/8	3-1/16	3-3/4
JARS USED WITH		52680	52711	66346
TOTAL STROKE TO SOLID (INCHES)		13	13	13
COMPLETE ASSEMBLY	**Logan Part No.**	**606-014**	**606-015**	**606-016**
	Bowen No.	50720	55910	66372
MANDREL BODY INSERT	**Logan Part No.**	**...**	**...**	**...**
NON-EXTRUSION RING	Bowen No.	...	...	...
	Price	...	...	...
MIDDLE BODY INSERT	**Logan Part No.**	**...**	**...**	**...**
SEAL RING	Bowen No.	...	...	...
(2 req'd)	Price	...	...	...
MANDREL & WASHPIPE	**Logan Part No.**	**L365-50.75**	**L365-59**	**L365-65**
NON-EXTRUSION RING	Bowen No.	708	365-59	365-65
(8 req'd)	Price	$49	$68	$197
MANDREL & WASHPIPE	**Logan Part No.**	**L375-50.75**	**L375-59**	**L375-65**
SEAL PROTECTOR RING	Bowen No.	709	375-59	375-65
(8 req'd)	Price	$21	$34	$69

OPTIONAL

MANDREL BODY	**Logan Part No.**	**AG1000-51**	**AG1000-59**	**AG1017**
SETTING TOOL	Bowen No.	22709-51	22709-59	22709-65
	Price	*	$1,336	*
PISTON ASSEMBLY	**Logan Part No.**	**27000-031**	**27000-032**	**27000-033**
Consists of:	Bowen No.	64240	64276	66382
	Price	*	$2,085	*
UPPER ADAPTER	**Logan Part No.**	**AH12014**	**AH12015**	**AH12016**
	Bowen No.	64242	64277	66378
	Price	*	$678	*
PACKING	**Logan Part No.**	**AH13014**	**AH13015**	**AH13016**
	Bowen No.	64243	64279	66384
	Price	*	$764	*
LOWER ADAPTER	**Logan Part No.**	**AH14014**	**AH14015**	**AH14016**
	Bowen No.	64241	64278	66379
	Price	*	$641	*
CONE	**Logan Part No.**	**...**	**...**	**...**
	Bowen No.	...	...	...
	Price	...	...	...
BY-PASS BODY	**Logan Part No.**	**...**	**...**	**...**
	Bowen No.	...	...	...
	Price	...	...	...
SEAL BODY	**Logan Part No.**	**...**	**...**	**...**
	Bowen No.	...	...	...
	Price	...	...	...
O-RING SEAL	**Logan Part No.**	**...**	**...**	**...**
	Bowen No.	...	...	...
	Price	...	...	...

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OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4 & 8	9				
INSIDE DIAMETER (INCHES)		2-3/8	3-1/16	3-3/4				
JARS USED WITH		52680	52711	66346				
TOTAL STROKE TO SOLID (INCHES)		13	13	13				
COMPLETE ASSEMBLY	**Logan Part No.**	**606-014**	**606-015**	**606-016**				
	Bowen No.	50720	55910	66372				
O-RING PACKING SET	**Logan Part No.**	**27000-048**	**27000-049**	**27000-050**				
Consists of:	Bowen No.	50842	55921	66383				
	Price	$110	$143	$263				
WASHPIPE SEAL	**Logan Part No.**	**568235**	**568242**	**568246**				
	Bowen No.	568235	568242	568246				
	Price	$4	$7	$10				
MANDREL & WASHPIPE SEAL	**Logan Part No.**	**568348**	**568432**	**568438**				
	Bowen No.	568348	568432	568438				
	No. Req'd	4	4	4				
	Price	$10	$14	$16				
MANDREL BODY & MIDDLE BODY SEAL – LARGE	**Logan Part No.**	**568256**	**568261**	**568265**				
	Bowen No.	568256	568261	568265				
	No. Req'd	3	3	3				
	Price	$16	$16	$19				
MANDREL BODY & MIDDLE BODY SEAL – SMALL	**Logan Part No.**	**568254**	**568259**	**568263**				
	Bowen No.	568254	568259	568263				
	No. Req'd	5	3	1				
	Price	$14	$16	$17				
MANDREL BODY INSERT FILL PLUG SEAL	**Logan Part No.**	**568011**	**568011**	**568441**				
	Bowen No.	568011	568011	568441				
	No. Req'd	2	2	2				
	Price	$2	$2	$17				
MIDDLE BODY FILL PLUG SEAL	**Logan Part No.**	**568006**	**568006**	**568011**				
	Bowen No.	568006	568006	568011				
	Price	$2	$2	$2				
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**				
	Bowen No.	55403	55403	55403				
	Price	$3,012	$3,012	$3,012				

ENERGIZER FLUID	**Logan Part No.**	**50529-A**	**50529-C**	**50529-D**	**50529-E**			
	Bowen No.	50529-A	50529-C	50529-D	50529			
		1 Gallon	5 Gallons	30 Gallons	55 Gallons			
	Price	$126	$536	$3,396	$4,989			

Innovex reserves the right to change or discontinue designs and/or prices without notice.

+ While assembly reflects two outside diameters, the price shown represents the smallest OD listed. An oversize fee will apply for any size above the smallest outside diameter. See "Special Notes" below with reference to this issue.

Special Notes:

(1) For oversize, add 5% for each additional 114" or portion thereof to Mandrel Body, Mandrel Body Insert, Middle Body, Washpipe Body, and either Mandrel or Top Sub.

(2) Packing Sets include all seals necessary to dress the tool. Non-Extrusion Rings and Back-up Rings are not included, and must be ordered separately.

(3) Service Kit does not include Mandrel Body Seal Setting Tool, which must be ordered separately.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Name and number of any desired spares
(4) Outside diameter, if other than standard

LOGAN SURFACE BUMPER JARS

11006 Lucerne Street | Houston, Texas 77016 | T: +1 281 219 6613 | Fax: +1 281 219 6638 | logan.sales@innovex-inc.com

Logan Surface Bumper Jars

TOOL JOINT CONNECTION		4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		7
INSIDE DIAMETER (INCHES)		1-7/8
STROKE		48
COMPLETE ASSEMBLY	**Logan Part No.**	**609-001**
	Bowen No.	74520
	Price	$50,393
TOP SUB	**Logan Part No.**	**AS1000**
	Bowen No.	13587
	Price	$3,774
KNOCKER SUB	**Logan Part No.**	**AS2000**
	Bowen No.	74522
	Price	$4,159
BOWL EXTENSION	**Logan Part No.**	**AS3000**
	Bowen No.	74523
	Price	$9,696
BOWL	**Logan Part No.**	**AS4000**
	Bowen No.	74524
	Price	$7,141
BOTTOM SUB	**Logan Part No.**	**AS5000**
	Bowen No.	74525
	Price	$3,182
MAIN MANDREL	**Logan Part No.**	**AS6000**
	Bowen No.	78609
	Price	$9,870
WASHPIPE	**Logan Part No.**	**AS7000**
	Bowen No.	13588
	Price	$4,333
PACKING SET	**Logan Part No.**	**AS8000**
	Bowen No.	66816
	Price	$577
FRICTION MANDREL	**Logan Part No.**	**AS9000**
	Bowen No.	78610
	Price	$2,479
CONTROL RING	**Logan Part No.**	**AS10000**
	Bowen No.	844
	Price	$1,254
FRICTION SLIP	**Logan Part No.**	**AS11000**
	Bowen No.	B-236
	Price	$2,109

REPLACEMENT PARTS

FRICTION SLIP SPACER	**Logan Part No.**	**AS12000**
	Bowen No.	13594
	Price	$295
CONTROL RING PLUG	**Logan Part No.**	**AS13000**
	Bowen No.	4144
	Price	$265
PLUG & CONTROL RING WRENCH	**Logan Part No.**	**AS14000**
	Bowen No.	86
	Price	$210
MANDREL SOCKET WRENCH	**Logan Part No.**	**AS15000**
	Bowen No.	14773
	Price	$2,054
LIFTING SUB	**Logan Part No.**	**AS17000**
	Bowen No.	242
	Price	$907
FRICTION SLIP LUBE (1 Tube)	**Logan Part No.**	**AS18000**
	Bowen No.	74285
	Price	$87

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

Recommended Spare Parts:

(1) 2 Washpipes

(2) 1 Friction Mandrel

(3) 1 Control Ring

(4) 1 Friction Slip

(5) 1 Control Ring Plug

(6) 6 Packing Sets

LOGAN LUBRICATED FISHING BUMPER SUBS

11006 Lucerne Street | Houston, Texas 77016 | T: +1 281 219 6613 | Fax: +1 281 219 6638 | logan.sales@innovex-inc.com

Logan Lubricated Fishing Bumper Subs

CONNECTION		1-13/16 WILSON FJ	1-1/4 API REG	2-3/8 PAC	2-3/8 API EUE	2-3/8 API REG	2-7/8 PAC	2-7/8 API REG
OUTSIDE DIAMETER		1-13/16	2-1/4	2 29/32	3-1/16	3-1/8	3-1/8	3-3/4
INSIDE DIAMETER		3/8	3/8	1	1-1/2	1	1-1/2	1-1/4
STROKE LENGTH		10	10	12	15-1/2	15-1/2	15-1/2	15-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**607-181**	**607-225**	**607-228**	**607-306**	**607-312-001**	**607-313-001**	**607-375**
	Bowen No.	54781	41490	...	...	43501	...	43509
	Price	*	*	$22,362	$25,350	$26,758	$27,805	$26,643
TOP SUB	**Logan Part No.**	**AJ1000**	**...**	**AG3003**	**...**	**...**	**...**	**...**
	Price	*	...	$959	...	...	...	...
MANDREL BODY	**Logan Part No.**	**AJ2000**	**AJ2001**	**AJ20015**	**AJ20025**	**AJ2002-001**	**AJ20025-001**	**AJ2003**
	Price	*	*	*	$3,675	$4,228	$4,228	$3,908
MIDDLE BODY	**Logan Part No.**	**AJ3000**	**AJ3001**	**AJ30015**	**AJ30025**	**AJ3002-001**	**AJ30025-001**	**AJ3003**
	Price	*	*	*	$4,019	$4,622	$4,622	$4,219
WASHPIPE BODY	**Logan Part No.**	**AJ4000**	**AJ4001**	**AG7003**	**AJ40025**	**AJ4002-001**	**AJ40025-001**	**AJ4003**
	Price	*	*	$3,294	$3,838	$3,605	$4,993	$4,338
MANDREL	**Logan Part No.**	**AJ5000**	**AJ5001**	**AJ50015**	**AJ50025**	**AJ5002-001**	**AJ50025-001**	**AJ5003**
	Price	*	*	$4,999	$7,457	$8,576	$8,577	$8,222
WASHPIPE	**Logan Part No.**	**...**	**AJ6001**	**AJ60015**	**AJ60025**	**AJ6002-004**	**AJ60025-001**	**AJ6003**
	Price	...	*	$1,613	$3,043	$3,650	$3,500	$3,375
NON-EXTRUSION RING	**Logan Part No.**	**L365-19**	**L365-24**	**L365-30.5**	**...**	**L365-32**	**...**	**L365-35**
	Bowen No.	365-19	365-24	365-30.5	...	365-32	...	365-35
	No. Req'd.	4	8	8	...	8	...	8
	Price	*	*	$39	...	$187	...	$40
SEAL PROTECTOR RING	**Logan Part No.**	**L375-19**	**L375-24**	**L375-305**	**...**	**L375-32**	**...**	**L375-35**
	Bowen No.	375-19	375-24	375-30.5	...	375-32	...	375-35
	No. Req'd.	4	8	8	...	8	...	8
	Price	*	*	$39	...	$187	...	$40
MANDREL BODY	**Logan Part No.**	**AG10000**	**AG10002**	**AG10002**	**AG10000**	**AG10002**	**AG10000**	**AG10002**
	Price	$19	$22	$22	$19	$22	$19	$22
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10004**	**AG10000**	**AG10004**	**AG10000**	**AG10000**
	Price	$19	$19	$3	$19	$3	$19	$19
KNOCKER	**Logan Part No.**	**...**	**AJ7001**	**...**	**AJ7002-001**	**AJ7002-001**	**AJ7002-001**	**AJ7003**
	Price	...	*	...	$1,813	$1,813	$1,813	$1,587

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

Logan Lubricated Fishing Bumper Subs

CONNECTION		1-13/16 WILSON FJ	1-1/4 API REG	2-3/8 PAC	2-3/8 API EUE	2-3/8 API REG	2-7/8 PAC	2-7/8 API REG
OUTSIDE DIAMETER		1-13/16	2-1/4	2 29/32	3-1/16	3-1/8	3-1/8	3-3/4
INSIDE DIAMETER		3/8	3/8	1	1-1/2	1	1-1/2	1-1/4
STROKE LENGTH		10	10	12	15-1/2	15-1/2	15-1/2	15-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**607-181**	**607-225**	**607-228**	**607-306**	**607-312-001**	**607-313-001**	**607-375**
	Bowen No.	54781	41490	...	...	43501	...	43509
	Price	*	*	$22,362	$25,350	$25,350	$25,350	$26,643
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Qty. Req'd	55403	55403	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012
SETTING TOOL	**Logan Part No.**	**AG1000-19**	**AG1000-24**	**AG1000-30.5**	**...**	**AG1000-32**	**...**	**AG1000-35**
	Qty. Req'd	22709-19	22709-24	22709-30.5	...	22709-32	...	22709-35
	Price	$918	$917	$983	...	$983	...	$996
SEAL PACKING	**Logan Part No.**	**28000-013**	**28000-014**	**28000-027**	**28000-026**	**28000-015-200**	**28000-026-200**	**28000-016**
	Qty. Req'd	54784	41846	...	...	43519	...	43517
	Price	$31	$34	$53	$33	$41	$38	$38
MAIN MANDREL & W.P.	**Logan Part No.**	**568211**	**568219**	**568328**	**...**	**568329**	**BD201-3**	**568332**
BODY SEAL	Qty. Req'd	4	4	4	...	4	...	4
	Price	-	-	-	-	-	$16	-
MIDDLE BODY	**Logan Part No.**	**568029**	**568224**	**568036**	**...**	**568231**	**...**	**568235**
SEAL LARGE	Qty. Req'd	2	2	2	...	2	...	2
	Price	-	-	-	-	-	...	-
MIDDLE BODY	**Logan Part No.**	**568027**	**568222**	**568035*** **	**...**	**568229**	**...**	**568233**
SEAL SMALL	Bowen No.	568027	568222	568035	...	568229	...	568233
	No. Req'd	2	2	2	2	2	...	2
	Price	$3	$3	$4	...	$3	...	$4
WASHPIPE SEAL	**Logan Part No.**	**...**	**568210**	**568217**	**568133**	**568220**	**568133**	**568222**
	Qty. Req'd	...	568210	568217	568133	568220	568133	568222
	Price	...	$3	$3	$3	$3	$3	$3
WASHPIPE BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**568130**	**...**
SEAL UPPER	Qty. Req'd	...	...	...	...	...	568230	...
	Price	...	...	...	...	...	$3	...
WASHPIPE BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**568146**	**...**
SEAL LOWER	Qty. Req'd	...	...	...	...	...	568146	...
	Price	...	...	...	...	...	$4	...
MIDDLE BODY	**Logan Part No.**	**568005**	**568005**	**...**	**568005**	**...**	**568005**	**568005**
FILL PLUG SEAL	Qty. Req'd	568005	568005	...	568005	...	568005	568005
	Price	$10	$10	...	$10	...	$10	$10
MANDREL BODY	**Logan Part No.**	**568005**	**568006**	**568006**	**568005**	**568006**	**568005**	**568006**
FILL PLUG SEAL	Qty. Req'd	568005	568006	568006	568005	568006	568005	568006
	Price	$10	$2	$2	$10	$2	$10	$2

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

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Logan Lubricated Fishing Bumper Subs

CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF OR FH	3-1/2 API IF	4-1/2 API FH
OUTSIDE DIAMETER		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6
INSIDE DIAMETER		1-1/2	1-7/8	1-15/16	2-3/8	2	2-1/4	2-13/16
STROKE LENGTH		15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	18
COMPLETE ASSEMBLY	**Logan Part No.**	**607-376-001**	**607-377**	**607-425**	**607-450**	**607-475**	**607-476-001**	**607-600**
	Bowen No.	43470	43521	43531	42700	39727	...	39732
	Price	$30,440	*	$27,843	*	$29,649	$28,239	*
TOP SUB	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Price	...	...	...	...	...	...	...
MANDREL BODY	**Logan Part No.**	**AJ2004-001**	**AJ2005**	**AJ2006**	**AJ2007**	**AJ2008**	**AJ2008**	**AJ2009**
	Price	$4,622	*	$3,908	*	$5,097	$5,097	*
MIDDLE BODY	**Logan Part No.**	**AJ3004-001**	**AJ3005**	**AJ3006**	**AJ3007**	**AJ3008**	**AJ3008**	**AJ3009**
	Price	$4,991	*	$4,476	*	$4,992	$4,992	*
WASHPIPE BODY	**Logan Part No.**	**AJ4004-001**	**AJ4005**	**AJ4006**	**AJ4007**	**AJ4008**	**AJ40085**	**AJ4009**
	Price	$5,131	*	$4,338	*	$5,094	$5,704	*
MANDREL	**Logan Part No.**	**AJ5004-001**	**AJ5005**	**AJ5006**	**AJ5007**	**AJ5008**	**AJ50085**	**AJ5009**
	Price	$9,720	*	$8,813	*	$9,170	$10,547	*
WASHPIPE	**Logan Part No.**	**AJ6004-001**	**AJ6005**	**AJ6006**	**AJ6007**	**AJ6008**	**AJ60085-003**	**AJ6009**
	Price	$3,931	*	$3,721	*	$3,827	$4,352	*
NON-EXTRUSION RING	**Logan Part No.**	**L365-36**	**L365-37.5**	**L365-40**	**L365-43**	**L365-42**	**L365-42**	**L365-50.25**
	Bowen No.	365-36	365-37.5	365-40	365-43	365-42	365-42	365-50.25
	Qty. Req'd	8	8	8	8	8	8	8
	Price	$41	*	$40	*	$61	$61	*
SEAL PROTECTOR RING	**Logan Part No.**	**L375-36**	**L375-37.5**	**L375-40**	**L375-43**	**L375-42**	**L375-42**	**L375-50.25**
	Bowen No.	375-36	375-37.5	375-40	375-43	375-42	375-42	375-50.25
	Qty. Req'd	8	8	8	8	8	8	8
	Price	$44	*	$20	*	$43	$43	*
MANDREL BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**	**AG10002**
	Price	$22	$22	$22	$22	$22	$22	$22
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10000**
	Price	$19	$19	$19	$19	$19	$19	$19
KNOCKER	**Logan Part No.**	**AJ7004**	**AJ7005**	**AJ7006**	**AJ7007**	**AJ7008**	**AJ7008**	**AJ7009**
	Price	$1,876	*	$1,587	*	$2,003	$2,003	*

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

Logan Lubricated Fishing Bumper Subs

CONNECTION		2-3/8 API IF	2-3/8 EUE	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF OR FH	3-1/2 API IF	4-1/2 API FH
OUTSIDE DIAMETER		3-3/4	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6
INSIDE DIAMETER		1-1/2	1-7/8	1-15/16	2-3/8	2	2-1/4	2-13/16
STROKE LENGTH		15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	18
COMPLETE ASSEMBLY	**Logan Part No.**	**607-376-001**	**607-377**	**607-425**	**607-450**	**607-475**	**607-476-001**	**607-600**
	Bowen No.	43470	43521	43531	42700	39727	...	39732
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**	**26000-055**
	Qty. Req'd	55403	55403	55403	55403	55403	55403	55403
	Price	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012	$3,012
SETTING TOOL	**Logan Part No.**	**AG1000-36**	**AG1000-37.5**	**AG1000-40**	**AG1000-43**	**AG1000-42**	**AG1000-42**	**AJ8000**
	Qty. Req'd	22709-36	22709-37.5	22709-40	22709-43	22709-42	22709-42	10572
	Price	$1,009	$983	$1,047	$1,047	$1,047	$1,047	$641
SEAL PACKING	**Logan Part No.**	**28000-017-200**	**28000-018**	**28000-019**	**28000-020**	**28000-021**	**28000-021**	**28000-022**
	Qty. Req'd	39720	43529	43539	42709	39730	39730	39735
	Price	$44	$43	$43	$50	$50	$57	$69
MAIN MANDREL & W.P. BODY SEAL	**Logan Part No.**	**568333**	**568334**	**568337**	**568340**	**568339**	**568339**	**568347**
	Bowen No.	568333	568334	568337	568340	568339	568339	568347
	Qty. Req'd	4	4	4	4	4	4	4
	Price	$3	$3	$4	$4	$4	$4	$8
MIDDLE BODY SEAL LARGE	**Logan Part No.**	**568235**	**568236**	**568239**	**568242**	**568242**	**568242**	**568250**
	Bowen No.	568235	568236	568239	568242	568242	568242	568250
	Qty. Req'd	2	2	2	2	2	2	2
	Price	$4	$4	$4	$7	$7	$7	$11
MIDDLE BODY SEAL SMALL	**Logan Part No.**	**568233**	**568233**	**568237**	**568239**	**568239**	**568239**	**568247**
	Bowen No.	568233	568233	568237	568239	568239	568239	568247
	No. Req'd	2	2	2	2	2	2	2
	Price	$4	$4	$4	$4	$4	$4	$11
WASHPIPE SEAL	**Logan Part No.**	**568223**	**568229**	**568227**	**568231**	**568229**	**568227**	**568236**
	Qty. Req'd	568223	568229	568227	568231	568229	568227	568236
	Price	$3	$3	$3	$3	$3	$3	$4
WASHPIPE BODY SEAL UPPER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Qty. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
WASHPIPE BODY SEAL LOWER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Qty. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MIDDLE BODY FILL PLUG SEAL	**Logan Part No.**	**568005**	**568005**	**568005**	**568005**	**568005**	**568005**	**568005**
	Qty. Req'd	568005	568005	568005	568005	568005	568005	568005
	Price	$10	$10	$10	$10	$10	$10	$10
MANDREL BODY FILL PLUG SEAL	**Logan Part No.**	**568006**	**568006**	**568006**	**568006**	**568006**	**568006**	**568006**
	Qty. Req'd	568006	568006	568006	568006	568006	568006	568006
	Price	$2	$2	$2	$2	$2	$2	$2

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

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Logan Lubricated Fishing Bumper Subs

CONNECTION		4-1/2 API IF OR FH	5-1/2 API REG	6-5/8 API REG				
OUTSIDE DIAMETER		6-1/4	6-3/4	7-3/4				
INSIDE DIAMETER		3-1/8	2-3/4	3-1/2				
STROKE LENGTH		18	18	18				
COMPLETE ASSEMBLY	**Logan Part No.**	**607-625**	**607-675**	**607-775**				
	Bowen No.	39737	39778	39752				
	Price	$41,190	$44,256	$54,598				
TOP SUB	**Logan Part No.**	**...**	**...**	**...**				
	Qty. Req'd	...	...	...				
	Price	...	...	...				
MANDREL BODY	**Logan Part No.**	**AJ2010**	**AJ2011**	**AJ2012**				
	Qty. Req'd	34966	33244	34992				
	Price	$6,242	$6,697	$7,913				
MIDDLE BODY	**Logan Part No.**	**AJ3010**	**AJ3011**	**AJ3012**				
	Qty. Req'd	34967	33245	34993				
	Price	$6,353	$6,697	$7,913				
WASHPIPE BODY	**Logan Part No.**	**AJ4010**	**AJ4011**	**AJ4012**				
	Qty. Req'd	39738	39779	39753				
	Price	$7,114	$7,543	$8,841				
MANDREL	**Logan Part No.**	**AJ5010**	**AJ5011**	**AJ5012**				
	Qty. Req'd	34970	33248	34996				
	Price	$12,387	$13,579	$18,061				
WASHPIPE	**Logan Part No.**	**AJ6010**	**AJ6011**	**AJ6012**				
	Qty. Req'd	39739	39780	39754				
	Price	$5,704	$5,995	$7,320				
NON-EXTRUSION RING	**Logan Part No.**	**L365-53**	**L365-54**	**L365-61**				
	Bowen	365-53	365-54	365-61				
	Qty. Req'd	8	8	8				
	Price	$45	$55	$74				
SEAL PROTECTOR RING	**Logan Part No.**	**L375-53**	**L375-54**	**L375-61**				
	Bowen	375-53	375-54	375-61				
	Qty. Req'd	8	8	8				
	Price	$22	$22	$35				
MANDREL BODY FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**	**AG10002**				
	Qty. Req'd	329	329	329				
	Price	$22	$22	$22				
MIDDLE BODY FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10000**				
	Qty. Req'd	617	617	617				
	Price	$19	$19	$19				
KNOCKER	**Logan Part No.**	**AJ7010**	**AJ7011**	**AJ7012**				
	Qty. Req'd	34972	33250	34998				
	Price	$2,045	$2,114	$2,530				

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

Logan Lubricated Fishing Bumper Subs

CONNECTION		4-1/2 API IF OR FH	5-1/2 API REG	6-5/8 API REG				
OUTSIDE DIAMETER		6-1/4	6-3/4	7-3/4				
INSIDE DIAMETER		3-1/8	2-3/4	3-1/2				
STROKE LENGTH		18	18	18				
COMPLETE ASSEMBLY	**Logan Part No.**	**607-625**	**607-675**	**607-775**				
	Bowen No.	39737	39778	39752				
SERVICE KIT	**Logan Part No.**	**26000-055**	**26000-055**	**26000-055**				
	Qty. Req'd	55403	55403	55403				
	Price	$3,012	$3,012	$3,012				
SETTING TOOL	**Logan Part No.**	**AG1000-53**	**AG1000-54**	**AG1000-61**				
	Qty. Req'd	22709-53	22709-54	22709-61				
	Price	$1,178	$1,178	$1,336				
SEAL PACKING	**Logan Part No.**	**28000-023**	**28000-024**	**28000-025**				
	Qty. Req'd	39740	39781	39755				
	Price	$88	$94	$125				
MAIN MANDREL & W.P.	**Logan Part No.**	**568426**	**568427**	**568434**				
BODY SEAL	Bowen No.	568426	568427	568434				
	Qty. Req'd	4	4	4				
	Price	$11	$11	$14				
MIDDLE BODY	**Logan Part No.**	**568253**	**568256**	**568261**				
SEAL LARGE	Bowen No.	568253	568256	568261				
	Qty. Req'd	2	2	2				
	Price	$14	$16	$16				
MIDDLE BODY	**Logan Part No.**	**568251**	**568254**	**568260**				
SEAL SMALL	Bowen No.	568251	568254	568260				
	No. Req'd	2	2	2				
	Price	$12	$14	$16				
WASHPIPE SEAL	**Logan Part No.**	**568239**	**568238**	**568246**				
	Qty. Req'd	568239	568238	568246				
	Price	$4	$4	$10				
WASHPIPE BODY	**Logan Part No.**	**...**	**...**	**...**				
SEAL UPPER	Qty. Req'd	...	...	...				
	Price	...	...	...				
WASHPIPE BODY	**Logan Part No.**	**...**	**...**	**...**				
SEAL LOWER	Qty. Req'd	...	...	...				
	Price	...	...	...				
MIDDLE BODY	**Logan Part No.**	**568005**	**568005**	**568005**				
FILL PLUG SEAL	Qty. Req'd	568005	568005	568005				
	Price	$10	$10	$10				
MANDREL BODY	**Logan Part No.**	**568006**	**568006**	**568006**				
FILL PLUG SEAL	Qty. Req'd	568006	568006	568006				
	Price	$2	$2	$2				

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** Available upon request.*

Special Notes:

(1) For oversize, add 5% for each additional 1/4" or portion thereof to Mandrel, Mandrel Body, Middle Body, and Washpipe Body.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Outside diameter, if other than standard
(4) Name and number of any desired spares

Recommended Spare Parts:

(1) 1 Service Kit
(2) 6 Seal Packing Sets
(3) 4 Middle Body Fill Plugs
(4) 4 Mandrel Body Fill Plugs
(5) 16 Main Mandrel Non-Extrusion Rings
(6) 16 Main Mandrel Seal Protector Rings
(7) 1 Seal Ring Setting Tool

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Notes

LOGAN FISHING BUMPER SUBS

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Logan Fishing Bumper Subs

CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 EUE	2-3/8 API Reg	2-3/8 API IF	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	3-1/8	3-5/32	3-3/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		3/8	1/2	1-17/32	1	1	1-1/2	1-7/8
STROKE (INCHES)		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	10120	18785	42592	10105	10190	39887	39893
	Price	$6,802	$7,762	$10,253	$10,253	*	$12,194	$13,625
TOP SUB	**Logan Part No.**	**AF1000**	**AF1001**	**AF10015**	**AF1002**	**AF10025**	**AF1003**	**AF1004**
	Bowen No.	10121	18786	42593	10106	10191	39888	39894
	Price	$573	$661	$923	$923	*	$1,008	$1,008
MANDREL BODY	**Logan Part No.**	**AF2000**	**AF2001**	**AF20015**	**AF2002**	**AF20025**	**AF2003**	**AF2004**
	Bowen No.	10123	18788	42596	10108	10193	39890	39896
	Price	$898	$904	$1,037	$1,037	*	$1,118	$1,118
MIDDLE BODY 20" STROKE	**Logan Part No.**	**AF3000-20**	**AF3001-20**	**AF30015-20**	**AF3002-20**	**AF30025-20**	**AF3003-20**	**AF3004-20**
	Bowen No.	10122	18787	42594	10107	10192	39889	39895
	Price	$2,308	$2,308	$2,308	$2,308	*	$2,308	$2,308
MANDREL 20" STROKE	**Logan Part No.**	**AF4000-20**	**AF4001-20**	**AF40015-20**	**AF4002-20**	**AF40025-20**	**AF4003-20**	**AF4004-20**
	Bowen No.	10125	18789	42597	10110	10194	39891	39897
	Price	$2,805	$2,805	$2,887	$2,887	*	$3,136	$3,136
KNOCKER	**Logan Part No.**	**AF5000**	**AF5001**	**AF50015**	**AF5002**	**AF50025**	**AF5003**	**AF5004**
	Bowen No.	10126	18790	42595	10111	10195	39892	39898
	Price	$602	$838	$929	$929	*	$998	$998
NON-EXTRUSION RING	**Logan Part No.**	**L385-22**	**L385-27**	**L216-34**	**L387-6**	**L385-35**	**L216-38**	**L216-38**
	Bowen No.	385-22	385-27	216-34	387-6	385-35	216-38	216-38
	No. Req'd	4	4	4	4	4	4	4
	Price	$52	$52	$52	$52	$52	$52	$52
SEAL PROTECTOR RING	**Logan Part No.**	**L386-22**	**L386-27**	**L227-34**	**L388-6**	**L386-35**	**L227-38**	**L227-38**
	Bowen No.	386-22	386-27	227-34	388-6	386-35	227-38	227-38
	No. Req'd	4	4	4	4	4	4	4
	Price	$8	$7	$7	$7	$7	$7	$7
KNOCKER SEAL RING	**Logan Part No.**	**568-217**	**568-222**	**568-331**	**568-228**	**568-332**	**568-335**	**568-335**
	Bowen No.	568217	568222	568331	568228	568332	568335	568335
	No. Req'd	2	2	2	2	2	2	
	Price	$3	$3	$3	$3	$3	$4	$4
KNOCKER LOCK SCREW	**Logan Part No.**	**...**	**...**	**AF6001**	**AF6000**	**AF6000**	**AF6000**	**AF6001**
	Bowen No.	...	...	54775	48879	48879	48879	54775
	Price	...	...	$2	$2	$2	$2	$2

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** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 EUE	2-3/8 API Reg	2-3/8 API IF	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	3-1/8	3-5/32	3-3/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		3/8	1/2	1-17/32	1	1	1-1/2	1-7/8
STROKE (INCHES)		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	10120	18785	42592	10105	10190	39887	39893

OPTIONAL ACCESSORIES

CHEVRON PACKING KNOCKER ASSEMBLY - BREAKDOWN:

COMPLETE ASSEMBLY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
KNOCKER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
PACKING RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
CENTER RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
CHEVRON PACKING SET	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
RETAINING RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price							
PACKING RETAINER	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	No. Req'd							
	Price	...	...	...	...	...	...	...

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** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Logan Fishing Bumper Subs

CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 EUE	2-3/8 API Reg	2-3/8 API IF	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	3-1/8	3-5/32	3-3/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		3/8	1/2	1-17/32	1	1	1-1/2	1-7/8

30" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	29523	29529	46881	29535	29538	46863	46866
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4000-30**	**AF4001-30**	**AF40015-30**	**AF4002-30**	**AF40025-30**	**AF4003-30**	**AF4004-30**
	Bowen No.	29524	29530	46882	29536	29539	46864	46867
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3000-30**	**AF3001-30**	**AF30015-30**	**AF3002-30**	**AF30025-30**	**AF3003-30**	**AF3004-30**
	Bowen No.	29525	29531	46883	29537	29540	46865	46868
	*	*	*	*	*	*	*	*

36" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	29574	29580	49608	29586	29589	46890	46893
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4000-36**	**AF4001-36**	**AF40015-36**	**AF4002-36**	**AF40025-36**	**AF4003-36**	**AF4004-36**
	Bowen No.	29575	29581	46909	29587	29590	46891	46894
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3000-36**	**AF3001-36**	**AF30015-36**	**AF3002-36**	**AF30025-36**	**AF3003-36**	**AF3004-36**
	Bowen No.	29576	29582	46910	29588	29591	46892	46895
	Price	*	*	*	*	*	*	*

42" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	29619	29625	46935	16933	29643	46917	46920
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4000-42**	**AF4001-42**	**AF40015-42**	**AF4002-42**	**AF40025-42**	**AF4003-42**	**AF4004-42**
	Bowen No.	29620	29626	46936	16935	26944	46918	46921
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3000-42**	**AF3001-42**	**AF30015-42**	**AF3002-42**	**AF30025-42**	**AF3003-42**	**AF3004-42**
	Bowen No.	29621	29627	46937	16934	26945	46919	46922
	Price	*	*	*	*	*	*	*

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** Available upon request.*

Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION		1-13/16 WFJ	1-1/4 API Reg	2-3/8 EUE	2-3/8 API Reg	2-3/8 API IF	2-3/8 API IF	2-3/8 EUE
OUTSIDE DIAMETER (INCHES)		1-13/16	2-1/4	3-1/8	3-5/32	3-3/8	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)		3/8	1/2	1-17/32	1	1	1-1/2	1-7/8

48" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	29682	29688	46962	16936	29694	46944	46947
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4000-48**	**AF4001-48**	**AF40015-48**	**AF4002-48**	**AF40025-48**	**AF4003-48**	**AF4004-48**
	Bowen No.	29683	29689	46963	16938	29695	46945	46948
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3000-48**	**AF3001-48**	**AF30015-48**	**AF3002-48**	**AF30025-48**	**AF3003-48**	**AF3004-48**
	Bowen No.	29684	29690	46964	16937	29696	46946	46949
	Price	*	*	*	*	*	*	*

60" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-181**	**604-225**	**604-313**	**604-315**	**604-338**	**604-375**	**604-376**
	Bowen No.	29748	29754	46989	29760	29763	46971	46974
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4000-60**	**AF4001-60**	**AF40015-60**	**AF4002-60**	**AF40025-60**	**AF4003-60**	**AF4004-60**
	Bowen No.	29749	29755	46990	29761	29764	46972	46975
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3000-60**	**AF3001-60**	**AF30015-60**	**AF3002-60**	**AF30025-60**	**AF3003-60**	**AF3004-60**
	Bowen No.	29750	29756	46991	29762	29765	46973	46976
	Price	*	*	*	*	*	*	*

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Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Logan Fishing Bumper Subs

CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	2	1-1/2	2	2-1/4
STROKE (INCHES)		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	**Logan Part No.**	**604-377**	**604-425**	**604-450**	**604-475**	**604-476**	**604-600**	**604-625**
	Bowen No.	10090	41824	36794	39905	10225	10135	10257
	Price	$12,194	$11,095	$12,095	$11,096	*	*	$17,302
TOP SUB	**Logan Part No.**	**AF1005**	**AF1006**	**AF1007**	**AF1008**	**AF10085**	**AF1009**	**AF1010**
	Bowen No.	10091	41825	36795	39906	10226	10136	10258
	Price	$1,008	$1,090	$1,133	$1,133	*	*	$1,683
MANDREL BODY	**Logan Part No.**	**AF2005**	**AF2006**	**AF2007**	**AF2008**	**AF20085**	**AF2009**	**AF2010**
	Bowen No.	10093	10158	36797	39908	10228	10138	10267
	Price	$1,118	$1,372	$1,534	$1,534	*	*	$2,556
MIDDLE BODY	**Logan Part No.**	**AF3005-20**	**AF3006-20**	**AF3007-20**	**AF3008-20**	**AF30085-20**	**AF3009-20**	**AF3010-20**
(20-inch stroke)	Bowen No.	10092	10157	36796	39907	10227	10137	10262
	Price	$2,308	$2,780	$2,904	$2,916	*	*	$4,780
MANDREL	**Logan Part No.**	**AF4005-20**	**AF4006-20**	**AF4007-20**	**AF4008-20**	**AF40085-20**	**AF4009-20**	**AF4010-20**
(20-inch stroke)	Bowen No.	10095	41828	36798	39909	10229	10140	10268
	Price	$3,136	$3,951	$4,164	$4,165	*	*	$6,520
KNOCKER	**Logan Part No.**	**AF5005**	**AF5006**	**AF5007**	**AF5008**	**AF50085**	**AF5009**	**AF5010**
	Bowen No.	10096	41829	36799	39910	10230	10141	10250
	Price	$998	$972	$1,086	$1,086	*	*	$1,333
NON-EXTRUSION RING	**Logan Part No.**	**L385-37**	**L385-41**	**L216-44.5**	**L385-44**	**L385-44**	**L385-52**	**L385-54**
	Bowen No.	385-37	385-41	216-44.5	385-44	385-44	385-52	385-54
	No. Req'd	4	4	4	4	4	4	4
	Price	$52	$50	$53	$53	$53	*	$69
SEAL PROTECTOR RING	**Logan Part No.**	**L386-37**	**L386-41**	**L227-44.5**	**L386-44**	**L386-44**	**L386-52**	**L386-54**
	Bowen No.	386-37	386-41	227-44.5	386-44	386-44	386-52	386-54
	No. Req'd	4	4	4	4	4	4	4
	Price	$7	$8	$12	$10	$10	*	$22
KNOCKER SEAL RING	**Logan Part No.**	**568-334**	**568-338**	**568-341**	**568-341**	**568-341**	**568-349**	**568-427**
	Bowen No.	568334	568338	568341	568341	568341	568349	568427
	No. Req'd	2	2	2	2	2	2	2
	Price	$3	$4	$4	$4	$4	$11	$11
KNOCKER LOCK SCREW	**Logan Part No.**	**AF6002**	**AF6000**	**AF6000**	**AF6000**	**AF6002**	**AF6003**	**AF6003**
	Bowen No.	54769	48879	48879	48879	54769	43305	43305
	Price	$2	$2	$2	$2	$2	$2	$2

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	2	1-1/2	2	2-1/4
STROKE (INCHES)		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	**Logan Part No.**	**604-377**	**604-425**	**604-450**	**604-475**	**604-476**	**604-600**	**604-625**
	Bowen No.	10090	41824	36794	39905	10225	10135	10257

OPTIONAL ACCESSORIES

CHEVRON PACKING KNOCKER ASSEMBLY								
COMPLETE ASSEMBLY	**Logan Part No.**	**25000-014**	**25000-015**	**25000-016**	**25000-017**	**25000-023**	**25000-018**	**25000-019**
	Bowen No.	30910	59191	62774	59177	81172	50321	62205
	Price	*	*	*	*	...	*	*
KNOCKER	**Logan Part No.**	**AF7000**	**AF7001**	**AF7002**	**AF7003**	**AF70035**	**AF7004**	**AF7005**
	Bowen No.	30911	59192	62775	59178	81173	50322	62206
	Price	*	*	*	*	...	*	*
PACKING RING	**Logan Part No.**	**AF8000**	**AF8001**	**AF8002**	**AF8003**	**AF80035**	**AF8004**	**AF8005**
	Bowen No.	30912	59193	62776	59179	81174	50323	62207
	Price	*	*	*	*	*	*	*
CENTER RING	**Logan Part No.**	**AF9000**	**AF9001**	**AF9002**	**AF9003**	**AF90035**	**AF9004**	**AF9005**
	Bowen No.	30913	59194	62777	59180	81175	50324	62208
	Price	*	*	*	*	*	*	*
CHEVRON PACKING SET	**Logan Part No.**	**AF10000**	**AF10001**	**AF10002**	**AF10003**	**AF100035**	**AF10004**	**AF10005**
	Bowen No.	30914	59195	62778	59181	81176	50325	62209
	Price	*	*	*	*	*	*	*
RETAINING RING	**Logan Part No.**	**AF11000**	**AF11001**	**AF11002**	**AF11003**	**AF110035**	**AF11004**	**AF11005**
	Bowen No.	19812	59196	59182	59182	81177	50326	13177
	Price	*	*	*	*	*	*	*
PACKING RETAINER	**Logan Part No.**	**AF12000**	**AF12001**	**AF12002**	**AF12003**	**...**	**AF12004**	**AF12005**
	Bowen No.	62345	59197	62780	59183	...	50009	62210
	No. Req'd	2	2	2	2	...	2	2
	Price	*	*	*	*	...	*	*

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** Available upon request.*

Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Logan Fishing Bumper Subs

CONNECTION		2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)		3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4
INSIDE DIAMETER (INCHES)		1-1/4	1-15/16	2-3/8	2	1-1/2	2	2-1/4

30" STROKE

COMPLETE ASSEMBLY	Logan Part No.	604-377	604-425	604-450	604-475	604-476	604-600	604-625
	Bowen No.	29541	46869	46875	46878	29562	16150	20005
	Price	*	*	*	*	*	*	*
MANDREL	Logan Part No.	AF4005-30	AF4006-30	AF4007-30	AF4008-30	AF40085-30	AF4009-30	AF4010-30
	Bowen No.	29542	46870	46876	46879	29563	16151	20007
	Price	*	*	*	*	*	*	*
MIDDLE BODY	Logan Part No.	AF3005-30	AF3006-30	AF3007-30	AF3008-30	AF30085-30	AF3009-30	AF3010-30
	Bowen No.	29543	46871	46877	46880	29564	16152	20006
	Price	*	*	*	*	*	*	*

36" STROKE

COMPLETE ASSEMBLY	Logan Part No.	604-377	604-425	604-450	604-475	604-476	604-600	604-625
	Bowen No.	25180	46896	46902	46905	29604	10147	29610
	Price	*	*	*	*	*	*	*
MANDREL	Logan Part No.	AF4005-36	AF4006-36	AF4007-36	AF4008-36	AF40085-36	AF4009-36	AF4010-36
	Bowen No.	25182	46897	46903	46906	29605	10149	29611
	Price	*	*	*	*	*	*	*
MIDDLE BODY	Logan Part No.	AF3005-36	AF3006-36	AF3007-36	AF3008-36	AF30085-36	AF3009-36	AF3010-36
	Bowen No.	25181	46898	46904	46907	29606	10148	29612
	Price	*	*	*	*	*	*	*

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** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION	2-7/8 API Reg	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF
OUTSIDE DIAMETER (INCHES)	3-3/4	4-1/4	4-1/2	4-3/4	4-3/4	6	6-1/4
INSIDE DIAMETER (INCHES)	1-1/4	1-15/16	2-3/8	2	1-1/2	2	2-1/4

42" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-377**	**604-425**	**604-450**	**604-475**	**604-476**	**604-600**	**604-625**
	Bowen No.	29646	46923	46929	46932	29661	29667	29670
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4005-42**	**AF4006-42**	**AF4007-42**	**AF4008-42**	**AF40085-42**	**AF4009-42**	**AF4010-42**
	Bowen No.	29647	46924	46930	46933	29662	29668	29671
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3005-42**	**AF3006-42**	**AF3007-42**	**AF3008-42**	**AF30085-42**	**AF3009-42**	**AF3010-42**
	Bowen No.	*	*	*	*	*	*	*
	Price	*	*	*	*	*	*	*

48" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-377**	**604-425**	**604-450**	**604-475**	**604-476**	**604-600**	**604-625**
	Bowen No.	29697	46950	46956	46959	29715	19880	29736
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4005-48**	**AF4006-48**	**AF4007-48**	**AF4008-48**	**AF40085-48**	**AF4009-48**	**AF4010-48**
	Bowen No.	29698	46951	46957	46960	29716	19881	29737
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3005-48**	**AF3006-48**	**AF3007-48**	**AF3008-48**	**AF30085-48**	**AF3009-48**	**AF3010-48**
	Bowen No.	29699	46952	46958	46961	29717	19882	29738
	Price	*	*	*	*	*	*	*

60" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-377**	**604-425**	**604-450**	**604-475**	**604-476**	**604-600**	**604-625**
	Bowen No.	29766	46977	46983	46986	29781	29790	25385
	Price	*	*	*	*	*	*	*
MANDREL	**Logan Part No.**	**AF4005-60**	**AF4006-60**	**AF4007-60**	**AF4008-60**	**AF40085-60**	**AF4009-60**	**AF4010-60**
	Bowen No.	29767	46978	46984	46987	29782	29791	25387
	Price	*	*	*	*	*	*	*
MIDDLE BODY	**Logan Part No.**	**AF3005-60**	**AF3006-60**	**AF3007-60**	**AF3008-60**	**AF30085-60**	**AF3009-60**	**AF3010-60**
	Bowen No.	29768	46979	46985	46988	29786	29792	25386
	Price	*	*	*	*	*	*	*

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** Available upon request.*

Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Logan Fishing Bumper Subs

CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg				
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4	9				
INSIDE DIAMETER (INCHES)		2-3/4	3-1/2	4				
STROKE (INCHES)		20	20	20				
COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	10690	26595	61596				
	Price	$18,532	$21,997	$31,008				
TOP SUB	**Logan Part No.**	**AF1011**	**AF1012**	**AF1013**				
	Bowen No.	10691	26596	61597				
	Price	$1,975	$2,446	$3,358				
MANDREL BODY	**Logan Part No.**	**AF2011**	**AF2012**	**AF2013**				
	Bowen No.	10693	26598	61599				
	Price	$2,666	$3,165	$4,686				
MIDDLE BODY	**Logan Part No.**	**AF3011-20**	**AF3012-20**	**AF3013-20**				
(20-inch stroke)	Bowen No.	10692	26597	61598				
	Price	$5,441	$5,801	$8,486				
MANDREL	**Logan Part No.**	**AF4011-20**	**AF4012-20**	**AF4013-20**				
(20-inch stroke)	Bowen No.	10694	26599	61600				
	Price	$6,520	$8,755	$11,114				
KNOCKER	**Logan Part No.**	**AF5011**	**AF5012**	**AF5013**				
	Bowen No.	10695	26594	61601				
	Price	$1,493	$1,630	$2,443				
NON-EXTRUSION RING	**Logan Part No.**	**L385-58**	**L385-65**	**L216-68.5**				
	Bowen No.	385-58	385-65	216-68.5				
	No. Req'd	4	4	4				
	Price	$82	$134	$125				
SEAL PROTECTOR RING	**Logan Part No.**	**L386-58**	**L386-65**	**8-441**				
	Bowen No.	386-58	386-65	227-68.5				
	No. Req'd	4	4	4				
	Price	$24	$37	$37				
KNOCKER SEAL RING	**Logan Part No.**	**568-431**	**568-438**	**568-441**				
	Bowen No.	568431	568438	568441				
	No. Req'd	2	2	2				
	Price	$13	$16	$17				
KNOCKER LOCK SCREW	**Logan Part No.**	**AF6003**	**AF6003**	**AF6004**				
	Bowen No.	43305	43305	54770				
	Price	$2	$2	$3				

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Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg				
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4	9				
INSIDE DIAMETER (INCHES)		2-3/4	3-1/2	4				
STROKE (INCHES)		20	20	20				
COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	10690	26595	61596				

OPTIONAL ACCESSORIES

CHEVRON PACKING KNOCKER ASSEMBLY								
COMPLETE ASSEMBLY	**Logan Part No.**	**25000-020**	**25000-021**	**...**				
	Bowen No.	57013	61103	...				
	Price	*	*	...				
KNOCKER	**Logan Part No.**	**AF7006**	**AF7007**	**...**				
	Bowen No.	57014	61104	...				
	Price	*	*	...				
PACKING RING	**Logan Part No.**	**AF8006**	**AF8007**	**...**				
	Bowen No.	57015	61105	...				
	Price	*	*	...				
CENTER RING	**Logan Part No.**	**AF9006**	**AF9007**	**...**				
	Bowen No.	62374	62378	...				
	Price	*	*	...				
CHEVRON PACKING SET	**Logan Part No.**	**AF10006**	**AF10007**	**...**				
	Bowen No.	57016	61106	...				
	Price	*	*	...				
RETAINING RING	**Logan Part No.**	**AF11006**	**AF11007**	**...**				
	Bowen No.	57017	59907	...				
	Price	*	*	...				
PACKING RETAINER	**Logan Part No.**	**AF12006**	**AF12007**	**...**				
	Bowen No.	62375	62379	...				
	No. Req'd	2	2	...				
	Price	*	*	...				

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** Available upon request.*

Special Notes:

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(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Logan Fishing Bumper Subs

CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg				
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4	9				
INSIDE DIAMETER (INCHES)		2-3/4	3-1/2	4				

30" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	14520	29568	70408				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AF4011-30**	**AF4012-30**	**AF4013-30**				
	Bowen No.	14522	29569	70410				
	Price	*	*	*				
MIDDLE BODY	**Logan Part No.**	**AF3011-30**	**AF3012-30**	**AF3013-30**				
	Bowen No.	14521	29570	70409				
	Price	*	*	*				

36" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	13590	29616	70411				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AF4011-36**	**AF4012-36**	**AF4013-36**				
	Bowen No.	13592	29617	70413				
	Price	*	*	*				
MIDDLE BODY	**Logan Part No.**	**AF3011-36**	**AF3012-36**	**AF3013-36**				
	Bowen No.	13591	29618	70412				
	Price	*	*	*				

42" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	29676	29679	70414				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AF4011-42**	**AF4012-42**	**AF4013-42**				
	Bowen No.	29677	29680	70416				
	Price	*	*	*				
MIDDLE BODY	**Logan Part No.**	**AF3011-42**	**AF3012-42**	**AF3013-42**				
	Bowen No.	29678	29681	70415				
	...	*	*	*				

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

Logan Fishing Bumper Subs

CONNECTION		5-1/2 API Reg	6-5/8 API Reg	7-5/8 API Reg				
OUTSIDE DIAMETER (INCHES)		6-3/4	7-3/4	9				
INSIDE DIAMETER (INCHES)		2-3/4	3-1/2	4				

48" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	29742	29745	70417				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AF4011-48**	**AF4012-48**	**AF4013-48**				
	Bowen No.	29743	29746	70419				
	Price	*	*	*				
MIDDLE BODY	**Logan Part No.**	**AF3011-48**	**AF3012-48**	**AF3013-48**				
	Bowen No.	29744	29747	70418				
	Price	*	*	*				

60" STROKE

COMPLETE ASSEMBLY	**Logan Part No.**	**604-675**	**604-775**	**604-900**				
	Bowen No.	29796	29799	70420				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AF4011-60**	**AF4012-60**	**AF4013-60**				
	Bowen No.	29797	29800	70422				
	Price	*	*	*				
MIDDLE BODY	**Logan Part No.**	**AF3011-60**	**AF3012-60**	**AF3013-60**				
	Bowen No.	29798	29801	70421				
	Price	*	*	*				

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Standard stroke for Bumper Subs is 20". Only the Mandrel and Middle Body need to be ordered to convert a standard 20" stroke assembly to one of greater stroke length. All other parts interchange for a given size. When a long stroke assembly is ordered by assembly number, the entire tool is ordered. To convert, order only the Mandrel and Middle Body by part number.

(2) For oversize, add 10% for each additional 1/4" or portion thereof to Mandrel Body, Middle Body, Mandrel, and Top Sub.

When ordering, please specify:

(1) Name and number of assembly or part
(2) Connections, if other than standard
(3) Stroke length
(4) O.D., if other than standard

Recommended Spare Parts:

(1) 8 Non-Extrusion Rings
(2) 8 Seal Protector Rings
(3) 16 Knocker Seals

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Notes

LOGAN DRILL PIPE SAFETY JOINTS

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Logan Drill Pipe Safety Joints

CONNECTION SIZE		2-3/8	2-3/8	2-7/8	2-7/8	2-7/8	3-1/2	3-1/2
CONNECTION TYPES		API Reg ACME Reg	API IF API FH HYD IF	API Reg ACME Reg	HYD IF	INT FLUSH	API Reg	HYD IF
TOOL O.D.		3-1/8	3-3/8	3-3/4	3-7/8	4-1/8	4-1/4	4-1/2
BORE		1	1-3/4	1-1/4	2-1/8	2-1/8	1-1/2	2-9/16
COMPLETE ASSEMBLY	**Logan Part No.**	**601-313**	**601-338**	**601-375**	**601-388**	**601-413**	**601-425**	**601-450**
	Price	$9,021	$6,672	$7,832	$9,035	$9,035	$9,472	*
PIN SECTION	**Logan Part No.**	**Y1000**	**Y1001**	**Y1002**	**Y1003**	**Y1004**	**Y1005**	**Y1006**
	Price	$3,610	$2,594	$3,133	$3,977	$3,977	$4,168	*
BOX SECTION	**Logan Part No.**	**Y2000**	**Y2001**	**Y2002**	**Y2003**	**Y2004**	**Y2005**	**Y2006**
	Price	$5,412	$4,005	$4,803	$5,419	$5,419	$5,687	*
O-RING – SMALL	**Logan Part No.**	**568-325**	**568-226**	**568-013**	**...**	**568-333**	**568-333**	**...**
	No. Req'd	2	2	2	...	2	2	...
	Price	$3	$3	$3	...	$3	$3	...
O-RING – LARGE	**Logan Part No.**	**568-329**	**568-332**	**568-333**	**...**	**568-337**	**568-337**	**...**
	No. Req'd	2	2	2	...	2	2	...
	Price	$3	$3	$3	...	$7	$7	...

CONNECTION SIZE		3-1/2	3-1/2	3-1/2	4	4	4-1/2	4-1/2
CONNECTION TYPES		API FH	API Reg	API IF	API FH	INT. FLUSH	API Reg	API FH
TOOL O.D.		4-5/8	4-3/4	4-3/4	5-1/4	5-3/4	5-1/2	5-3/4
BORE		2-7/16	1-1/2	2-11/16	2-13/16	3-1/4	2-1/4	3
COMPLETE ASSEMBLY	**Logan Part No.**	**601-463**	**601-475**	**601-476**	**601-525**	**601-575**	**601-550**	**601-575**
	Price	$9,491	$9,912	$9,920	*	*	$10,897	$12,109
PIN SECTION	**Logan Part No.**	**Y1007**	**Y1008**	**Y1009**	**Y1010**	**Y1011**	**Y1012**	**Y1013**
	Price	$3,151	$3,928	$2,911	*	*	*	$6,092
BOX SECTION	**Logan Part No.**	**Y2007**	**Y2008**	**Y2009**	**Y2010**	**Y2011**	**Y2012**	**Y2013**
	Price	$4,728	$5,760	$4,365	*	*	*	$8,970
O-RING – SMALL	**Logan Part No.**	**568-337**	**...**	**568-337**	**...**	**...**	**...**	**568-344**
	No. Req'd	2	...	2	...	...	...	2
	Price	$7	...	$7	...	...	...	$8
O-RING – LARGE	**Logan Part No.**	**568-341**	**...**	**568-341**	**...**	**...**	**...**	**568-349**
	No. Req'd	2	...	2	...	...	...	2
	Price	$7	...	$7	...	...	...	$12

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Add 20% for left-hand application.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) O.D., if other than standard. For oversize, add 10% for each additional 1/4" or portion thereof to Pin Section and Box Section.

Logan Drill Pipe Safety Joints

CONNECTION SIZE		4-1/2	4-1/2	5-1/2	5-1/2	5-1/2	6-5/8	6-5/8
CONNECTION TYPES		X-HOLE	API IF HYD IF	API Reg	API FH	API IF	API Reg	API FH
TOOL O.D.		6	6-1/8	6-3/4	7	7-3/8	7-3/4	8
BORE		3-1/4	3-3/4	2-3/4	4	4-13/16	3-1/2	5
COMPLETE ASSEMBLY	**Logan Part No.**	**601-600**	**601-613**	**601-675**	**601-700**	**601-738**	**601-775**	**601-800**
	Price	*	$14,582	*	$17,996	$17,211	$19,502	$20,469
PIN SECTION	**Logan Part No.**	**Y1014**	**Y1015**	**Y1016**	**Y1017**	**Y1018**	**Y1019**	**Y1020**
	Price	*	$6,597	*	$6,713	$6,403	$7,802	$8,189
BOX SECTION	**Logan Part No.**	**Y2014**	**Y2015**	**Y2016**	**Y2017**	**Y2018**	**Y2019**	**Y2020**
	Price	*	$8,752	*	$10,068	$9,604	$12,297	$12,161
O-RING – SMALL	**Logan Part No.**	**...**	**568-347**	**...**	**...**	**...**	**568-355**	**568-435**
	No. Req'd	...	2	...	...	...	2	2
	Price	...	$9	...	...	...	$17	$19
O-RING – LARGE	**Logan Part No.**	**...**	**568-429**	**...**	**...**	**...**	**568-359**	**568-438**
	No. Req'd	...	2	...	...	...	2	2
	Price	...	$16	...	...	...	$19	$19

CONNECTION SIZE		6-5/8	7-5/8	8-5/8				
CONNECTION TYPES		API IF	API Reg	API Reg				
TOOL O.D.		8-1/2	9	10				
BORE		5-29/32	4	4-3/4				
COMPLETE ASSEMBLY	**Logan Part No.**	**601-850**	**601-900**	**601-1000**				
	Price	$22,517	$22,519	$27,090				
PIN SECTION	**Logan Part No.**	**Y1021**	**Y1022**	**Y1023**				
	Price	$9,007	$10,836	$10,082				
BOX SECTION	**Logan Part No.**	**Y2021**	**Y2022**	**Y2023**				
	Price	$13,509	$13,512	$15,125				
O-RING – SMALL	**Logan Part No.**	**...**	**568-361**	**...**				
	No. Req'd	...	2					
	Price	...	$19	...				
O-RING – LARGE	**Logan Part No.**	**...**	**568-363**	**...**				
	No. Req'd	...	2	...				
	Price	...	$19	...				

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** Available upon request.*

Special Notes:

(1) Add 20% for left-hand application.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) O.D., if other than standard. For oversize, add 10% for each additional 1/4" or portion thereof to Pin Section and Box Section.

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LOGAN TUBING SAFETY JOINTS

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Logan Tubing Safety Joints

CONNECTION SIZE		3/4	1	1-13/16	1	1-1/2	2	2-1/2
CONNECTION TYPE		EUE	DSS HARDY GRIFFIN	WFJ	EUE	CS	EUE	EUE
TOOL O.D.		1.660	1.590	1.813	1-29/32	2-1/8	3-1/16	3-21/32
BORE		.812	.812	5/16	1	1-1/2	2	2-7/16
COMPLETE ASSEMBLY	**Logan Part No.**	**602-166**	**602-159**	**602-181**	**602-191**	**602-213**	**602-306**	**602-366**
	Price	*	*	*	*	*	$8,461	$9,908
PIN SECTION	**Logan Part No.**	**Y3000**	**Y3001**	**Y30015**	**Y3002**	**Y3003**	**Y3004**	**Y3005**
	Price	*	*	*	*	*	$4,223	$4,944
BOX SECTION	**Logan Part No.**	**Y4000**	**Y4001**	**Y40015**	**Y4002**	**Y4003**	**Y4004**	**Y4005**
	Price	*	*	*	*	*	$4,223	$4,944
O-RING – SMALL	**Logan Part No.**	**...**	**...**	**568-210**	**568-025**	**568-131**	**568-138**	**568-228**
	No. Req'd	...	...	2	2	2	2	2
	Price	...	...	$3	$3	$3	$3	$3
O-RING – LARGE	**Logan Part No.**	**...**	**...**	**568-217**	**568-128**	**568-225**	**568-332**	**568-336**
	No. Req'd	...	...	2	2	2	2	2
	Price	...	...	$3	$3	$3	$3	$7

CONNECTION SIZE		2-7/8	3	3				
CONNECTION TYPE		HYDRILL C-100	EUE	EUE				
TOOL O.D.		3-1/2	4-1/2	5				
BORE		2-3/8	3	3				
COMPLETE ASSEMBLY	**Logan Part No.**	**602-350**	**602-450**	**602-500**				
	Price	*	*	*				
PIN SECTION	**Logan Part No.**	**Y3006**	**Y3007**	**Y3008**				
	Price	*	*	*				
BOX SECTION	**Logan Part No.**	**Y4006**	**Y4007**	**Y4008**				
	Price	*	*	*				
O-RING - SMALL	**Logan Part No.**	**...**	**568-152**	**...**				
	No. Req'd	...	2	...				
	Price	...	$3	...				
O-RING - LARGE	**Logan Part No.**	**...**	**568-241**	**...**				
	No. Req'd	...	2	...				
	Price	...	$8	...				

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** Available upon request.*

Special Notes:

(1) Add 20% for left-hand application.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) For oversize, add 10% for each additional 1/4" or portion thereof to Pin Section and Box Section.

Logan Washover Safety Joints

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Logan Washover Safety Joints

CONNECTION SIZE		4	4-1/2	5	5-1/2	5-3/4	7	7-3/8
CONNECTION TYPE		FJ	FJ	FJ	FJ	FJ	HYDRIL FJ	FJ
TOOL O.D.		4	4-1/2	5-3/8	5-5/8	5-3/4	7-5/16	7-3/8
BORE		1-1/4	1-1/4	2-1/8	2-9/16	2-7/16	3-3/4	3
COMPLETE ASSEMBLY	**Logan Part No.**	**603-400**	**603-450**	**603-538**	**603-563**	**603-575**	**603-731**	**603-738**
	Price	*	*	*	*	*	*	*
PIN SECTION WITHOUT STEM	**Logan Part No.**	**Y5000-B**	**Y5001-B**	**Y5002-B**	**Y5003-B**	**Y5004-B**	**Y5005-B**	**Y5006-B**
	Price	*	*	*	*	*	*	*
BOX SECTION	**Logan Part No.**	**Y6000**	**Y6001**	**Y6002**	**Y6003**	**Y6004**	**Y6005**	**Y6006**
	Price	*	*	*	*	*	*	*
O-RING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**568-261**
	No. Req'd	...	...	...	...	...	...	2
	Price	...	...	...	...	...	...	*

OPTIONAL

PIN SECTION WITH STEM	**Logan Part No.**	**Y5000-A**	**Y5001-A**	**Y5002-A**	**Y5003-A**	**Y5004-A**	**Y5005-A**	**Y5006-A**
	Price	*	*	*	*	*	*	*

CONNECTION SIZE		7-5/8	8-1/8	9	9-5/8	10-3/4	11-3/4	
CONNECTION TYPE		FJ	FJ	FJ	FJ	FJ	FJ	
TOOL O.D.		8	8-5/32	9-3/8	10-1/8	11-1/16	11-3/4	
BORE		3-3/4	3-5/32	4		4		
COMPLETE ASSEMBLY	**Logan Part No.**	**603-800**	**603-816**	**603-938**	**603-1013**	**603-1106**	**603-1175**	
	Price	*	*	*	*	*	*	
PIN SECTION WITHOUT STEM	**Logan Part No.**	**Y5007-B**	**Y5008-B**	**Y5009-B**	**Y5010-B**	**Y5011-B**	**Y5012-B**	
	Price	*	*	*	*	*	*	
BOX SECTION	**Logan Part No.**	**Y6007**	**Y6008**	**Y6009**	**Y6010**	**Y6011**	**Y6012**	
	Price	*	*	*	*	*	*	
O-RING	**Logan Part No.**	**568-262**	**...**	**...**	**...**	**...**	**...**	
	No. Req'd	2	...	...	...	...	...	
	Price	*	...	...	...	...	...	

OPTIONAL

PIN SECTION WITH STEM	**Logan Part No.**	**Y5007-A**	**Y5008-A**	**Y5009-A**	**Y5010-A**	**Y5011-A**	**Y5012-A**	
	Price	*	*	*	*	*	*	

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** Available upon request.*

Special Notes:

(1) Add 20% for left-hand application.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

(3) Name and number of any desired spares

(4) If ordering Pin Section With Stem, specify stem length

(5) For oversize, add 10% for each additional 1/4" or portion thereof to Pin Section and Box Section.

LOGAN TYPE J SAFETY JOINTS

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Logan Type J Safety Joints

STANDARD TOOL O.D.		4-1/8	4-3/4	5-3/4	6-1/4	7-3/4		
COMPLETE ASSEMBLY	**Logan Part No.**	**610-413**	**610-475**	**610-575**	**610-625**	**610-775**		
	Price	$19,859	$21,780	$36,221	$32,607	$39,106		
MANDREL	**Logan Part No.**	**Y7000**	**Y7001**	**Y70015**	**Y7002**	**Y7003**		
	Price	*	*	*	*	*		
MANDREL STINGER	**Logan Part No.**	**Y8000**	**Y8001**	**Y80015**	**Y8002**	**Y8003**		
	Price	*	*	*	*	*		
LOWER BODY	**Logan Part No.**	**Y9000**	**Y9001**	**Y90015**	**Y9002**	**Y9003**		
	Price	*	*	*	*	*		
PACK-OFF SUB	**Logan Part No.**	**Y10000**	**Y10001**	**Y100015**	**Y10002**	**Y10003**		
	Price	*	*	*	*	*		
GLAND NUT	**Logan Part No.**	**Y11000**	**Y11001**	**Y110015**	**Y11002**	**Y11002**		
	Price	*	*	*	*	*		
FEMALE ADAPTER	**Logan Part No.**	**SC3131-480**	**SC2652-480**	**SC2728-480**	**SC3123-480**	**SC3433-480**		
	Price	*	*	*	*	*		
MALE ADAPTER	**Logan Part No.**	**SC3132-280**	**SC2652-280**	**SC2728-280**	**SC3123-280**	**SC3433-280**		
	Price	*	*	*	*	*		
CHEVRON PACKING	**Logan Part No.**	**SC3132-160**	**SC2652-160**	**SC2728-160**	**SC3123-160**	**SC3433-160**		
	Price	*	*	*	*	*		
SHEAR SCREW	**Logan Part No.**	**Y12000**	**Y12000**	**Y12000**	**Y12000**	**Y12000**		
	No. Req'd	2	2	2	4	4		
	Price	*	*	*	*	*		
GLAND WRENCH	**Logan Part No.**	**Y13000**	**Y13001**	**Y130015**	**Y13002**	**Y13002**		
	Price	*	*	*	*	*		

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Note: Gland Wrench provided with each assembly.

When ordering, please specify:

(1) Complete assembly or part number

(2) O.D. of assembly

(3) Size and type of connection

Logan Wireline Spare Parts

Line Bushing

Line Rubber

Interlocking Seats

REPLACEMENT PARTS FOR HYDRAULIC AND MANUAL LINE WIPERS AND CONTROL HEADS

LINE BUSHINGS	**Logan Part No.**	**L262**	**L10402**	**L745451**				
	Price	$132	$181	*				
LINE RUBBERS	**Logan Part No.**	**L10975**	**L267**	**L10203**				
	Price	$40	$44	$60				
INTERLOCKING SEATS	**Logan Part No.**	**L10974**	**L6482**	**L10204**				
	Price	*	$63	*				

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** Available upon request.*

When ordering, please specify:

(1) Your preferred line size.

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Logan Flo-Tubes

Part Number	Description	Actual Bore*
L44906-183	.178" – .180"	.183"
L44906-186	.181" – .183"	.186"
L44906-189	.184" – .186"	.189"
L44906-192	.187" – .189"	.192"
L44906-194	.188" – .190"	.194"
L44906-196-A	.191" – .193"	.196"
L44906-199	.194" – .196"	.199"
L44906-201	.195" – .198"	.201"
L44906-208	.201" – .205"	.208"
L44906-216	.211" – .213"	.216"
L44906-219	.214" – .216"	.219"
L44906-221	.216" – .218"	.221"
L44906-222	.216" – .219"	.222"
L44906-223	.218" – .220"	.223"
L44906-224	.219" – .221"	.224"
L44906-225	.220" – .222"	.225"
L44906-226	.221" – .223"	.226"
L44906-227	.222" – .224"	.227"
L44906-228	.222" – .225"	.228"
L44906-229	.224" – .226"	.229"
L44906-231	.225" – .228"	.231"
L44906-232	.227" – .229"	.232"
L44906-233	.228" – .230"	.233"
L44906-234	.229" – .231"	.234"
L44906-236	.231" – .233"	.236"
L44906-238	.233" – .235"	.238"
L44906-239	.234" – .236"	.239"
L44906-240	.235" – .237"	.240"
L44906-242	.237" – .239"	.242"
L44906-250	.244" – .247"	.250"
L44906-252	.247" – .249"	.252"
L44906-254	.249" – .251"	.254"
L44906-256	.251" – .253"	.256"
L44906-258	.253" – .255"	.258"
L44906-261	.256" – .258"	.261"
L44906-262	.257" – .259"	.262"
L44906-267	.262" – .264"	.267"
L44906-268	.263" – .265"	.267"
L44906-282	.277" – .279"	.282"
L44906-284	.279" – .281"	.284"
L44906-285	.280" – .282"	.285"
L44906-286	.281" – .283"	.286"
L44906-287	.282" – .284"	.287"
L44906-288	.283" – .285"	.288"
L44906-290	.285" – .287"	.290"
L44906-291	.286" – .288"	.291"
L44906-292	.287" – .289"	.292"
L44906-293	.288" – .290"	.293"

Part Number	Description	Actual Bore*
L44906-294	.289" – .291"	.294"
L44906-295	.290" – .292"	.295"
L44906-296	.291" – .293"	.296"
L44906-297	.292" – .294"	.297"
L44906-298	.292" – .295"	.298"
L44906-300	.295" – .297"	.300"
L44906-303	.297" – .300"	.303"
L44906-312	.307" – .309"	.312"
L44906-315	.310" – .312"	.315"
L44906-316	.311" – .313"	.316"
L44906-318	.312" – .315"	.318"
L44906-321	.315" – .318"	.321"
L44906-322	.317" – .319"	.322"
L44906-323	.318" – .320"	.323"
L44906-325	.319" – .322"	.325"
L44906-326	.321" – .323"	.326"
L44906-327	.322" – .324"	.327"
L44906-328	.323" – .325"	.328"
L44906-329	.324" – .326"	.329"
L44906-330	.324" – .327"	.330"
L44906-331	.325" – .328"	.331"
L44906-332	.327" – .329"	.332"
L44906-334	.329" – .331"	.334"
L44906-335	.329" – .332"	.335"
L44906-337	.332" – .334"	.337"
L44906-341	.336" – .338"	.341"
L44906-375	.370" – .372"	.375"
L44906-377	.372" – .374"	.377"
L44906-379	.374" – .376"	.379"
L44906-380	.375" – .377"	.380"
L44906-381	.375" – .378"	.281"
L44906-382	.377" – .379"	.382"
L44906-384	.379" – .381"	.284"
L44906-386	.381" – .384"	.386"
L44906-390	.385" – .388"	.390"
L44906-394	.389" – .391"	.394"
L44906-397	.392" – .394"	.297"
L44906-406	.401" – .403"	.406"
L44906-425	.420" – .422"	.425"
L44906-427	.422" – .424"	.427"
L44906-429	.424" – .426"	.429"
L44906-431	.426" – .428"	.431"
L44906-433	.428" – .430"	.433"
L44906-435	.430" – .432"	.435"
L44906-436	.431" – .433"	.436"
L44906-437	.432" – .434"	.437"
L44906-445	.440" – .442"	.445"
L44906-467	.462" – .464"	.467"

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** +.002/–.000*

Price available upon request.

Note: If your preferred size is not listed, please contact your local Innovex Sales Representative for pricing and availability (price subject to change).

When ordering, please specify:

(1) Calipered size

(2) Actual bore size or range of tubes needed

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Logan HE "AJ" Reversing Tool

NOMINAL SIZE (INCHES)		3	4	6 (With Wing Extensions)	6	8	8 (With Wing Extensions)
OUTSIDE DIAMETER		3-3/4"	4-1/16"	5-13/16"	5-13/16"	7-3/4"	7-3/4"
INSIDE DIAMETER		5/8"	1-1/8"	1-1/4"	1-1/4"	1-1/4"	1-1/4"
LENGTH		106"	116"	147"	147"	157"	157"
TO OPERATE IN CASING SIZES		4-1/2" up to 13 Lbs thru 5-1/2" 13 Lbs.	5" up to 18 Lbs thru 7" 38 & 40 Lbs	7" up to 35 Lbs thru All Wts. 8-5/8"	9-5/8" All Wts.	9-5/8" thru 10-3/4" All Wts.	11-3/4" thru13-3/8" All Wts. Or 15" thru 16" All Wts.
COMPLETE ASSEMBLY	**Logan Part No.**	**16084**	**15690**	**16082**	**16082**	**16083**	**16083**
	Weight	210	375	*	*	*	*
	Price						

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** Note: Price and delivery upon request*

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LOGAN HYDRAULIC WIRELINE JARS

Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-3/4	
CONNECTIONS		15/16	15/16	15/16	15/16	15/16	3/4	
PIN UP - BOX DOWN		10 THD	10 THD	10 THD	10 THD	10 THD	SR	
LENGTH OF STROKE		9-1/4	8-3/4	8-3/4	20	12	10	
COMPLETE ASSEMBLY	**Logan Part No.**	**700-925**	**700-875**	**700-002**	**700-003**	**700-004**	**700-1000**	
	Bowen No.	11740	11180	48383	51227	35518	79297	
	Price	$2,936	$2,526	*	$5,028	*	$3,957	
TOP SUB	**Logan Part No.**	**AL1001**	**AL1002**	**AL1002**	**AL1002**	**AL1002**	**AL1003**	
	Bowen No.	11741	10761	10761	10761	10761	12761	
	Price	$287	$214	$214	$214	$214	$388	
MIDDLE BODY	**Logan Part No.**	**AL2001**	**AL2002**	**AL2002**	**AL2003**	**AL2004**	**AL2005**	
	Bowen No.	11744	11182	11182	51228	35519	12765	
	Price	$1,176	$1,176	$1,176	$3,009	*	$1,775	
MIDDLE BODY INSERT	**Logan Part No.**	**AL3001**	**AL3002**	**AL3002**	**AL3002**	**AL3002**	**AL3003**	
	Bowen No.	29486	28652	28652	28652	28652	79298	
	Price	$329	$329	$329	$329	$329	$567	
INSERT BUSHING	**Part No.**	**AL4001**	**AL4002**	**AL4003**	**AL4002**	**AL4003**	**AL4006**	
	Bowen No.	33572	33571	35085	33571	35085	79299	
	Price	$152	$152	$431	$152	$431	$431	
MANDREL	**Logan Part No.**	**AL5001**	**AL5002**	**AL5003**	**AL5004**	**AL5005**	**AL5006**	
	Bowen No.	11742	11184	35086	51229	35520	79300	
	Price	$706	$706	*	$2,047	*	$1,038	
BOTTOM SUB	**Logan Part No.**	**AL6001**	**AL6002**	**AL6002**	**AL6002**	**AL6002**	**AL6003**	
	Bowen No.	11747	11181	11181	11181	11181	12767	
	Price	$214	$182	$182	$182	$182	$246	
BALANCE PISTON	**Logan Part No.**	**AL7001**	**AL7002**	**AL7002**	**AL7002**	**AL7002**	**AL7003**	
	Bowen No.	11746	11185	11185	11185	11185	12766	
	Price	$78	$78	$78	$78	$78	$195	
VALVE PLUG	**Logan Part No.**	**AL8000**	**AL8000**	**AL8000**	**AL8000**	**AL8000**	**AL8000**	
	Bowen No.	11189	11189	11189	11189	11189	11189	
	Price	$58	$58	$58	$58	$58	$58	
VALVE PLUG SPRING	**Logan Part No.**	**AL9000**	**AL9000**	**AL9000**	**AL9000**	**AL9000**	**AL9000**	
	Bowen No.	834	834	834	834	834	834	
	Price	$10	$10	$10	$10	$10	$10	
VALVE PLUG SEAT	**Logan Part No.**	**AL10000**	**AL10001**	**AL10001**	**AL10001**	**AL10001**	**AL10001**	
	Bowen No.	11745	11186	11186	11186	11186	11186	
	Price	$74	$74	$74	$74	$74	$74	
FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	**AG10000**	
	Bowen No.	617	617	617	617	617	617	
	Price	$19	$19	$19	$19	$19	$19	
LOCK PIN	**Logan Part No.**	**AL11001**	**AL11002**	**AL11002**	**AL11002**	**AL11002**	**AL11003**	
	Bowen No.	16010	13432	13432	13432	13432	18183	
	Price	$1	$1	$2	$2	$2	$2	
SPRING GUIDE	**Logan Part No.**	**AL16000**	**AL16000**	**AL16000**	**AL16000**	**AL16000**	**AL16000**	
	Bowen No.	48307	48307	48307	48307	48307	48307	
	Price	$12	$12	$12	$12	$12	$12	

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Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-3/4
CONNECTIONS		15/16	15/16	15/16	15/16	15/16	3/4
PIN UP - BOX DOWN		10 THD	10 THD	10 THD	10 THD	10 THD	SR
LENGTH OF STROKE		9-1/4	8-3/4	8-3/4	20	12	10
COMPLETE ASSEMBLY	**Logan Part No.**	**700-925**	**700-875**	**700-002**	**700-003**	**700-004**	**700-1000**
	Bowen No.	11740	11180	48383	51227	35518	79297
MANDREL	**Logan Part No.**	**L365-11**	**L365-15**	**L365-15**	**L365-15**	**L365-15**	**L365-17**
NON-EXTRUSION RING	Bowen No.	365-11	365-15	365-15	365-15	365-15	365-17
	No. Req'd	2	2	2	2	2	2
	Price	$43	$43	$43	$43	$43	$39
MANDREL SEAL	**Logan Part No.**	**L375-11**	**L375-15**	**L375-15**	**L375-15**	**L375-15**	**L375-17**
PROTECTOR RING	Bowen No.	375-11	375-15	375-15	375-15	375-15	375-17
	No. Req'd	2	2	2	2	2	2
	Price	$8	$8	$8	$8	$8	$8
BALANCE PISTON	**Logan Part No.**	**L366-11**	**L366-16**	**L366-16**	**L366-16**	**L366-16**	**L366-20**
NON-EXTRUSION RING	Bowen No.	366-11	366-16	366-16	366-16	366-16	366-20
	No. Req'd	2	2	2	2	2	2
	Price	$41	$41	$41	$41	$41	$39
BALANCE PISTON SEAL	**Logan Part No.**	**L82-11**	**L82-16**	**L82-16**	**L82-16**	**L82-16**	**L82-20**
PROTECTOR RING	Bowen No.	82-11	82-16	82-16	82-16	82-16	82-20
	No. Req'd	2	2	2	2	2	2
	Price	$7	$7	$7	$7	$7	$7

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

Recommended Spare Parts:

(1) 1 Balanced Piston

(2) 2 Valve Plugs

(3) 4 Valve Plug Springs

(4) 2 Valve Plug Seats

(5) 6 Mandrel Non-Extrusion Rings

(6) 6 Mandrel Seal Protector Rings

(7) 4 Balance Piston Non-Extrusion Rings

(8) 4 Balance Piston Seal Protector Rings

(9) 6 Complete Packing Sets

Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-3/4
CONNECTIONS		15/16	15/16	15/16	15/16	15/16	3/4
PIN UP - BOX DOWN		10 THD	10 THD	10 THD	10 THD	10 THD	SR
LENGTH OF STROKE		9-1/4	8-3/4	8-3/4	20	12	10
COMPLETE ASSEMBLY	**Logan Part No.**	**700-001**	**700-875**	**700-002**	**700-003**	**700-004**	**700-1000**
	Bowen No.	11740	11180	48383	51227	35518	79297
O-RING PACKING SET	**Logan Part No.**	**28000-009**	**28000-010**	**28000-010**	**28000-010**	**28000-010**	**28000-011**
Consists of:	Bowen No.	11754	11191	11191	11191	11191	79327
	Price	$14	$14	$14	$14	$14	$14
MANDREL SEAL	**Logan Part No.**	**568-112**	**568-210**	**568-210**	**568-210**	**568-210**	**568-212**
	Bowen No.	568112	568210	568210	568210	568210	568212
	Price	$3	$3	$3	$3	$3	$3
BALANCE PISTON SEAL	**Logan Part No.**	**568-113**	**568-211**	**568-211**	**568-211**	**568-211**	**568-215**
	Bowen No.	568113	568211	568211	568211	568211	568215
	Price	$3	$3	$3	$3	$3	$3
MIDDLE BODY	**Logan Part No.**	**568-116**	**568-215**	**568-215**	**568-215**	**568-215**	**568-218**
INSERT SEAL (LARGE)	Bowen No.	568116	568215	568215	568215	568215	568218
	Price	$3	$3	$3	$3	$3	$3
MIDDLE BODY	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
INSERT SEAL (SMALL)	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
VALVE PLUG SEAL	**Logan Part No.**	**568-007**	**568-007**	**568-007**	**568-007**	**568-007**	**568-007**
	Bowen No.	568007	568007	568007	568007	568007	568007
	Price	$2	$2	$2	$2	$2	$2
VALVE PLUG	**Logan Part No.**	**568-110**	**568-112**	**568-112**	**568-112**	**568-112**	**568-112**
SEAT SEAL	Bowen No.	568110	568112	568112	568112	568112	568112
	Price	$3	$3	$3	$3	$3	$3
FILL PLUG SEAL	**Logan Part No.**	**568-005**	**568-005**	**568-005**	**568-005**	**568-005**	**568-005**
	Bowen No.	68005	568005	568005	568005	568005	568005
	Price	$1	$1	$1	$1	$1	$8

ACCESSORIES

SERVICE KIT	**Logan Part No.**	**28001-014**	**28001-015**	**28001-015**	**28001-015**	**28001-015**	**28001-016**
	Bowen No.	11751	11178	11178	11178	11178	15997
	Price	*	*	*	*	*	*
MANDREL BODY	**Logan Part No.**	**AG1000-11**	**AG1000-15**	**AG1000-15**	**AG1000-15**	**AG1000-15**	**AG1000-17**
SETTING TOOL	Bowen No.	22709-11	22709-15	22709-15	22709-15	22709-15	22709-17
	Price	*	*	*	*	*	*
BALANCE PISTON	**Logan Part No.**	**AL13001**	**AL13000-16**	**AL13000-16**	**AL13000-16**	**AL13000-16**	**AL13000-20**
SETTING TOOL	Bowen No.	11753	22729-16	22729-16	22729-16	22729-16	22729-20
	Price	*	*	*	*	*	

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Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		2-1/8	2-3/4
CONNECTIONS		7/8	1-9/16
PIN UP - BOX DOWN		SR	10 THD
LENGTH OF STROKE		11-5/8	20
COMPLETE ASSEMBLY	**Logan Part No.**	**700-1163**	**700-006**
	Bowen No.	11550	...
	Price	$5,343	*
TOP SUB	**Logan Part No.**	**AL1004**	**AL1005**
	Bowen No.	11543	...
	Price	$457	*
MIDDLE BODY	**Logan Part No.**	**AL2006**	**AL2007**
	Bowen No.	11537	...
	Price	$2,805	*
MIDDLE BODY INSERT	**Logan Part No.**	**AL3004**	**AL3005**
	Bowen No.	11538	...
	Price	$1,177	*
INSERT BUSHING	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
MANDREL	**Logan Part No.**	**AL5007**	**AL5008**
	Bowen No.	11539	...
	Price	$1,119	*
BOTTOM SUB	**Logan Part No.**	**AL6004**	**AL6005**
	Bowen No.	11536	...
	Price	$431	*
BALANCE PISTON	**Logan Part No.**	**AL7004**	**AL7005**
	Bowen No.	11540	...
	Price	$264	*
VALVE PLUG	**Logan Part No.**	**AL8000**	**AL8000**
	Bowen No.	11189	...
	Price	$57	*
VALVE PLUG SPRING	**Logan Part No.**	**AL9000**	**AL9000**
	Bowen No.	834	...
	Price	$8	*
VALVE PLUG SEAT	**Logan Part No.**	**AL10001**	**AL10001**
	Bowen No.	11186	...
	Price	$73	*
FILL PLUG	**Logan Part No.**	**AG10002**	**AG10002**
	Bowen No.	329	...
	Price	$22	*
LOCK PIN	**Logan Part No.**	**AL11004**	**AL11005**
	Bowen No.	42732	...
	Price	$1	*
SPRING GUIDE	**Logan Part No.**	**AL16000**	**AL16001**
	Bowen No.	48307	...
	Price	$12	*

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Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		2-1/8	2-3/4
CONNECTIONS		7/8	1-9/16
PIN UP - BOX DOWN		SR	10 THD
LENGTH OF STROKE		11-5/8	20
COMPLETE ASSEMBLY	**Logan Part No.**	**700-1163**	**700-006**
	Bowen No.	11550	...
MANDREL NON-EXTRUSION RING	**Logan Part No.**	**L365-21**	**L365-27**
	Bowen No.	365-21	365-27
	No. Req'd	2	2
	Price	$43	$39
MANDREL SEAL PROTECTOR RING	**Logan Part No.**	**L375-21**	**L375-27**
	Bowen No.	375-21	375-27
	No. Req'd	2	2
	Price	$10	$16
BALANCE PISTON NON-EXTRUSION RING	**Logan Part No.**	**L366-24**	**L366-28.5**
	Bowen No.	366-24	...
	No. Req'd	2	4
	Price	$39	$39
BALANCE PISTON SEAL PROTECTOR RING	**Logan Part No.**	**L82-24**	**8-235-400**
	Bowen No.	82-24	...
	No. Req'd	2	4
	Price	$8	*

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When ordering, please specify:

(1) Name and number of assembly or part

(2) Connections, if other than standard

Recommended Spare Parts:

(1) 1 Balanced Piston

(2) 2 Valve Plugs

(3) 4 Valve Plug Springs

(4) 2 Valve Plug Seats

(5) 6 Mandrel Non-Extrusion Rings

(6) 6 Mandrel Seal Protector Rings

(7) 4 Balance Piston Non-Extrusion Rings

(8) 4 Balance Piston Seal Protector Rings

(9) 6 Complete Packing Sets

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Logan Hydraulic Wireline Jars

OUTSIDE DIAMETER		2-1/8	2-3/4
CONNECTIONS		7/8	1-9/16
PIN UP - BOX DOWN		SR	10 THD
LENGTH OF STROKE		11-5/8	20
COMPLETE ASSEMBLY	**Logan Part No.**	**700-1163**	**700-006**
	Bowen No.	11550	
O-RING PACKING SET	**Logan Part No.**	**28000-012**	**28000-013**
Consists of:	Bowen No.	11553	54784
	Price	$20	$31
MANDREL SEAL	**Logan Part No.**	**568-216**	**568-222**
	Bowen No.	568216	568222
	Price	$3	$3
BALANCE PISTON SEAL	**Logan Part No.**	**568-219**	**568-325**
	Bowen No.	568219	568-325
	Price	$3	$3
MIDDLE BODY INSERT SEAL (LARGE)	**Logan Part No.**	**568-223**	**568-226**
	Bowen No.	568223	568-226
	Price	$3	$3
MIDDLE BODY INSERT SEAL (SMALL)	**Logan Part No.**	**568-211**	**568-224**
	Bowen No.	568211	568-224
	Price	$3	$3
VALVE PLUG SEAL	**Logan Part No.**	**568-007**	**568-007**
	Bowen No.	568007	568-007
	Price	$2	$2
VALVE PLUG SEAT SEAL	**Logan Part No.**	**568-112**	**568-112**
	Bowen No.	568112	568-112
	Price	$3	$3
FILL PLUG SEAL	**Logan Part No.**	**568-006**	**568-006**
	Bowen No.	568006	568-006
	Price	$2	$2

ACCESSORIES

SERVICE KIT	**Logan Part No.**	**28001-017**	**...**
	Bowen No.	11554	...
	Price	*	...
MANDREL BODY SETTING TOOL	**Logan Part No.**	**AG1000-24**	**...**
	Bowen No.	22709-21	...
	Price	*	...
BALANCE PISTON SETTING TOOL	**Logan Part No.**	**AL13000-24**	**...**
	Bowen No.	22729-24	...
	Price	*	...

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LOGAN TUBULAR WIRELINE JARS

Logan Tubular Wireline Jars

OUTSIDE DIAMETER		1-1/8	1-3/4	1-3/4				
CONNECTIONS		5/8	3/4	3/4				
PIN UP - BOX DOWN		11 THD	SR	SR				
LENGTH OF STROKE (INCHES)		18	20	30				
COMPLETE ASSEMBLY	**Logan Part No.**	**700-000-018**	**701-003-020**	**701-003-030**				
	Bowen No.	19355	14235	14235				
	Price	*	*	*				
TOP SUB	**Logan Part No.**	**AM1000**	**AM1003**	**AM1003**				
	Bowen No.	19356	14236	14236				
	Price	*	*	*				
BODY	**Logan Part No.**	**AM2000**	**AM2003**	**AM2003**				
	Bowen No.	19357	14237	14237				
	Price	*	*	*				
MANDREL	**Logan Part No.**	**AM3000**	**AM3003**	**AM3003**				
	Bowen No.	19358	14232	14232				
	Price	*	*	*				
BOTTOM SUB	**Logan Part No.**	**AM4000**	**AM4003**	**AM4003**				
	Bowen No.	19359	14233	14233				
	Price	*	*	*				
SPRING PIN	**Logan Part No.**	**AM5000**	**AM5003**	**AM5003**				
	Bowen No.	13431	27220	27220				
	Price	*	*	*				

OUTSIDE DIAMETER		1-7/8	1-7/8					
CONNECTIONS		3/4	3/4					
PIN UP - BOX DOWN		SR	SR					
LENGTH OF STROKE (INCHES)		20	30					
COMPLETE ASSEMBLY	**Logan Part No.**	**701-004-020**	**701-004-030**					
	Bowen No.	21430	21430					
	Price	*	*					
TOP SUB	**Logan Part No.**	**AM1004**	**AM1004**					
	Bowen No.	21431	21431					
	Price	*	*					
BODY	**Logan Part No.**	**AM2004**	**AM2004**					
	Bowen No.	21432	21432					
	Price	*	*					
MANDREL	**Logan Part No.**	**AM3003**	**AM3003**					
	Bowen No.	14232	14232					
	Price	*	*					
BOTTOM SUB	**Logan Part No.**	**AM4004**	**AM4004**					
	Bowen No.	21433	21433					
	Price	$288	*					
SPRING PIN	**Logan Part No.**	**AM5004**	**AM5004**					
	Bowen No.	18183	18183					
	Price	*	*					

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LOGAN HYDRAULIC ROD JARS

Logan Hydraulic Rod Jars

OUTSIDE DIAMETER		1-1/2	1-3/4	2-1/8
CONNECTIONS		15/16	3/4	7/8
PIN UP - BOX DOWN		10 THD	SR	SR
LENGTH OF STROKE (INCHES)		9-3/16	10	11-5/16
COMPLETE ASSEMBLY	**Logan Part No.**	**703-001**	**703-003**	**703-005**
	Bowen No.	28591	79316	13570
	Price	*	$7,342	$10,285
TOP SUB	**Logan Part No.**	**AL1002**	**AL1003**	**AL1004**
	Bowen No.	10761	12761	11543
	Price	*	$388	$457
MANDREL BODY INSERT	**Logan Part No.**	**BA2000**	**BA2001**	**BA2002**
	Bowen No.	28594	79317	10723
	Price	*	$602	$956
MANDREL BODY	**Logan Part No.**	**BA3000**	**BA3001**	**BA3002**
	Bowen No.	28593	12763	13572
	Price	*	$1,256	$1,742
MANDREL	**Logan Part No.**	**BA4000**	**BA4001**	**BA4002**
	Bowen No.	28592	79318	13571
	Price	*	$2,133	$3,049
MIDDLE BODY	**Logan Part No.**	**AL2002**	**AL2005**	**AL2006**
	Bowen No.	11182	12765	11537
	Price	*	$1,775	$2,799
BALANCE PISTON	**Logan Part No.**	**AL7002**	**AL7003**	**AL7004**
	Bowen No.	11185	12766	11540
	Price	*	$195	$264
BOTTOM SUB	**Logan Part No.**	**AL6002**	**AL6003**	**AL6004**
	Bowen No.	11181	12767	11536
	Price	*	$246	$431
VALVE PLUG	**Logan Part No.**	**AL8000**	**AL8000**	**AL8000**
	Bowen No.	11189	11189	11189
	Price	$58	$58	$58
VALVE PLUG SPRING	**Part No.**	**AL9000**	**AL9000**	**AL9000**
	Bowen No.	834	834	834
	Price	$10	$10	$10
VAVLE PLUG SEAT	**Logan Part No.**	**AL10001**	**AL10001**	**AL10001**
	Bowen No.	11186	11186	11186
	Price	$74	$74	$74
MANDREL NON-EXTRUSION RING	**Logan Part No.**	**L365-15**	**L365-17**	**L365-21**
	Bowen No.	365-15	365-17	365-21
	Price	$43	$39	$43
MANDREL SEAL PROTECTOR RING	**Logan Part No.**	**L375-15**	**L375-17**	**L375-21**
	Bowen No.	375-15	375-17	375-21
	Price	$8	$8	$10
BALANCE PISTON NON-EXTRUSION RING	**Logan Part No.**	**L366-16**	**L366-20**	**L366-24**
	Bowen No.	366-16	366-20	366-24
	Price	$41	$39	$39
BALANCE PISTON SEAL PROTECTOR RING	**Part No.**	**L82-16**	**L82-20**	**L82-24**
	Bowen No.	9382-16	9382-20	9382-24
	Price	$7	$7	$8

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Logan Hydraulic Rod Jars

OUTSIDE DIAMETER		1-1/2	1-3/4	2-1/8
CONNECTIONS		15/16	3/4	7/8
PIN UP - BOX DOWN		10 THD	SR	SR
LENGTH OF STROKE (INCHES)		9-3/16	10	11-5/16
COMPLETE ASSEMBLY	**Logan Part No.**	**703-001**	**703-003**	**703-005**
	Bowen No.	28591	79316	13570
FILL PLUG	**Logan Part No.**	**AG10000**	**AG10000**	**AG10002**
	Bowen No.	617	617	329
	Price	$19	$19	$22
LOCK PINS	**Logan Part No.**	**AL11002**	**AL11003**	**AL11004**
	Bowen No.	13432	18183	42732
	Price	$1	$1	$1
SPRING GUIDE	**Logan Part No.**	**AL16000**	**AL16000**	**AL16000**
	Bowen No.	48307	48307	48307
	Price	$12	$12	$12
O-RING PACKING SET	**Logan Part No.**	**703-002**	**703-004**	**703-006**
Consists of:	Bowen No.	32679	79328	13573
	Price	$27	$27	$27
MANDREL SEAL	**Logan Part No.**	**568-210**	**568-212**	**568-216**
	Bowen No.	27-15	27-17	27-21
	No. Req'd	2	2	2
	Price	$3	$3	$3
BALANCE PISTON SEAL	**Logan Part No.**	**568-211**	**568-215**	**568-219**
	Bowen No.	27-16	27-20	27-24
	Price	$3	$3	$3
MANDREL BODY	**Logan Part No.**	**...**	**...**	**568-221**
INSERT – SMALL SEAL	Bowen No.	...	...	27-26
	Price	...	...	$3
MANDREL BODY	**Logan Part No.**	**568-215**	**568-218**	**568-223**
INSERT – LARGE SEAL	Bowen No.	27-20	27-23	30-1
	Price	$3	$3	$3
MIDDLE BODY SEAL	**Logan Part No.**	**568-215**	**568-218**	**568-223**
	Bowen No.	27-20	27-23	30-1
	Price	$3	$3	$3
VALVE PLUG SEAL	**Logan Part No.**	**568-007**	**568-007**	**568-007**
	Bowen No.	27-2	27-2	27-2
	Price	$2	$2	$2
FILL PLUG SEAL	**Logan Part No.**	**568-005**	**568-005**	**568-006**
	Bowen No.	568005	568005	27-1
	Price	$1	$1	$2
VALVE PLUG	**Logan Part No.**	**568-112**	**568-112**	**568-112**
SEAT SEAL	Bowen No.	27-10	27-10	27-10
	Price	$3	$3	$3

ACCESSORIES

SERVICE KIT	**Logan Part No.**	**28001-015**	**28001-016**	**28001-017**
	Bowen No.	11178	15997	11554
	Price	*	*	*
MANDREL BODY	**Logan Part No.**	**AG1000-15**	**AG1000-17**	**AG1000-21**
SETTING TOOL	Bowen No.	22709-15	22709-17	22709-21
	Price	*	*	*
BALANCE PISTON	**Logan Part No.**	**AL13000-16**	**AL13000-20**	**AL13000-24**
SETTING TOOL	Bowen No.	22729-16	22729-20	22729-24
	Price	*	*	*

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LOGAN WELDED CUP JUNK SUBS

Logan Welded Cup Junk Subs

SIZE RANGE (HOLE SIZE)		4-1/4 to 5-5/8	4-5/8 to 4-7/8	5-1/8 to 5-7/8	6 to 6-3/8	6-1/2 to 7-1/2	7-1/2 to 8-1/2	8-5/8 to 9-5/8
CONNECTION (STD. API REG)		2-3/8	2-7/8	3-1/2	3-1/2	3-1/2	4-1/2	4-1/2
DIAMETER OF BORE		3/4	1-1/4	1-1/2	1-1/2	1-1/2	2-1/4	2-1/4
O.D. OF TOP CONNECTION BODY		3-1/8	3-3/4	4-1/4	4-1/4	4-1/4	5-1/2	5-1/2
O.D. UNDER TOP CONNECTION		2	2-5/8	3-1/8	3-1/4	3-1/4	4-1/2	4-1/2
O.D. OF CUP		3-11/16	4	4-1/2	5	5-1/2	6-5/8	7
I.D. OF CUP		3-5/16	3-5/8	4-1/4	4-9/16	4-7/8	5-15/16	6-9/32
COMPLETE ASSEMBLY	**Logan Part No.**	**200-000-010**	**200-001-010**	**200-002-010**	**200-003-010**	**200-004-010**	**200-005-010**	**200-006-010**
	Bowen No.	20340	15450	15455	15460	15465	15470	15475
	Cup Length (in)	10	10	10	10	10	10	10
	Price	$4,510	$5,113	$5,179	$5,207	$5,647	$6,152	$6,748

LONG TYPE

COMPLETE ASSEMBLY	**Logan Part No.**	**200-000-020**	**200-001-020**	**200-002-020**	**200-003-020**	**200-004-020**	**200-005-020**	**200-006-020**
	Bowen No.	20345	17060	17065	17070	17075	17080	17085
	Cup Length (in)	20	20	20	20	20	20	20
	Price	$4,963	$5,566	$5,632	$5,867	$6,400	$7,040	$7,712

EXTRA LONG TYPE

COMPLETE ASSEMBLY	**Logan Part No.**	**200-000-030**	**200-001-030**	**200-002-030**	**200-003-030**	**200-004-030**	**200-005-030**	**200-006-030**
	Bowen No.	20295	20300	20305	20310	20315	20320	20325
	Cup Length (in)	30	30	30	30	30	30	30
	Price	$5,566	$6,016	$6,234	$6,896	$6,960	$7,957	$10,466

SIZE RANGE (HOLE SIZE)		9-5/8 to 11-5/8	11-1/2 to 13	14-3/4 to 17-1/2				
CONNECTION (STD. API REG)		6-5/8	6-5/8	7-5/8				
DIAMETER OF BORE		3-1/2	3-1/2	4				
O.D. OF TOP CONNECTION BODY		7-3/4	7-3/4	8-7/8				
O.D. UNDER TOP CONNECTION		5-3/4	5-3/4	7-5/8				
O.D. OF CUP		8-5/8	9-5/8	12-7/8				
I.D. OF CUP		7-15/16	8-17/32	11-5/8				
COMPLETE ASSEMBLY	**Logan Part No.**	**200-007-010**	**200-008-010**	**200-009-010**				
	Bowen No.	15480	15485	55306				
	Cup Length (in)	10	10	10				
	Price	$7,517	$8,576	$22,513				

LONG TYPE

COMPLETE ASSEMBLY	**Logan Part No.**	**200-007-020**	**200-008-020**	**200-009-020**				
	Bowen No.	17090	17095	62533				
	Cup Length (in)	20	20	20				
	Price	$9,915	$12,225	$24,717				

EXTRA LONG TYPE

COMPLETE ASSEMBLY	**Logan Part No.**	**200-007-030**	**200-008-030**	**200-009-030**				
	Bowen No.	20330	20335	62536				
	Cup Length (in)	30	30	30				
	Price	$13,544	$15,268	$35,058				

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Note: Prices available upon request for Junk Subs with ODs and/or Cup lengths not listed above.

When ordering, please specify:

(1) Complete assembly number

(2) Size and type of connections

(3) Cup length

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LOGAN THREADED CUP JUNK SUBS

Logan Threaded Cup Junk Subs

CASING SIZE RANGE (HOLE SIZE)		4-1/4 to 5-5/8	4-5/8 to 4-7/8	4-5/8 to 4-7/8	5-1/8 to 5-7/8	6 to 6-3/8	6-1/2 to 7-1/2
CONNECTION (STD API REG)	2-3/8	2-3/8	2-7/8	2-7/8	3-1/2	3-1/2	3-1/2
DIAMETER OF BORE	3/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	
O.D. OF TOP CONNECTION BODY	2-15/16	3-1/8	3-1/2	3-1/2	4-1/4	4-1/4	4-1/4
O.D. UNDER TOP CONNECTION	2	2	2-5/8	2-5/8	3-1/8	3-1/4	3-1/4
O.D. OF CUP *(Determines Part Number)*	3-1/2	3-11/16	4	4-1/4	4-1/2	5	5-1/2
I.D. OF CUP	3	3-5/16	3-9/16	3-3/4	4-1/4	4-9/16	4-7/8

LONG TYPE

CUP LENGTH (INCHES)		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	Logan Part No.	201-014-20	201-000-20	201-013-20	201-001-20	201-002-20	201-003-20	201-004-20
	Price	*	$4,718	$5,172	$5,328	$6,520	$6,515	$6,609
BODY	Logan Part No.	KA1014-20	KA1000-20	KA1013-20	KA1001-20	KA1002-20	KA1003-20	KA1004-20
	Price	*	$3,761	$3,735	$3,623	$4,387	$4,882	$4,832
O-RING FOR GROOVE	Logan Part No.	*	568-234	568-237	*	*	568-244	568-247
	Price	*	$7	$7	*	*	$9	$12
O-RING FOR THREADED RELIEF GROOVE	Logan Part No.	*	568-151	568-238	*	*	568-157	568-158
	Price	*	$7	$7	*	*	$12	$14
THREADED CUP	Logan Part No.	KA2014-20	KA2000-20	KA2013-20	KA2001-20	KA2002-20	KA2003-20	KA2004-20
	Price	*	$1,626	$1,616	$1,667	$1,884	$2,098	$2,122

EXTRA LONG TYPE

CUP LENGTH (INCHES)		30	30	30	30	30	30	30
COMPLETE ASSEMBLY	Logan Part No.	201-014-30	201-000-30	201-013-30	201-001-30	201-002-30	201-003-30	201-004-30
	Price	*	$5,823	$6,284	$6,299	$6,635	$7,771	$8,187
BODY	Logan Part No.	KA1014-30	KA1000-30	KA1013-30	KA1001-30	KA1002-30	KA1003-30	KA1004-30
	Price	*	$4,351	$4,414	$4,711	$4,967	$5,439	$6,133
O-RING FOR GROOVE	Logan Part No.	*	568-234	568-237	*	*	568-244	568-247
	Price	*	$7	$7	*	*	$9	$12
O-RING FOR THREADED RELIEF GROOVE	Logan Part No.	*	568-151	568-238	*	*	568-157	568-158
	Price	*	$7	$7	*	*	$12	$14
THREADED CUP	Logan Part No.	KA2014-30	KA2000-30	KA2013-30	KA2001-30	KA2002-30	KA2003-30	KA2004-30
	Price	*	$1,866	$1,888	$2,015	$2,122	$2,495	$2,628

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** Available upon request.*

Note: Prices available upon request for Junk Subs with ODs and/or Cup lengths not listed above.
The connection on the Cup to the Body is left-hand.

When ordering, please specify:

(1) Complete assembly number
(2) Size and type of connections
(3) Length of Cup

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Logan Threaded Cup Junk Subs

CASING SIZE RANGE (HOLE SIZE)	7-1/2 to 8-1/2	8-5/8 to 9-5/8		9-5/8 to 11-5/8		11-1/2 to 13	
CONNECTION (STD API REG)	4-1/2	4-1/2	4-1/2	6-5/8	6-5/8	6-5/8	6-5/8
DIAMETER OF BORE	2-1/4	2-1/4	2-1/4	3-1/2	3-1/2	3-1/2	3-1/2
O.D. OF TOP CONNECTION BODY	5-1/2	5-1/2	5-1/2	8	7-3/4	8	8
O.D. UNDER TOP CONNECTION	4-1/2	4-1/2	5-1/2	5-3/4	5-3/4	6	6
O.D. OF CUP (Determines Part Number)	6-5/8	7	8-1/4	8-5/8	9	9-5/8	10
I.D. OF CUP	5-15/16	6-9/32	7-9/16	7-15/16	8-1/8	8-17/32	8-29/32

LONG TYPE

CUP LENGTH		20	20	20	20	20	20	20
COMPLETE ASSEMBLY	**Logan Part No.**	**201-005-20**	**201-006-20**	**201-007-20**	**201-008-20**	**201-009-20**	**201-010-20**	**201-011-20**
	Price	$6,890	$7,804	$10,629	$11,213	$13,846	$13,880	$15,234
BODY	**Logan Part No.**	**KA1005-20**	**KA1006-20**	**KA1007-20**	**KA1008-20**	**KA1009-20**	**KA1010-20**	**KA1011-20**
	Price	$5,157	$7,123	$7,965	$8,384	$9,361	$10,370	$11,384
O-RING FOR GROOVE	**Logan Part No.**	**568-256**	**568-258**	**568-263**	*	**568-265**	**568-267**	**568-268**
	Price	$19	$19	$20	*	$21	$26	$26
O-RING FOR THREADED RELIEF GROOVE	**Logan Part No.**	**568-163**	**568-258**	**568-264**	*	**568-266**	**568-268**	**568-269**
	Price	$20	$19	$20	*	$21	$26	$26
THREADED CUP	**Logan Part No.**	**KA2005-20**	**KA2006-20**	**KA2007-20**	**KA2008-20**	**KA2009-20**	**KA2010-20**	**KA2011-20**
	Price	$2,216	$2,507	$3,408	$3,594	$4,012	$4,448	$4,879

EXTRA LONG TYPE

CUP LENGTH		30	30	30	30	30	30	30
COMPLETE ASSEMBLY	**Logan Part No.**	**201-005-30**	**201-006-30**	**201-007-30**	**201-008-30**	**201-009-30**	**201-010-30**	**201-011-30**
	Price	$8,567	$9,615	$13,226	$14,445	$16,643	$17,731	$20,202
BODY	**Logan Part No.**	**KA1005-30**	**KA1006-30**	**KA1007-30**	**KA1008-30**	**KA1009-30**	**KA1010-30**	**KA1011-30**
	Price	$6,421	$7,204	$9,276	$10,110	$11,647	$13,198	$17,372
O-RING FOR GROOVE	**Logan Part No.**	**568-256**	**568-258**	**568-263**	*	**568-265**	**568-267**	**568-268**
	Price	$19	$19	$20	*	$21	$26	$26
O-RING FOR THREADED RELIEF GROOVE	**Logan Part No.**	**568-163**	**568-258**	**568-264**	*	**568-266**	**568-268**	**568-269**
	Price	$20	$19	$20	*	$21	$26	$26
THREADED CUP	**Logan Part No.**	**KA2005-30**	**KA2006-30**	**KA2007-30**	**KA2008-30**	**KA2009-30**	**KA2010-30**	**KA2011-30**
	Price	$2,749	$3,086	$3,985	$4,334	$4,999	$5,699	$7,447

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The connection on the Cup to the Body is left-hand.

When ordering, please specify:

(1) Complete assembly number
(2) Size and type of connections
(3) Length of Cup

Logan Threaded Cup Junk Subs

CASING SIZE RANGE (HOLE SIZE)		14-3/4 to 17-1/2	14-3/4 to 17-1/2					
CONNECTION (STD API REG)		7-5/8	7-5/8					
DIAMETER OF BORE		4	4					
O.D. OF TOP CONNECTION BODY		8-7/8	8-7/8					
O.D. UNDER TOP CONNECTION		7-5/8	7-5/8					
O.D. OF CUP (Determines Part Number)		12-3/4	12-7/8					
I.D. OF CUP		11-1/2	11-5/8					

LONG TYPE

CUP LENGTH		20	20					
COMPLETE ASSEMBLY	**Logan Part No.**	**201-039-20**	**201-012-20**					
	Price	$32,871	$36,066					
BODY	**Logan Part No.**	**KA10115-20**	**KA1012-20**					
	Price	$22,090	$25,310					
O-RING FOR GROOVE	**Logan Part No.**	**568-276**	*					
	Price	$40	*					
O-RING FOR THREADED RELIEF GROOVE	**Logan Part No.**	**568-277**	*					
	Price	$52	*					
THREADED CUP	**Logan Part No.**	**KA20115-20**	**KA2012-20**					
	Price	$9,471	$10,849					

EXTRA LONG TYPE

CUP LENGTH		30	30					
COMPLETE ASSEMBLY	**Logan Part No.**	**201-039-30**	**201-012-30**					
	Price	$42,223	$42,664					
BODY	**Logan Part No.**	**KA10115-30**	**KA1012-30**					
	Price	$21,435	$32,930					
O-RING FOR GROOVE	**Logan Part No.**	**568-276**	*					
	Price	$40	*					
O-RING FOR THREADED RELIEF GROOVE	**Logan Part No.**	**568-277**	*					
	Price	$52	*					
THREADED CUP	**Logan Part No.**	**KA20115-30**	**KA2012-30**					
	Price	$6,803	$14,112					

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The connection on the Cup to the Body is left-hand.

When ordering, please specify:

(1) Complete assembly number
(2) Size and type of connections
(3) Length of Cup

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Logan Crossover Subs

LARGEST OD		1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3
	Min. Base Length	10	10	10	10	10	10	10
	Logan Part No.	**XO048**	**XO056**	**XO064**	**XO072**	**XO080**	**XO088**	**XO096**
	Price	$950	$1,073	$1,109	$1,109	$1,143	$1,170	$1,195
	Add'l per Inch	$31	$38	$41	$44	$47	$49	$49

LARGEST OD		3-1/4	3-1/2	3-3/4	4	4-1/4	4-1/2	4-3/4
	Min. Base Length	10	10	10	10	10	10	12
	Logan Part No.	**XO104**	**XO112**	**XO120**	**XO128**	**XO136**	**XO144**	**XO152**
	Price	$1,195	$1,329	$1,386	$1,461	$1,481	$1,604	$1,626
	Add'l per Inch	$49	$49	$57	$57	$57	$60	$60

LARGEST OD		5	5-1/4	5-1/2	5-3/4	6	6-1/4	6-1/2
	Min. Base Length	12	12	12	12	12	12	12
	Logan Part No.	**XO160**	**XO168**	**XO176**	**XO180**	**XO192**	**XO200**	**XO208**
	Price	$1,630	$1,682	$1,716	$1,807	$1,878	$1,979	$2,105
	Add'l per Inch	$63	$63	$63	$72	$75	$81	$81

LARGEST OD		6-3/4	7	7-1/4	7-1/2	7-3/4	8	8-1/4
	Min. Base Length	12	12	14	14	14	14	14
	Logan Part No.	**XO216**	**XO224**	**XO232**	**XO240**	**XO248**	**XO256**	**XO264**
	Price	$2,242	$2,311	$2,655	$2,815	$2,920	$3,127	$3,198
	Add'l per Inch	$87	$87	$101	$113	$122	$132	$148

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: All prices given are at Minimum Base Length.

When ordering, please specify:

(1) O.D., I.D., and length (shoulder-to-shoulder).

(2) Size and type of connection or thread on each end.

Note: Prices shown represent API threads.

Logan Crossover Subs with an alternative thread type are priced upon request.

Logan Crossover Subs

LARGEST OD		8-1/2	8-3/4	9	9-1/4	9-1/2	9-3/4	10
	Min. Base Length	14	14	16	16	16	16	16
	Logan Part No.	**XO272**	**XO280**	**XO288**	**XO296**	**XO304**	**XO312**	**XO320**
	Price	$3,319	$3,611	$4,029	$5,178	$5,491	$5,905	$6,446
	Add'l per Inch	$148	$165	$174	$199	$209	$233	$241

LARGEST OD		10-1/4	10-1/2	10-3/4	11	11-1/4	11-1/2	11-3/4
	Min. Base Length	16	16	16	16	16	16	16
	Logan Part No.	**XO328**	**XO336**	**XO344**	**XO352**	**XO360**	**XO368**	**XO376**
	Price	$7,682	$8,130	$8,253	$8,772	$8,898	$9,381	$9,869
	Add'l per Inch	$299	$325	$335	$371	$376	$397	$397

LARGEST OD		12	12-1/4	12-1/2	12-3/4	13	13-1/4	13-1/2
	Min. Base Length	16	16	16	16	16	16	16
	Logan Part No.	**XO384**	**XO392**	**XO400**	**XO408**	**XO416**	**XO424**	**XO432**
	Price	$10,024	$10,318	$10,859	$10,998	$11,606	$11,815	$12,439
	Add'l per Inch	$435	$435	$450	$467	$501	$501	$530

LARGEST OD		13-3/4	14					
	Min. Base Length	16	16					
	Logan Part No.	**XO440**	**XO448**					
	Price	$12,525	$13,380					
	Add'l per Inch	$530	$572					

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Note: All prices given are at Minimum Base Length.

When ordering, please specify:

(1) O.D., I.D., and length (shoulder-to-shoulder).

(2) Size and type of connection or thread on each end.

Note: Prices shown represent API threads.

Logan Crossover Subs with an alternative thread type are priced upon request.

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LOGAN STANDARD EXTERNAL CUTTERS

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Logan Standard External Cutters

TUBING/CASING SIZE TO CUT		1.050 to 1.315 Tbg	1.315 to 2-3/8 Tbg	1.660 to 2-3/8 Tbg	1.900 to 2-7/8 Tbg	2-1/16 to 3-1/2 Tbg	2-3/8 to 3-1/2 Tbg	2 3/8 to 4 Tbg
MAX SIZE WILL PASS OVER		1.552	3-1/16	3-1/8	3-3/4	4-1/4	4-1/2	4-3/4
INSIDE DIAMETER (CUTTER)		1-5/8	3-1/8	3-1/4	3-7/8	4-3/8	4-5/8	4-7/8
OUTSIDE DIAMETER (CUTTER)		2-5/16	3-7/8	4-1/2	4-11/16	5-5/8	5-7/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		2-7/16	4-1/8	4-3/4	4-15/16	5-7/8	6-1/8	6-1/4
COMPLETE ASSEMBLY w/SPRING DOG	**Logan Part No.**	**410-231**	**410-388**	**410-450**	**410-468**	**410-563**	**410-588**	**410-606**
	Bowen No.	32848	47127	47167	47210	47309	47264	47360
	Price	$8,790	$14,223	$13,466	$15,638	$18,934	$19,829	$20,359
TOP SUB	**Logan Part No.**	**P1000**	**P1001**	**P1002**	**P1003**	**P1004**	**P1005**	**P1006**
	Bowen No.	13626	47128	47168	47211	33574	47265	33648
	Price	$962	$1,150	$1,228	$1,344	$1,631	$1,709	$1,804
BODY	**Logan Part No.**	**P2000**	**P2001**	**P2002**	**P2003**	**P2004**	**P2005**	**P2006**
	Bowen No.	13627	47129	47169	47212	47310	47266	47361
	Price	$3,731	$6,899	$6,647	$6,857	$8,841	$9,123	$9,209
THRUST WASHER	**Logan Part No.**	**P3000**	**P3001**	**P3002**	**P3003**	**P3004**	**P3005**	**P3006**
	Bowen No.	13633	32904	47171	33083	36484	47268	33650
	Price	$144	$167	$174	$199	$197	$204	$204
THRUST BEARING	**Logan Part No.**	**P4000**	**P4001**	**P4002**	**P4003**	**P4004**	**P4005**	**P4006**
	Bowen No.	32852	32905	47172	33084	33595	47269	33651
	Price	$146	$146	$167	$167	$175	$183	$181
PRELOAD SLEEVE	**Logan Part No.**	**P5000**	**P5001**	**P5002**	**P5003**	**P5004**	**P5005**	**P5006**
	Bowen No.	32891	45844	47173	47214	33582	47270	47362
	Price	$190	$204	$237	$264	$264	$270	$289
SPRING SEAT	**Logan Part No.**	**P6000**	**P6001**	**P6002**	**P6003**	**P6004**	**P6005**	**P6006**
	Bowen No.	80149	14209	47174	47215	33583	49254	47363
	Price	$233	$246	$264	$264	$298	$319	$317
MAIN SPRING	**Logan Part No.**	**P7000**	**P7001**	**P7002**	**P7003**	**P7004**	**P7005**	**P7006**
	Bowen No.	13634	14217	33020	33085	9994	39164	33652
	Price	$1,769	$1,251	$1,426	$1,105	$2,087	$1,112	$20,068
FEED RING	**Logan Part No.**	**P8000**	**P8001**	**P8002**	**P8003**	**P8004**	**P8005**	**P8006**
	Bowen No.	13635	32907	47175	33086	33579	47577	33653
	Price	$183	$270	$298	$424	$423	$424	$428
SHEAR PIN	**Logan Part No.**	**P9000**	**P9000**	**P9004**	**P9000**	**P9004**	**P9004**	**P9006**
	Bowen No.	14205	14205	47578	14205	33580	33580	33654
	No. Req'd	2	2	2	2	2	2	2
	Price	$17	$17	$20	$17	$20	$20	$20
KNIFE	**Logan Part No.**	**P10000**	**P10001**	**P10002**	**P10003**	**P10004**	**P10004**	**P10006**
	Bowen No.	13637	32909	33023	33088	34553	34553	33655
	No. Req'd	5	5	5	5	5	5	5
	Price	$301	$326	$421	$421	$531	$531	$530
KNIFE PIN	**Logan Part No.**	**P11000**	**P11001**	**P11002**	**P11003**	**P11004**	**P11004**	**P11006**
	Bowen No.	37015	32910	33024	33089	34554	34554	33656
	No. Req'd	5	5	5	5	5	5	5
	Price	$21	$26	$26	$26	$31	$31	$31
KNIFE PIN SET SCREW	**Logan Part No.**	**...**	**P12001**	**P12002**	**P12003**	**P12004**	**P12004**	**P12006**
	Bowen No.	...	32911	23687	23664	23703	23703	23685
	No. Req'd	...	5	5	5	5	5	5
	Price	...	$3	$3	$3	$3	$3	$3
GUIDE	**Logan Part No.**	**P13000**	**P13001**	**P13002**	**P13003**	**P13004**	**P13005**	**P13006**
	Bowen No.	13628	14203	47176	33093	33584	39169	33660
	Price	$521	$522	$540	$589	$821	$838	$873

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Logan Standard External Cutters

TUBING/CASING SIZE TO CUT		1.050 to 1.315 Tbg	1.315 to 2-3/8 Tbg	1.660 to 2-3/8 Tbg	1.900 to 2-7/8 Tbg	2-1/16 to 3-1/2 Tbg	2-3/8 to 3-1/2 Tbg	2 3/8 to 4 Tbg
MAXIMUM SIZE WILL PASS OVER		1.552	3-1/16	3-1/8	3-3/4	4-1/4	4-1/2	4-3/4
INSIDE DIAMETER (CUTTER)		1-5/8	3-1/8	3-1/4	3-7/8	4-3/8	4-5/8	4-7/8
OUTSIDE DIAMETER (CUTTER)		2-5/16	3-7/8	4-1/2	4-11/16	5-5/8	5-7/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		2-7/16	4-1/8	4-3/4	4-15/16	5-7/8	6-1/8	6-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**410-231**	**410-388**	**410-450**	**410-468**	**410-563**	**410-588**	**410-606**
w/SPRING DOG	Bowen No.	32848	47127	47167	47210	47309	47264	47360

SPRING DOG ASSEMBLY

COMPLETE ASSEMBLY	**Logan Part No.**	**11000-000**	**11000-001**	**11000-002**	**11000-003**	**11000-004**	**11000-005**	**11000-006**
Consists of:	Bowen No.	13629	47131	47177	47216	47313	47271	47365
	Price	$1,167	$2,519	$2,620	$2,942	$3,104	$3,193	$3,399
SPRING DOG BODY	**Logan Part No.**	**P14000**	**P14001**	**P14002**	**P14003**	**P14004**	**P14005**	**P14006**
	Bowen No.	13630	47132	47178	47217	47314	47272	47366
	Price	$814	$1,561	$1,561	$1,739	$1,927	$2,048	$2,226
SPRING DOG	**Logan Part No.**	**P15000**	**P15001**	**P15002**	**P15003**	**P15004**	**P15004**	**P15006**
	Bowen No.	13631	32917	47179	33103	33644	33644	33663
	No. Req'd	6	6	6	6	6	6	6
	Price	$58	$169	$218	$197	$199	$197	$197
RIVET	**Logan Part No.**	**P16000**	**P16001**	**P16002**	**P16003**	**P16004**	**P16002**	**P16004**
	Bowen No.	13632	45626	47180	45842	44803	47180	44803
	No. Req'd	12	12	12	12	12	12	12
	Price	$2	$2	$2	$2	$2	$2	$2

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Assembly price includes one Spring Dog assembly, which differs with Ratchet Pawl or Slip assemblies: see chart above

(2) Connections other than API will be priced upon request.

(3) Single Pawl Spacer is required when using Ratchet Pawl Assembly. (Must be purchased separately. Not sold with Ratchet Pawl Assembly).

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and type of top connection

(3) Any desired options by name and number

(4) Any desired spares by name and number

Recommended Spare Parts:

(1) 2 sets Knife Pins

(2) 1 Feed Ring

(3) 24 Shear Pins

(4) 6 sets of Knives

(5) 2 Spring Dog, Ratchet Pawl, or Slip Assemblies

(6) 1 set Knife Pin Screws

Logan Standard External Cutters

TUBING/CASING SIZE TO CUT		1.050 to 1.315 Tbg	1.315 to 2-3/8 Tbg	1.660 to 2-3/8 Tbg	1.900 to 2-7/8 Tbg	2-1/16 to 3-1/2 Tbg	2-3/8 to 3-1/2 Tbg	2 3/8 to 4 Tbg
MAXIMUM SIZE WILL PASS OVER		1.552	3-1/16	3-1/8	3-3/4	4-1/4	4-1/2	4-3/4
INSIDE DIAMETER (CUTTER)		1-5/8	3-1/8	3-1/4	3-7/8	4-3/8	4-5/8	4-7/8
OUTSIDE DIAMETER (CUTTER)		2-5/16	3-7/8	4-1/2	4-11/16	5-5/8	5-7/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		2-7/16	4-1/8	4-3/4	4-15/16	5-7/8	6-1/8	6-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**410-231**	**410-388**	**410-450**	**410-468**	**410-563**	**410-588**	**410-606**
w/SPRING DOG	Bowen No.	32848	47127	47167	47210	47309	47264	47360

OPTIONAL RATCHET PAWL ASSEMBLY

COMPLETE ASSEMBLY	**Logan Part No.**	**11000-009**	**11000-010**	**11000-011**	**11000-012**	**11000-013**	**11000-014**	**11000-015**
Consists of:	Bowen No.	13666	47138	47181	47218	47315	47275	47367
	Price	$1,462	$2,297	$2,575	$2,620	$2,974	$3,044	$3,133
PAWL BODY	**Logan Part No.**	**P17000**	**P17001**	**P17002**	**P17003**	**P17004**	**P17005**	**P17006**
	Bowen No.	13667	47139	47182	47219	47316	47276	47368
	Price	$814	$1,167	$1,442	$1,561	$1,796	$1,855	$1,927
RATCHET PAWL	**Logan Part No.**	**P18000**	**P18001**	**P18002**	**P18003**	**P18004**	**P18005**	**P18006**
(6 req'd)	Bowen No.	13668	32946	47183	47220	47317	47277	47369
	Price	$121	$167	$167	$167	$174	$174	$174
PAWL SPRING	**Logan Part No.**	**P19000**	**P19001**	**P19002**	**P19003**	**P19002**	**P19002**	**P19002**
(6 req'd)	Bowen No.	14213	15656	14829	18729	14829	14829	14829
	Price	$40	$9	$8	$11	$8	$8	$8
PAWL PIN	**Logan Part No.**	**P20000**	**P20001**	**P20002**	**P20001**	**P20004**	**P20005**	**P20002**
(6 req'd)	Bowen No.	37011	33128	37019	33128	37031	47253	37019
	Price	$14	$22	$22	$22	$22	$22	$22
SINGLE PAWL SPACER	**Logan Part No.**	**P27000**	**P27001**	**P27002**	**P27003**	**P27004**	**P27005**	**P27006**
(See Note 3)	Bowen No.	32890	47141	47190	47227	47326	47286	47378
	Price	$166	$204	$206	$207	$225	$313	$423

OPTIONAL SLIP ASSEMBLY

COMPLETE ASSEMBLY	**Logan Part No.**	**...**	**11000-019**	**11000-020**	**11000-021**	**11000-022**	**11000-023**	**11000-024**
Consists of:	Bowen No.	...	47133	47185	47221	47319	47279	47371
	Price	...	$4,971	$5,103	$5,459	$6,457	$6,606	$7,064
SLIP	**Logan Part No.**	**...**	**P21001**	**P21002**	**P21003**	**P21004**	**P21005**	**P21006**
	Bowen No.	...	47134	47186	47222	47320	47280	47372
	Price	...	$2,048	$2,051	$2,122	$2,500	$2,607	$2,742
SLIP BOWL	**Logan Part No.**	**...**	**P22001**	**P22002**	**P22003**	**P22004**	**P22005**	**P22006**
	Bowen No.	...	47135	47187	47223	47321	47281	47373
	Price	...	$467	$498	$543	$621	$686	$761
SLIP BOWL RETAINER	**Logan Part No.**	**...**	**P23001**	**P23002**	**P23003**	**P23004**	**P23005**	**P23006**
	Bowen No.	...	47136	47188	47224	47322	47282	47374
	Price	...	$943	$1,021	$1,082	$1,323	$1,323	$1,390
SLIP SPRING	**Logan Part No.**	**...**	**P24001**	**P24002**	**P24003**	**P24004**	**P24005**	**P24006**
	Bowen No.	...	47137	47189	47225	47323	47283	47375
	Price	...	*	*	*	$1,288	$1,040	*
SLIP BOWL SHEAR PIN	**Logan Part No.**	**...**	**P25001**	**P25001**	**P25001**	**P25004**	**P25004**	**P25004**
(4 req'd)	Bowen No.	...	47208	47208	47208	47324	47324	47324
	Price	...	$20	$20	$20	$20	$20	$20
SLIP ADAPTER	**Logan Part No.**	**...**	**P26001**	**P26002**	**P26003**	**P26004**	**P26005**	**P26006**
	Bowen No.	...	47130	47170	47213	47311	47267	47364
	Price	...	$1,230	$1,255	$1,291	$1,635	$1,635	$1,860

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Logan Standard External Cutters

TUBING/CASING SIZE TO CUT		3-1/2, 4, 4-1/2 & 5 DP	4 to 5-3/4 Csg
MAXIMUM SIZE WILL PASS OVER		6-1/4	6-1/2
INSIDE DIAMETER (CUTTER)		6-3/8	6-5/8
OUTSIDE DIAMETER (CUTTER)		7-5/8	8-1/8
MINIMUM SIZE HOLE TO RUN IN		8-1/4	8-5/8
COMPLETE ASSEMBLY	**Logan Part No.**	**410-763**	**410-813**
w/SPRING DOG	Bowen No.	47422	47541
Consists of:	Price	$22,463	$27,332
TOP SUB	**Logan Part No.**	**P1007**	**P1008**
	Bowen No.	33885	33959
	Price	$2,369	$4,024
BODY	**Logan Part No.**	**P2007**	**P2008**
	Bowen No.	47423	47542
	Price	$10,137	$11,900
THRUST WASHER	**Logan Part No.**	**P3007**	**P3008**
	Bowen No.	33887	33961
	Price	$225	$225
THRUST BEARING	**Logan Part No.**	**P4007**	**P4008**
	Bowen No.	33888	33962
	Price	$199	$199
PRELOAD SLEEVE	**Logan Part No.**	**P5007**	**P5008**
	Bowen No.	47424	47543
	Price	$366	$376
SPRING SEAT	**Logan Part No.**	**P6007**	**P6008**
	Bowen No.	49255	49258
	Price	$343	$359
MAIN SPRING	**Logan Part No.**	**P7007**	**P7008**
	Bowen No.	33889	33963
	Price	$2,327	$3,092
FEED RING	**Logan Part No.**	**P8007**	**P8008**
	Bowen No.	33890	33964
	Price	$495	$562
SHEAR PIN	**Logan Part No.**	**P9007**	**P9008**
	Bowen No.	33891	33965
	No. Req'd	2	2
	Price	$72	$39
KNIFE	**Logan Part No.**	**P10004**	**P10008**
	Bowen No.	34553	44802
	No. Req'd	5	5
	Price	$531	$653
KNIFE PIN	**Logan Part No.**	**P11004**	**P11008**
	Bowen No.	34554	33966
	No. Req'd	5	5
	Price	$31	$31
KNIFE PIN SET SCREW	**Logan Part No.**	**P12004**	**P12008**
	Bowen No.	23703	23705
	No. Req'd	5	5
	Price	$3	$3
GUIDE	**Logan Part No.**	**P13007**	**P13008**
	Bowen No.	33897	33969
	Price	$1,167	$1,272

TUBING/CASING SIZE TO CUT		3-1/2, 4, 4-1/2 & 5 DP	4 to 5-3/4 Csg
MAXIMUM SIZE WILL PASS OVER		6-1/4	6-1/2
INSIDE DIAMETER (CUTTER)		6-3/8	6-5/8
OUTSIDE DIAMETER (CUTTER)		7-5/8	8-1/8
MINIMUM SIZE HOLE TO RUN IN		8-1/4	8-5/8
SPRING DOG ASSEMBLY			
COMPLETE ASSEMBLY	**Logan Part No.**	**11000-007**	**11000-008**
Consists of:	Bowen No.	33949	47545
	Price	$3,590	$4,006
SPRING DOG BODY	**Logan Part No.**	**P14007**	**P14008**
	Bowen No.	33950	7546
	Price	$2,384	$2,810
SPRING DOG	**Logan Part No.**	**P15007**	**P15007**
	Bowen No.	50192	50192
	No. Req'd	6	6
	Price	$197	$197
RIVET	**Logan Part No.**	**P16004**	**P16008**
	Bowen No.	44803	50191
	No. Req'd	12	12
	Price	$2	$2

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Assembly price includes one Spring Dog Assembly which differs with Ratchet Pawl or Slip Assemblies. See table on next page.

(2) Connections other than API will be priced upon request.

(3) Single Pawl Spacer is required when using Ratchet Pawl Assembly. (Must be purchased separately. Not sold with Ratchet Pawl Assembly).

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and type of top connection

(3) Any desired options by name and number

(4) Any desired spares by name and number

Recommended Spare Parts:

(1) 2 sets Knife Pins

(2) 1 Feed Ring

(3) 24 Shear Pins

(4) 6 sets of Knives

(5) 2 Spring Dog, Ratchet Pawl, or Slip Assemblies

(6) 1 set Knife Pin Screws

Logan Standard External Cutters

TUBING/CASING SIZE TO CUT	3-1/2, 4, 4-1/2 & 5 DP	4 to 5-3/4 Csg
MAXIMUM SIZE WILL PASS OVER	6-1/4	6-1/2
INSIDE DIAMETER (CUTTER)	6-3/8	6-5/8
OUTSIDE DIAMETER (CUTTER)	7-5/8	8-1/8
MINIMUM SIZE HOLE TO RUN IN	8-1/4	8-5/8

OPTIONAL RATCHET PAWL ASSEMBLY

COMPLETE ASSEMBLY	**Logan Part No.**	11000-016	11000-017
Consists of:	Bowen No.	47426	47547
	Price	$4,046	$4,308
PAWL BODY	**Logan Part No.**	P17007	P17008
	Bowen No.	47427	47548
	Price	$2,810	$3,061
RATCHET PAWL	**Logan Part No.**	P18007	P18008
	Bowen No.	47428	47549
	No Req'd	6	6
	Price	$181	$181
PAWL SPRING	**Logan Part No.**	P19002	P19008
	Bowen No.	14829	47443
	No Req'd	6	6
	Price	$8	$11
PAWL PIN	**Logan Part No.**	P20004	P20008
	Bowen No.	37031	47550
	No Req'd	6	6
	Price	$22	$26
SINGLE PAWL SPACER	**Logan Part No.**	P27007	P27008
(See Note 3)	Bowen No.	47437	47557
	Price	$516	$540

TUBING/CASING SIZE TO CUT	3-1/2, 4, 4-1/2 & 5 DP	4 to 5-3/4 Csg
MAXIMUM SIZE WILL PASS OVER	6-1/4	6-1/2
INSIDE DIAMETER (CUTTER)	6-3/8	6-5/8
OUTSIDE DIAMETER (CUTTER)	7-5/8	8-1/8
MINIMUM SIZE HOLE TO RUN IN	8-1/4	8-5/8

OPTIONAL RATCHET PAWL ASSEMBLY

COMPLETE ASSEMBLY	**Logan Part No.**	11000-025	11000-026
Consists of:	Bowen No.	47430	47551
	Price	$9,310	$10,137
SLIP	**Logan Part No.**	P21007	P21008
	Bowen No.	47431	47552
	Price	$3,354	$3,489
SLIP BOWL	**Logan Part No.**	P22007	P22008
	Bowen No.	47432	47553
	Price	$1,272	$1,410
SLIP BOWL RETAINER	**Logan Part No.**	P23007	P23008
	Bowen No.	47433	47554
	Price	$1,957	$2,226
SLIP SPRING	**Logan Part No.**	P24007	P24008
	Bowen No.	47434	47556
	Price	$343	$1,457
SLIP BOWL SHEAR PIN	**Logan Part No.**	P25007	P25008
	Bowen No.	47435	47555
	No Req'd	4	4
	Price	$20	$20
SLIP ADAPTER	**Logan Part No.**	P26007	P26008
	Bowen No.	47425	47544
	Price	$2,297	$2,591

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Assembly price includes one Spring Dog Assembly which differs with Ratchet Pawl or Slip Assemblies. See table on next page.

(2) Connections other than API will be priced upon request.

(3) Single Pawl Spacer is required when using Ratchet Pawl Assembly. (Must be purchased separately. Not sold with Ratchet Pawl Assembly).

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and type of top connection

(3) Any desired options by name and number

(4) Any desired spares by name and number

Recommended Spare Parts:

(1) 2 sets Knife Pins

(2) 1 Feed Ring

(3) 24 Shear Pins

(4) 6 sets of Knives

(5) 2 Spring Dog, Ratchet Pawl, or Slip Assemblies

(6) 1 set Knife Pin Screws

LOGAN HYDRAULIC EXTERNAL CUTTERS

Logan Hydraulic External Cutters

PIPE SIZE TO CUT		1.315 to 2-1/16	1.315 to 2-3/8	1.315 to 2-3/8	1.900 to 2-7/8	1.900 to 2-7/8	1.900 to 2-7/8	2-1/16 to 4 FJ	2-3/8 to 4
MAXIMUM SIZE WILL PASS OVER		2-3/4	3-1/16	3-1/16	3-7/16	3-9/16	3-5/8	4-1/8	4-13/16
INSIDE DIAMETER (CUTTER)		2-7/8	3-1/8	3-3/16	3-5/8	3-13/16	3-7/8	4-5/16	4-7/8
OUTSIDE DIAMETER (CUTTER)		3-3/4	3-7/8	4-1/16	4-7/16	4-9/16	4-11/16	5-5/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		4	4-1/8	4-5/16	4-11/16	4-13/16	4-15/16	5-7/8	6-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**411-375**	**411-388**	**411-406**	**411-444**	**411-456**	**411-468**	**411-563**	**411-606**
	Bowen No.	70086	47127	34415	70209	79215	41727	34551	51148
	Price	$10,486	$12,089	$11,563	$12,754	$15,685	$13,285	$16,153	$16,960
TOP SUB	**Logan Part No.**	**N1001**	**N10015**	**N10027**	**N1002**	**N10025**	**N1003**	**N1004**	**N1005**
	Bowen No.	70087	47128	34416	70210	79271	33081	33574	13177
	Price	$994	$876	$1,061	$1,153	$1,061	$1,167	$1,418	$2,770
BODY	**Logan Part No.**	**N2001**	**N20015**	**N2004**	**N2002**	**N20025**	**N2005**	**N2006**	**N2007**
	Bowen No.	70088	47129	34417	70211	79272	41728	34552	56992
	Price	$4,884	$5,446	$5,781	$5,855	$5,902	$5,913	$7,692	$8,018
FEED RING	**Logan Part No.**	**N3001**	**N30015**	**N3004**	**N3002**	**N30025**	**N3005**	**N3006**	**N3007**
	Bowen No.	70089	32907	49819	70212	79273	49824	49829	51150
	Price	$857	$1,625	$927	$1,049	$1,068	$1,107	$1,107	$1,107
SHEAR PIN	**Logan Part No.**	**P9000**	**N40015**	**P9000**	**P9000**	**N40015**	**P9000**	**N4006**	**N4007**
	Bowen No.	33087	14205	33087	33087	34420	33087	34555	7227
	No. Req'd	2	2	2	2	2	2	2	2
	Price	$17	$17	$17	$17	$17	$17	$17	$17
KNIFE	**Logan Part No.**	**N5001**	**N50015**	**N5004**	**P10003**	**N50025**	**P10003**	**P10004**	**N5007**
	Bowen No.	80147	32909	34421	33088	79275	33088	34553	12382
	No. Req'd	5	5	5	5	5	5	5	5
	Price	$306	$403	$282	$421	$460	$421	$531	$460
KNIFE PIN	**Logan Part No.**	**N6001**	**N6001**	**N6004**	**P11003**	**N60025**	**P11003**	**P11004**	**N6007**
	Bowen No.	80148	80148	34422	33089	A14348	33089	34554	37022
	No. Req'd	5	5	5	5	5	5	5	5
	Price	$21	$21	$21	$26	$22	$26	$31	$27
KNIFE PIN SET SCREW	**Logan Part No.**	**N7001**	**N7001**	**N7002**	**N7002**	**...**	**N7002**	**P12004**	**...**
	Bowen No.	23654	23654	23666	23666	...	23666	23703	...
	No. Req'd	5	5	5	5	...	5	5	...
	Price	$2	$2	$2	$2	...	$2	$3	...
FEED RING O-RING	**Logan Part No.**	**568-235**	**568235**	**568-237**	**568-241**	**568-242**	**568-243**	**568-247**	**568-251**
	Bowen No.	568235	568235	568237	568241	568242	568243	568247	568251
	Price	$7	$7	$7	$8	$8	$9	$12	$14
GUIDE	**Logan Part No.**	**N8001**	**N80015**	**N8004**	**N8002**	**N80025**	**P13003**	**N8006**	**N8007**
	Bowen No.	70090	14203	34424	70213	79274	33093	187	13412
	Price	$429	$460	$469	$484	$499	$589	$833	$755
GUIDE SCREW	**Logan Part No.**	**N9001**	**N9001**	**N9001**	**N9001**	**N9001**	**N9001**	**N9006**	**N9007**
(2 req'd)	Bowen No.	34418	34418	34418	34418	34418	34418	34556	51149
	Price	$35	$35	$35	$35	$35	$35	$73	$73
PISTON ASSEMBLY	**Logan Part No.**	**10000-010**	**10000-051**	**10000-013**	**10000-011**	**10000-047**	**10000-014**	**10000-015**	**10000-016**
(Consists of):	Bowen No.	70091	...	34425	70232	79283	41733	34559	51151
	Pipe Size	2-1/16	2-3/8	2-3/8	2-7/8	2-7/8	2-7/8	3-1/2	4
	Price	$1,873	*	$1,926	$2,413	$2,698	$2,839	$2,899	$3,104
PISTON SEGMENT SET	**Logan Part No.**	**N10001**	**N100015**	**N10004**	**N10002**	**N100025**	**N10005**	**N10006**	**N10007**
	Bowen No.	70092	...	49814	70233	79284	49825	49830	51152
	Price	$1,784	$1,967	$1,885	$2,370	$2,620	$2,770	$2,839	$3,031
RUBBER RING	**Logan Part No.**	**N11002**	**N11002**	**N11001**	**N11001**	**N11001**	**N11001**	**N11006**	**N11007**
	Bowen No.	70093	70093	34564	34564	34564	34564	34561	51153
	Price	$60	$60	$62	$62	$62	$62	$60	$60
PISTON O-RING	**Logan Part No.**	**568-234**	**568234**	**568-236**	**568-235**	**568-236**	**568-237**	**568-246**	**568-250**
	Bowen No.	568234	568234	568236	568235	568236	568237	568246	568250
	Price	$7	$7	$7	$7	$7	$7	$11	$12

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** Available upon request.*

When ordering, please specify:

See Sheet 4 of 5 / pg 270

Recommended Spare Parts:

See Sheet 4 of 5 / pg 270

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Logan Hydraulic External Cutters

PIPE SIZE TO CUT		1.315 to 2-1/16	1.315 to 2-3/8	1.315 to 2-3/8	1.900 to 2-7/8	1.900 to 2-7/8	1.900 to 2-7/8	2-1/16 to 4 FJ	2-3/8 to 4
MAXIMUM SIZE WILL PASS OVER		2-3/4	3-1/16	3-1/16	3-7/16	3-9/16	3-5/8	4-1/8	4-13/16
INSIDE DIAMETER (CUTTER)		2-7/8	3-1/8	3-3/16	3-5/8	3-13/16	3-7/8	4-5/16	4-7/8
OUTSIDE DIAMETER (CUTTER)		3-3/4	3-7/8	4-1/16	4-7/16	4-9/16	4-11/16	5-5/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		4	4-1/8	4-5/16	4-11/16	4-13/16	4-15/16	5-7/8	6-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**411-375**	**411-388**	**411-406**	**411-444**	**411-456**	**411-468**	**411-563**	**411-606**
	Bowen No.	70086	...	34415	70209	79215	41727	34551	51148

OPTIONAL

PISTON ASSEMBLY	**Logan Part No.**	**10000-019**	**10000-052**	**10000-022**	**10000-020**	**10000-048**	**10000-023**	**10000-024**	**10000-025**
Consists of:	Bowen No.	70094	...	34427	70214	79281	41736	34562	51230
	Pipe Size	1.900	2	2-1/16	2-3/8	2-3/8	2-3/8	2-7/8	3-1/2
	Price	$1,873	*	$1,930	$2,413	$2,693	$2,839	$2,899	$3,104
PISTON SEGMENT SET	**Logan Part No.**	**N12001**	**N100015**	**N12004**	**N12002**	**N120025**	**N12005**	**N12006**	**N12007**
	Bowen No.	70095	...	49817	70215	79282	49828	49831	51231
	Price	$1,779	$1,972	$1,889	$2,370	$2,625	$2,770	$2,839	$3,031
RUBBER RING	**Logan Part No.**	**N13001**	**N11001**	**N13002**	**N13002**	**N11001**	**N13002**	**N11001**	**N11006**
	Bowen No.	70096	...	34567	34567	34564	34567	34564	34561
	Price	$60	$156	$60	$60	$156	$60	$60	$60
PISTON O-RING	**Logan Part No.**	**568-234**	**568234**	**568-236**	**568-235**	**568-236**	**568-237**	**568-246**	**568-250**
	Bowen No.	568234	568234	568236	568235	568236	568237	568246	568250
	Price	$7	$7	$7	$7	$7	$7	$11	$12

PISTON ASSEMBLY	**Logan Part No.**	**10000-028**	**...**	**10000-031**	**10000-029**	**10000-049**	**10000-032**	**10000-033**	**10000-034**
Consists of:	Bowen No.	70097	...	34429	70217	79279	41738	34565	51345
	Pipe Size	1.660	...	1.900	2-1/16	2-1/16	2-1/16	2-3/8	2-7/8
	Price	$1,873	...	$1,930	$2,418	$2,698	$2,848	$2,899	$3,104
PISTON SEGMENT SET	**Logan Part No.**	**N14001**	**...**	**N14004**	**N14002**	**N140025**	**N14005**	**N14006**	**N14007**
	Bowen No.	70098	...	49818	70218	79280	49826	49832	51346
	Price	$1,784	...	$1,889	$2,422	$2,625	$1,889	$2,856	$3,031
RUBBER RING	**Logan Part No.**	**N13001**	**...**	**N13002**	**N13002**	**N13002**	**N13002**	**N11001**	**N11001**
	Bowen No.	70096	...	34567	34567	34567	34567	34564	34564
	Price	$60	...	$60	$60	$60	$60	$62	$62
PISTON O-RING	**Logan Part No.**	**568-234**	**...**	**568-236**	**568-235**	**568-236**	**568-237**	**568-246**	**568-250**
	Bowen No.	568234	...	568236	568235	568236	568237	568246	568250
	Price	$7	$7	$7	$7	$7	$7	$11	$12

PISTON ASSEMBLY	**Logan Part No.**	**10000-037**	**...**	**10000-040**	**10000-038**	**10000-050**	**10000-041**	**10000-042**	**10000-043**
Consists of:	Bowen No.	70100	...	34432	70219	79277	41740	34568	51344*
	Pipe Size	1.315	...	1.600	1.900	1.900	1.900	2-1/16	2-3/8
	Price	$1,873	...	$1,930	$2,418	$2,698	$2,848	$2,899	$3,104
PISTON SEGMENT SET	**Logan Part No.**	**N16001**	**...**	**N16004**	**N16002**	**N160025**	**N16005**	**N16006**	**N16007**
	Bowen No.	70101	...	49815	70220	79278	49827	49833	51343
	Price	$1,784	...	$1,889	$2,370	$2,625	$2,774	$2,837	$3,031
RUBBER RING	**Logan Part No.**	**N17001**	**...**	**N17004**	**N13002**	**N13002**	**N13002**	**N13002**	**N11001**
	Bowen No.	70102	...	34431	34567	34567	34567	34567	34564
	Price	$62	...	$62	$60	$60	$60	$60	$62
PISTON O-RING	**Logan Part No.**	**568-234**	**...**	**568-236**	**568-235**	**568-236**	**568-237**	**568-246**	**568-250**
	Bowen No.	568234	...	568236	568235	568236	568237	568246	568250
	Price	$7	$7	$7	$7	$7	$7	$11	$12

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

When ordering, please specify:

See Sheet 4 of 5 / pg 270

Recommended Spare Parts:

See Sheet 4 of 5 / pg 270

Logan Hydraulic External Cutters

PIPE SIZE TO CUT		1.315 to 2-1/16	1.315 to 2-3/8	1.315 to 2-3/8	1.900 to 2-7/8	1.900 to 2-7/8	1.900 to 2-7/8	2-1/16 to 4 FJ	2-3/8 to 4
MAXIMUM SIZE WILL PASS OVER		2-3/4	3-1/16	3-1/16	3-7/16	3-9/16	3-5/8	4-1/8	4-13/16
INSIDE DIAMETER (CUTTER)		2-7/8	3-1/8	3-3/16	3-5/8	3-13/16	3-7/8	4-5/16	4-7/8
OUTSIDE DIAMETER (CUTTER)		3-3/4	3-7/18	4-1/16	4-7/16	4-9/16	4-11/16	5-5/8	6-1/16
MINIMUM SIZE HOLE TO RUN IN		4	4-1/8	4-5/16	4-11/16	4-13/16	4-15/16	5-7/8	6-1/4
COMPLETE ASSEMBLY	**Logan Part No.**	**411-375**	**411-388**	**411-406**	**411-444**	**411-456**	**411-468**	**411-563**	**411-606**
	Bowen No.	70086	...	34415	70209	79215	41727	34551	51148
OPTIONAL									
PISTON ASSEMBLY	**Logan Part No.**	**...**		**10000-045**	**...**	**...**	**...**	**10000-046**	**...**
Consists of:	Bowen No.	...		34434	...	...	...	53881	...
	Pipe Size	...		1.315	...	...	...	4	...
	Price	...		*	...	...	...	$2,899	...
PISTON SEGMENT SET	**Logan Part No**	**...**		**N18004**	**...**	**...**	**...**	**N18006**	**...**
	Bowen No.	...		49816	...	...	...	53880	...
	Price	...		*	...	...	...	$3,064	...
RUBBER RING	**Logan Part No.**	**...**		**N19004**	**...**	**...**	**...**	**N11007**	**...**
	Bowen No.	...		34436	...	...	...	51153	...
	Price	...		$57	...	...	...	$60	...
PISTON O-RING	**Logan Part No.**	**...**		**568-236**	**...**	**...**	**...**	**568-246**	**...**
	Bowen No.	...		568236	...	...	...	568246	...
	Price	...		$3	...	...	...	$11	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

When ordering, please specify:

(1) Name and number of assembly or part
(2) Size and type of top connection
(3) Name and number of any desired options

Recommended Spare Parts:

(1) 2 Piston Assemblies
(2) 1 Feed Ring
(3) 24 Shear Pins
(4) 30 Knives
(5) 10 Knife Pins
(6) 5 Knife Pin Screws
(7) 6 Rubber Rings
(8) 6 Piston O-Rings
(9) 6 Feed Ring O-Rings

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Logan Hydraulic External Cutters

PIPE SIZE TO CUT		3-1/2 to 5
MAXIMUM SIZE WILL PASS OVER		6-3/8
INSIDE DIAMETER (CUTTER)		6-1/2
OUTSIDE DIAMETER (CUTTER)		8
MINIMUM SIZE HOLE TO RUN IN		8-1/2
COMPLETE ASSEMBLY	**Logan Part No.**	**411-800**
	Bowen No.	35957
	Price	$19,908
TOP SUB	**Logan Part No.**	**N1006**
	Bowen No.	35958
	Price	$2,839
BODY	**Logan Part No.**	**N2008**
	Bowen No.	35959
	Price	$9,886
FEED RING	**Logan Part No.**	**N3008**
	Bowen No.	49834
	Price	$1,214
SHEAR PIN	**Logan Part No.**	**N4006**
	Bowen No.	34555
	No. Req'd	2
	Price	$17
KNIFE	**Logan Part No.**	**N5008**
	Bowen No.	35960
	No. Req'd	5
	Price	$526
KNIFE PIN	**Logan Part No.**	**P11004**
	Bowen No.	34554
	No. Req'd	5
	Price	$31
KNIFE PIN SET SCREW	**Logan Part No.**	**P12004**
	Bowen No.	23703
	No. Req'd	5
	Price	$3
FEED RING O-RING	**Logan Part No.**	**568-438**
	Bowen No.	568438
	Price	$19
GUIDE	**Logan Part No.**	**N8008**
	Bowen No.	35932
	Price	$1,055
GUIDE SCREW	**Logan Part No.**	**N9006**
	Bowen No.	34556
	No. Req'd	2
	Price	$73
PISTON ASSEMBLY *(Consists of):*	**Logan Part No.**	**10000-017**
	Bowen No.	35963
	Pipe Size	5
	Price	$4,429
PISTON SEGMENT SET	**Logan Part No.**	**N10008**
	Bowen No.	49821
	Price	$4,368
RUBBER RING	**Logan Part No.**	**N11008**
	Bowen No.	35965
	Price	$60
PISTON O-RING	**Logan Part No.**	**568-259**
	Bowen No.	568259
	Price	$19

OPTIONAL

PISTON ASSEMBLY *Consists of:*	**Logan Part No.**	**10000-026**
	Bowen No.	35966
	Pipe Size	4-1/2
	Price	$4,430
PISTON SEGMENT SET	**Logan Part No.**	**N12008**
	Bowen No.	49823
	Price	$4,368
RUBBER RING	**Logan Part No.**	**N11008**
	Bowen No.	35965
	Price	$60
PISTON O-RING	**Logan Part No.**	**568-259**
	Bowen No.	568259
	Price	$19

PISTON ASSEMBLY *Consists of:*	**Logan Part No.**	**10000-035**
	Bowen No.	35968
	Pipe Size	4
	Price	$4,429
PISTON SEGMENT SET	**Logan Part No.**	**N14008**
	Bowen No.	49822
	Price	$4,435
RUBBER RING	**Logan Part No.**	**N15008**
	Bowen No.	35970
	Price	$100
PISTON O-RING	**Logan Part No.**	**568-259**
	Bowen No.	568259
	Price	$19

PISTON ASSEMBLY *Consists of:*	**Logan Part No.**	**10000-044**
	Bowen No.	35971
	Pipe Size	3-1/2
	Price	$4,429
PISTON SEGMENT SET	**Logan Part No.**	**N16008**
	Bowen No.	49820
	Price	$4,368
RUBBER RING	**Logan Part No.**	**N11001**
	Bowen No.	34564
	Price	$62
PISTON O-RING	**Logan Part No.**	**568-259**
	Bowen No.	568259
	Price	$19

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and type of top connection

(3) Name and number of any desired options

Recommended Spare Parts:

See Sheet 4 of 5

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LOGAN INTERNAL CUTTERS

Logan Internal Cutters

PIPE SIZE TO CUT		1.900 Tbg	2-3/8 Tbg	2-7/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4-1/2 FHDP	4-1/2 IFDP
CAN BE DRESSED FOR		... 2-7/8 Tbg	2-7/8 IFDP	...	3-1/2 IFDP	4 Tbg 4-1/2 Tbg	4-1/2 IFDP 4-1/2 Csg	4-1/2, 4-3/4, 5 & 5-1/2 Csg
MINIMUM CUTTER O.D.		1-1/2	1-13/16	2-1/4	2-1/4	2-5/8	2-1/2	3-3/8
STANDARD ASSEMBLY		Drag Spring	Drag Spring	Drag Spring	Drag Spring	Wiper Block	Drag Spring	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-000**	**409-002**	**409-003**	**409-004**	**409-005**	**409-006**	**409-007**
Consists of:	Bowen No.	25940	2174	8505	9176	8570	9465	8844
	Price	$13,359	$13,418	$25,127	$26,164	$33,037	$19,245	$25,323
MANDREL	**Logan Part No.**	**Q1000**	**Q1002**	**Q1003**	**Q1004**	**Q1005**	**Q1006**	**Q1007**
	Bowen No.	25941	2175	8506	9177	8571	9466	8845
	Price	$2,581	$2,575	$3,237	$3,325	$3,853	$3,832	$4,137
KNIFE BEARING	**Logan Part No.**	**Q2000**	**Q2002**	**Q2002**	**Q2004**	**Q2004**	**Q2004**	**Q2004**
3 req'd	Bowen No.	25942	8433	8433	8575	8575	8575	8575
	Price	$166	$670	$670	$387	$387	$387	$387
KNIFE SPRING SCREW	**Logan Part No.**	**Q3000**	**Q3002**	**Q3002**	**Q3002**	**Q3002**	**Q3002**	**Q3002**
3 req'd	Bowen No.	13834	8181	8181	8181	8181	8181	8181
	Price	$2	$2	$2	$2	$2	$2	$2
KNIFE SPRING	**Logan Part No.**	**Q4000**	**Q4002**	**Q4002**	**Q4004**	**Q4004**	**Q4004**	**Q4004**
3 req'd	Bowen No.	25959	8434	8434	8629	8629	8629	8629
	Price	$120	$28	$28	$47	$47	$47	$47
KNIFE	**Logan Part No.**	**Q5000**	**Q5002**	**Q5002**	**Q5004**	**Q5004**	**Q5006**	**Q5004**
3 req'd	Bowen No.	25943	8432	8432	8572	8572	6807	8572
	Price	$237	$237	$237	$419	$409	$235	$409
KNIFE BEARING SCREW	**Logan Part No.**	**Q6000**	**Q6002**	**Q6003**	**Q6004**	**Q6005**	**Q6005**	**Q6005**
3 req'd	Bowen No.	23501	8529	8567	9189	8576	8576	8576
	Price	$2	$2	$2	$2	$2	$2	$2
KNIFE PIN	**Logan Part No.**	**Q7000**	**Q7002**	**Q7002**	**Q7004**	**Q7004**	**Q7006**	**Q7004**
3 req'd	Bowen No.	25944	8501	8501	8573	8573	9467	8573
	Price	$19	$19	$19	$20	$20	$20	$20
KNIFE PIN SCREW	**Logan Part No.**	**AA9001**	**Q8002**	**Q8002**	**Q8004**	**Q8004**	**Q8002**	**Q8004**
3 req'd	Bowen No.	12484	8445	8445	8574	8574	8445	8574
	Price	$2	$2	$2	$2	$2	$2	$2
KNIFE BLOCK	**Logan Part No.**	**Q9000**	**Q9002**	**Q9003**	**Q9004**	**Q9004**	**Q9006**	**Q9007**
3 req'd	Bowen No.	25945	8436	8507	8580	8580	6809	8846
	Price	$640	$214	$404	$486	$486	$225	$237
TOP THRUST	**Logan Part No.**	**Q10000**	**Q10002**	**Q10003**	**Q10004**	**Q10005**	**Q10006**	**Q10007**
	Bowen No.	25946	9421	8508	9422	8612	6810	8931
	Price	$668	$1,020	$1,626	$1,255	$2,856	$1,374	$1,533
SPLIT THRUST	**Logan Part No.**	**Q11000**	**Q11002**	**Q11003**	**Q11004**	**Q11005**	**Q11006**	**Q11007**
	Bowen No.	25947	8438	8509	9179	8582	7496	8848
	Price	$1,535	$1,533	$1,619	$1,650	$2,057	$1,742	$1,739

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

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Logan Internal Cutters

PIPE SIZE TO CUT		1.900 Tbg	2-3/8 Tbg	2-7/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4-1/2 FHDP	4-1/2 IFDP
CAN BE DRESSED FOR		...	2-7/8 IFDP 2-7/8 Tbg	...	3-1/2 IFDP	4 Tbg 4-1/2 Tbg	4-1/2 IFDP 4-1/2 Csg	4-1/2, 4 3/4, & 5 Csg
MINIMUM CUTTER O.D.		1-1/2	1-13/16	2-1/4	2-1/4	2-5/8	2-1/2	3-3/8
STANDARD ASSEMBLY		Drag Spring	Drag Spring	Drag Spring	Drag Spring	Wiper Block	Drag Spring	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-000**	**409-002**	**409-003**	**409-004**	**409-005**	**409-006**	**409-007**
	Bowen No.	25940	2174	8505	9176	8570	9465	8844
CONE	**Logan Part No.**	**Q12000**	**Q12002**	**Q12003**	**Q12004**	**Q12005**	**Q12006**	**Q12007**
	Bowen No.	25948	2177	8510	9180	8583	9468	8849
	Price	$1,219	$1,214	$1,631	$1,333	$3,054	$1,548	$1,619
MAIN SPRING	**Logan Part No.**	**Q13000**	**Q13002**	**Q13002**	**Q13004**	**Q13005**	**Q13006**	**Q13007**
	Bowen No.	25949	8440	8440	9191	8584	9469	8850
	Price	$114	$216	$216	$110	$130	$154	$154
SPRING STOP	**Logan Part No.**	**Q14000**	**Q14002**	**Q14002**	**Q14004**	**Q14005**	**Q14005**	**Q14007**
	Bowen No.	25950	8442	8442	9192	8585	8585	8851
	Price	$194	$204	$619	$196	$892	$892	$892
SLIP	**Logan Part No.**	**Q15000**	**Q15002**	**Q15003**	**Q15004**	**Q15005**	**Q15006**	**Q15007**
	Bowen No.	25958	2180	4005	2178	8586	7201	8852
	No. Req'd	3	3	3	3	3	2	3
	Price	$365	$365	$889	$365	$1,078	$540	$621
GRIP JAW SET	**Logan Part No.**	**Q16000**	**Q16002**	**Q16002**	**Q16002**	**Q16005**	**Q16005**	**Q16005**
	Bowen No.	25951	8443	8443	8443	8588	8588	8588
	Price	$747	$1,188	$1,188	$1,188	$1,136	$1,136	$1,136
GRIP JAW SPRING	**Logan Part No.**	**Q17000**	**Q17000**	**Q17000**	**Q17000**	**Q17005**	**Q17005**	**Q17005**
	Bowen No.	8444	8444	8444	8444	8589	8589	8589
	No. Req'd	3	3	3	3	3	3	3
	Price	$38	$38	$38	$38	$41	$41	$41
BOWL	**Logan Part No.**	**Q18000**	**Q18002**	**Q18003**	**Q18004**	**Q18005**	**Q18006**	**Q18007**
	Bowen No.	25952	8521	8520	9181	8597	9470	8853
	Price	$2,124	$2,118	$3,309	$2,679	$7,964	$4,113	$4,223
GRIP JAW STOP	**Logan Part No.**	**Q19000**	**Q19002**	**Q19003**	**Q19004**	**Q19005**	**Q19006**	**Q19005**
	Bowen No.	25953	8446	8515	9182	8590	9471	8590
	Price	$275	$275	$821	$404	$1,151	$446	$1,151
GRIP JAW STOP SCREW	**Logan Part No.**	**Q20000**	**Q20002**	**Q20002**	**Q20002**	**Q20005**	**Q20005**	**Q20005**
	Bowen No.	23096	62517	62517	62517	62681	62681	62681
	No. Req'd	3	3	3	3	3	3	3
	Price	...	$22	$22	$22	$26	$26	$26
WICKERED SLEEVE LONG	**Logan Part No.**	**Q21000**	**Q21002**	**Q21002**	**Q21004**	**Q21005**	**Q21006**	**Q21005**
	Bowen No.	25954	8568	8568	9185	8591	9475	8591
	Price	$1,099	$1,489	$1,489	$1,098	$1,289	$1,140	$1,274
BOTTOM NUT	**Logan Part No.**	**Q22000**	**Q22002**	**Q22003**	**Q22003**	**Q22005**	**Q22006**	**Q22007**
	Bowen No.	25955	8565	8566	8566	8596	9476	8857
	Price	$255	$256	$618	$618	$588	$440	$470

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		1.900 Tbg	2-3/8 Tbg	2-7/8 Tbg	2-7/8 Tbg	3-1/2 Tbg	4-1/2 FHDP	4 1/2 IFDP
CAN BE DRESSED FOR		...	2-7/8 IFDP 2-7/8 Tbg	...	3-1/2 IFDP	4-Tbg 4-1/2 Tbg	4-1/2 IFDP 4-1/2 Csg	4-1/2, 4 3/4, & 5 Csg
MINIMUM CUTTER O.D.		1-1/2	1-13/16	2-1/4	2-1/4	2-5/8	2-1/2	3-3/8
STANDARD ASSEMBLY		Drag Spring	Drag Spring	Drag Spring	Drag Spring	Wiper Block	Drag Spring	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-000**	**409-002**	**409-003**	**409-004**	**409-005**	**409-006**	**409-007**
	Bowen No.	25940	2174	8505	9176	8570	9465	8844
WIPER BLOCK	**Logan Part No.**	**...**	**...**	**...**	**...**	**Q23005**	**...**	**Q23007**
3 req'd	Bowen No.	...	...	...	...	8598	...	8854
	Price	...	...	...	...	$887	...	$359
WIPER BLOCK SPRING	**Logan Part No.**	**...**	**...**	**...**	**...**	**Q24005**	**...**	**Q24007**
9 req'd	Bowen No.	...	...	...	...	8599	...	8863
	Price	...	...	...	...	$20	...	$20
WIPER BLOCK SCREW	**Logan Part No.**	**...**	**...**	**...**	**...**	**Q25005**	**...**	**Q25005**
6 req'd	Bowen No.	...	...	...	...	8856	...	8856
	Price	...	...	...	...	$57	...	$57
BOWL DRAG	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
SPRING TYPE	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
MANDREL EXTENSION	**Logan Part No.**	**...**	**...**	**...**	**Q27004**	**Q27005**	**Q27006**	**Q27005**
	Bowen No.	...	...	...	9183	8595	9472	8595
	Price	...	...	...	$861	$1,271	$1,271	$1,271
DRAG SPRING	**Logan Part No.**	**Q28000**	**Q28002**	**Q28002**	**Q28002**	**Q28005**	**Q28005**	**Q28005**
3 req'd	Bowen No.	25956	8569	8569	8569	8592	8592	8592
	Price	$196	$197	$197	$197	$133	$133	$133
DRAG SPRING RING	**Logan Part No.**	**Q29000**	**Q29002**	**Q29003**	**Q29003**	**Q29005**	**Q29006**	**Q29007**
	Bowen No.	25957	8500	8518	8518	8594	9473	8855
	Price	$352	$352	$1,122	$1,122	$564	$470	$566
DRAG SPRING SCREW	**Logan Part No.**	**Q20000**	**Q20002**	**Q20002**	**Q20002**	**Q30005**	**Q20005**	**AK6004**
6 req'd	Bowen No.	23096	62517	62517	62517	62734	62681	8593
	Price	$22	$22	$22	$22	*	$26	$35
WICKERED	**Logan Part No.**	**...**	**Q21002**	**Q31003**	**...**	**...**	**...**	**...**
SLEEVE SHORT	Bowen No.	...	8568	8564	...	...	...	...
	Price	...	$1,489	$1,098	...	...	...	...
DRAG SPRING SHORT	**Logan Part No.**	**...**	**...**	**Q32003**	**...**	**...**	**...**	**...**
3 req'd	Bowen No.	...	...	8449	...	...	...	...
	Price	...	...	*	...	...	...	...
ROD KNIFE	**Logan Part No.**	**...**	**...**	**Q33003**	**Q33003**	**...**	**...**	**...**
	Bowen No.	...	...	9423	9423	...	...	...
	Price	...	...	$268	$268	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
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Logan Internal Cutters

PIPE SIZE TO CUT		5 IUDP	5 Csg	7 Csg	8-5/8 to 9 Csg	9-5/8 Csg	11-3/4 Csg
CAN BE DRESSED FOR		...	5-1/2 Csg	7-5/8, 8 Csg 8-1/8 Csg	9-5/8 Csg	10-3/4 Csg 11-3/4 Csg	12 LP
MINIMUM CUTTER O.D.		3-3/8	4	5-11/16	7-1/4	8-1/4	...
STANDARD ASSEMBLY		Drag Spring	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-008**	**409-009**	**409-011**	**409-012**	**409-013**	**409-014**
	Bowen No.	9081	8200	8745	15532	15080	41876
	Price	$21,071	$23,420	$31,439	$43,218	$50,198	$67,494
MANDREL	**Logan Part No.**	**Q1008**	**Q1009**	**Q1011**	**Q1012**	**Q1013**	**Q1014**
	Bowen No.	9082	8176	8746	15533	15081	41877
	Price	$4,647	$5,280	$7,752	$11,593	$15,446	$22,076
KNIFE BEARING	**Logan Part No.**	**Q2004**	**Q2009**	**Q2009**	**Q2012**	**Q2012**	**Q2012**
	Bowen No.	8575	8179	8179	15110	15110	15110
	No. Req'd	3	3	3	5	5	5
	Price	$387	$187	$187	$194	$194	$194
KNIFE SPRING SCREW	**Logan Part No.**	**Q3002**	**Q3002**	**Q3002**	**Q3012**	**Q3012**	**Q3012**
	Bowen No.	8181	8181	8181	9558	9558	9558
	No. Req'd	3	3	3	5	5	5
	Price	$2	$2	$2	$2	$2	$2
KNIFE SPRING	**Logan Part No.**	**Q4004**	**Q4009**	**Q4009**	**Q4012**	**Q4012**	**Q4012**
	Bowen No.	8629	8180	8180	15111	15111	15111
	No. Req'd	3	3	3	5	5	5
	Price	$47	$32	$32	$47	$47	$47
KNIFE	**Logan Part No.**	**Q5008**	**Q5009**	**Q5009**	**Q5012**	**Q5012**	**Q5012**
	Bowen No.	9042	8177	8177	15102	15102	15102
	No. Req'd	3	3	3	5	5	5
	Price	$299	$763	$763	$564	$564	$564
KNIFE BEARING SCREW	**Logan Part No.**	**Q6005**	**Q6009**	**Q6009**	**Q6012**	**Q6013**	**Q6013**
	Bowen No.	8576	8229	8229	15553	15112	15112
	No. Req'd	3	3	3	5	5	5
	Price	$2	$2	$2	$8	$8	$8
KNIFE PIN	**Logan Part No.**	**Q7004**	**Q7009**	**Q7009**	**Q7012**	**Q7013**	**Q7013**
	Bowen No.	8573	8178	8178	15558	15113	15113
	No. Req'd	3	3	3	5	5	5
	Price	$20	$22	$22	$22	$24	$24
KNIFE PIN SCREW	**Logan Part No.**	**Q8004**	**Q8009**	**Q8009**	**Q8012**	**Q8012**	**Q8012**
	Bowen No.	8574	8208	8208	15114	15114	15114
	No. Req'd	3	3	3	5	5	5
	Price	$2	$2	$2	$3	$3	$3
KNIFE BLOCK	**Logan Part No.**	**Q9007**	**Q9009**	**Q9009**	**Q9012**	**Q9012**	**Q9012**
	Bowen No.	8846	8183	8183	15115	15115	15115
	No. Req'd	3	3	3	5	5	5
	Price	$237	$237	$237	$352	$352	$352
TOP THRUST	**Logan Part No.**	**Q10008**	**Q10009**	**Q10011**	**Q10012**	**Q10013**	**Q10014**
	Bowen No.	8847	8241	8748	15534	15099	41878
	Price	$2,001	$2,118	$2,471	$3,104	$3,181	$3,320

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		5 IUDP	5 Csg	7 Csg	8-5/8 to 9 Csg	9-5/8 Csg	11-3/4 Csg
CAN BE DRESSED FOR		...	5-1/2 Csg	7-5/8, 8 Csg 8-1/2 Csg	9-5/8 Csg	10-3/4 Csg 11-3/4 Csg	12 LP
MINIMUM CUTTER O.D.		3-3/8	4	5-11/16	7-1/4	8-1/4	...
STANDARD ASSEMBLY		Drag Spring	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-008**	**409-009**	**409-011**	**409-012**	**409-013**	**409-014**
	Bowen No.	9081	8200	8745	15532	15080	41876
SPLIT THRUST	**Logan Part No.**	**Q11007**	**Q11009**	**Q11011**	**Q11012**	**Q11013**	**Q11014**
	Bowen No.	8848	8185	8750	15535	15084	41879
	Price	$1,739	$1,796	$1,899	$2,327	$2,384	$3,216
CONE	**Logan Part No.**	**Q12008**	**Q12009**	**Q12011**	**Q12012**	**Q12013**	**Q12014**
	Bowen No.	9083	8186	8751	15536	15085	41880
	Price	$1,622	$1,973	$2,679	$3,415	$4,428	$4,381
MAIN SPRING	**Logan Part No.**	**Q13008**	**Q13009**	**Q13011**	**Q13012**	**Q13013**	**Q13014**
	Bowen No.	9084	8187	8752	15537	15086	41881
	Price	$154	$154	$389	$359	$439	$491
SPRING STOP	**Logan Part No.**	**Q14007**	**Q14009**	**Q14011**	**Q14012**	**Q14013**	**Q14014**
	Bowen No.	8851	8209	8753	15538	15087	41882
	Price	$892	$275	$343	$367	$589	$589
SLIP	**Logan Part No.**	**Q15008**	**Q15009**	**Q15011**	**Q15012**	**Q15013**	**Q15014**
(3 req'd)	Bowen No.	9043	1924	8754	15539	15275	41883
	Price	$625	$621	$827	$873	$873	$1,076
GRIP JAW SET	**Logan Part No.**	**...**	**Q16009**	**Q16011**	**Q16012**	**Q16013**	**Q16014**
	Bowen No.	...	8193	8755	15540	15089	41884
	Price	...	$1,214	$1,604	$1,813	$1,899	$2,092
GRIP JAW SPRING	**Logan Part No.**	**...**	**Q17009**	**Q17011**	**Q17012**	**Q17012**	**Q17012**
(3 req'd)	Bowen No.	...	8194	8756	15108	15108	15108
	Price	...	$41	$90	$90	$90	$90
BOWL	**Logan Part No.**	**Q18008**	**Q18009**	**Q18011**	**Q18012**	**Q18013**	**Q18014**
	Bowen No.	9044	8190	8761	15542	15090	41885
	Price	$4,231	$4,282	$6,737	$7,414	$7,664	$12,108
GRIP JAW STOP	**Logan Part No.**	**Q19005**	**Q19009**	**Q19011**	**Q19012**	**Q19013**	**Q19014**
	Bowen No.	8590	8202	8757	15543	15091	41886
	Price	$1,151	$447	$470	$516	$578	$1,076
GRIP JAW STOP SCREW	**Logan Part No.**	**Q20005**	**Q20009**	**Q20010**	**Q20010**	**Q20010**	**Q20010**
(3 req'd)	Bowen No.	62681	25221	8251	8251	8251	8251
	Price	$26	$27	$8	$8	$8	$8
WICKERED	**Logan Part No.**	**Q21008**	**Q21009**	**Q21011**	**Q21012**	**Q21013**	**Q21014**
SLEEVE LONG	Bowen No.	9045	8236	8762	15546	15096	41888
	Price	$1,140	$1,214	$1,650	$2,118	$2,208	$2,403
BOTTOM NUT	**Logan Part No.**	**Q22007**	**Q22009**	**Q22011**	**Q22012**	**Q22013**	**Q22014**
	Bowen No.	8857	8196	8763	15547	15097	41889
	Price	$470	$581	$1,456	$2,575	$2,679	$4,177

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

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Logan Internal Cutters

PIPE SIZE TO CUT		5 IUDP	5 Csg	7 Csg	8-5/8 to 9 Csg	9-5/8 Csg	11-3/4 Csg
CAN BE DRESSED FOR		...	5-1/2 Csg	7-5/8, 8 Csg, & 8-1/2 Csg	9-5/8 Csg	10-3/4 Csg 11-3/4 Csg	12 LP
MINIMUM CUTTER O.D.		3-3/8	4	5-11/16	7-1/4	8-1/4	...
STANDARD ASSEMBLY		Drag Spring	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-008**	**409-009**	**409-011**	**409-012**	**409-013**	**409-014**
	Bowen No.	9081	8200	8745	15532	15080	41876
WIPER BLOCK	**Logan Part No.**	**...**	**Q23009**	**Q23011**	**Q23012**	**Q23013**	**Q23014**
(3 req'd)	Bowen No.	...	8191	8758	15548	15098	41887
	Price	...	$439	$589	$726	$762	$844
WIPER BLOCK SPRING	**Logan Part No.**	**...**	**Q24005**	**Q24010**	**Q24012**	**Q24012**	**Q24012**
(9 req'd)	Bowen No.	...	8599	8759	15276	15276	15276
	No. Req'd	...	24	24	36	36	36
	Price	...	$20	$20	$20	$20	$20
WIPER BLOCK SCREW	**Logan Part No.**	**...**	**Q25005**	**Q25010**	**Q25010**	**Q25010**	**Q25010**
(6 req'd)	Bowen No.	...	8856	8760	8760	8760	8760
	Price	...	$55	$38	$38	$38	$38
BOWL DRAG SPRING TYPE	**Logan Part No.**	**...**	**Q26005**	**...**	**...**	**...**	**...**
	Bowen No.	...	8201	...	...	...	...
	Price	...	$4,290	...	...	...	...
MANDREL EXTENSION	**Logan Part No.**	**Q27008**	**Q27009**	**Q27011**	**Q27012**	**Q27013**	**Q27014**
	Bowen No.	9093	8237	8246	15544	15092	41892
	Price	$1,373	$1,710	$2,625	$3,052	$3,569	*
DRAG SPRING	**Logan Part No.**	**Q28008**	**Q28009**	**Q28010**	**Q28012**	**Q28012**	**Q28014**
(3 req'd)	Bowen No.	9092	8203	8247	15093	15093	41890
	Price	$331	$331	$589	$294	$294	*
DRAG SPRING RING	**Logan Part No.**	**Q29007**	**Q29009**	**Q29011**	**Q29012**	**Q29013**	**Q29014**
	Bowen No.	8855	8205	8248	15545	15095	41891
	Price	$564	$621	$762	$1,020	$1,115	*
DRAG SPRING SCREW	**Logan Part No.**	**Q20005**	**Q20009**	**Q20010**	**Q20010**	**Q20010**	**Q20010**
(6 req'd)	Bowen No.	62681	25221	8251	8251	8251	8251
	No. Req'd	...	3	3	3	3	3
	Price	$26	$28	$8	$8	$8	$8
WICKERED SLEEVE SHORT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
DRAG SPRING SHORT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
(3 req'd)	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
ROD KNIFE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...

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Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		5 IUDP	5 Csg	7 Csg	8-5/8 to 9 Csg	9-5/8 Csg	11-3/4 Csg
CAN BE DRESSED FOR		...	5-1/2 Csg	7-5/8, 8 Csg, & 8-1/2 Csg	9-5/8 Csg	10-3/4 Csg 11-3/4 Csg	12 LP
MINIMUM CUTTER O.D.		3-3/8	4	5-11/16	7-1/4	8-1/4	...
STANDARD ASSEMBLY		Drag Spring	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-008**	**409-009**	**409-011**	**409-012**	**409-013**	**409-014**
	Bowen No.	9081	8200	8745	15532	15080	41876
TOP THRUST	**Logan Part No.**	**...**	**Q34009**	**Q34011**	**Q34012**	**Q39015**	**Q34014**
TO CUT COUPLING	Bowen No.	...	8184	8749	15541	15083	41896
	Price	...	$960	$2,315	$1,756	$2,347	*
TOP THRUST	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
SLIP	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
WIPER BLOCK	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
BOTTOM NUT	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...
KNIFE BLOCK	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...
	Price	...	...	...	...	...	...

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Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
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Logan Internal Cutters

PIPE SIZE TO CUT		16 Csg	20 Tbg
CAN BE DRESSED FOR		18-5/8 Csg	20-3/4 Csg
MINIMUM CUTTER O.D.		14-1/2	18-5/8
STANDARD ASSEMBLY		Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-016**	**409-017**
	Bowen No.	21240	19760
	Price	$115,953	$154,204
MANDREL	**Logan Part No.**	**Q1016**	**Q1017**
	Bowen No.	21241	19761
	Price	$36,529	$51,673
KNIFE BEARING	**Logan Part No.**	**Q2012**	**Q2012**
	Bowen No.	15110	15110
	No. Req'd	5	5
	Price	$194	$194
KNIFE SPRING SCREW	**Logan Part No.**	**Q3012**	**Q3012**
	Bowen No.	9558	9558
	No. Req'd	5	5
	Price	$2	$2
KNIFE SPRING	**Logan Part No.**	**Q4012**	**Q4012**
	Bowen No.	15111	15111
	No. Req'd	5	5
	Price	$47	$47
KNIFE	**Logan Part No.**	**Q5012**	**Q5012**
	Bowen No.	15102	15102
	No. Req'd	5	5
	Price	$564	$564
KNIFE BEARING SCREW	**Logan Part No.**	**Q6013**	**Q6013**
	Bowen No.	15112	15112
	No. Req'd	5	5
	Price	$8	$8
KNIFE PIN	**Logan Part No.**	**Q7013**	**Q7013**
	Bowen No.	15113	15113
	No. Req'd	5	5
	Price	$24	$24
KNIFE PIN SCREW	**Logan Part No.**	**Q8012**	**Q8012**
	Bowen No.	15114	15114
	No. Req'd	5	5
	Price	$3	$3
KNIFE BLOCK	**Logan Part No.**	**Q9012**	**Q9012**
	Bowen No.	15115	15115
	No. Req'd	5	5
	Price	$352	$352

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Special Notes:

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(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		16 Csg	20 Csg
CAN BE DRESSED FOR		18-5/8 Csg	20-3/4 Csg
MINIMUM CUTTER O.D.		14-1/2	18-5/8
STANDARD ASSEMBLY		Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-016**	**409-017**
	Bowen No.	21240	19760
TOP THRUST	**Logan Part No.**	**Q10016**	**Q10017**
	Bowen No.	21242	19762
	Price	$4,292	$5,780
SPLIT THRUST	**Logan Part No.**	**Q11016**	**Q11017**
	Bowen No.	21243	19763
	Price	$6,578	$7,609
CONE	**Logan Part No.**	**Q12016**	**Q12017**
	Bowen No.	21244	19764
	Price	$14,172	$20,440
MAIN SPRING	**Logan Part No.**	**Q13016**	**Q13017**
	Bowen No.	21245	19765
	Price	$582	$776
SPRING STOP	**Logan Part No.**	**Q14016**	**Q14017**
	Bowen No.	21246	19766
	Price	$814	$1,117
SLIP	**Logan Part No.**	**Q15016**	**Q15017**
	Bowen No.	21247	19767
	No. Req'd	3	3
	Price	$2,184	$2,390
GRIP JAW SET	**Logan Part No.**	**Q16016**	**Q16017**
	Bowen No.	21248	19768
	Price	$2,479	$2,523
GRIP JAW SPRING	**Logan Part No.**	**Q17016**	**8234**
	Bowen No.	21249	19769
	No. Req'd	4	4
	Price	$75	$75
BOWL	**Logan Part No.**	**Q18016**	**Q18017**
	Bowen No.	21250	19770
	Price	$17,963	$29,125
GRIP JAW STOP	**Logan Part No.**	**Q19016**	**Q19017**
	Bowen No.	21251	19771
	Price	$1,769	$2,347
GRIP JAW STOP SCREW	**Logan Part No.**	**Q20016**	**Q20010**
	Bowen No.	21679	8251
	No. Req'd	3	3
	Price	$8	$8

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Special Notes:

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(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
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Logan Internal Cutters

PIPE SIZE TO CUT		16 Csg	20 Csg
CAN BE DRESSED FOR		18-5/8 Csg	20-3/4 Csg
CUTTER O.D. (MINIMUM)		14-1/2	18-5/8
STANDARD ASSEMBLY		Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-016**	**409-017**
	Bowen No.	21240	19760
WICKERED SLEEVE LONG	**Logan Part No.**	**Q21016**	**Q21017**
	Bowen No.	21253	19778
	Price	$2,714	$2,788
BOTTOM NUT	**Logan Part No.**	**Q22016**	**Q22017**
	Bowen No.	21254	19779
	Price	$7,110	$10,129
WIPER BLOCK	**Logan Part No.**	**Q23016**	**Q23017**
	Bowen No.	21252	19772
	No. Req'd	8	6
	Price	$905	$1,117
WIPER BLOCK SPRING	**Logan Part No.**	**Q24012**	**Q24012**
	Bowen No.	15276	15276
	No. Req'd	54	48
	Price	$20	$20
WIPER BLOCK SCREW	**Logan Part No.**	**Q25016**	**Q25010**
	Bowen No.	21678	8760
	No. Req'd	12	6
	Price	*	$20
BOWL DRAG SPRING TYPE	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
MANDREL EXTENSION	**Logan Part No.**	**Q27016**	**Q27017**
	Bowen No.	21255	19773
	Price	*	*
DRAG SPRING	**Logan Part No.**	**Q28016**	**Q28017**
	Bowen No.	21256	19774
	No. Req'd	6	6
	Price	*	*
DRAG SPRING RING	**Logan Part No.**	**Q29016**	**Q29017**
	Bowen No.	21257	19799
	Price	*	*
DRAG SPRING SCREW	**Logan Part No.**	**Q20010**	**Q20010**
	Bowen No.	8251	8251
	No. Req'd	6	6
	Price	$8	$8

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Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		16 Csg	20 Csg
CAN BE DRESSED FOR		18-5/8 Csg	20-3/4 Csg
MINIMUM CUTTER O.D.		14-1/2	18-5/8
STANDARD ASSEMBLY		Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-016**	**409-017**
	Bowen No.	21240	19760
WICKERED SLEEVE SHORT	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
DRAG SPRING SHORT	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	No. Req'd	...	...
	Price	...	...
ROD KNIFE	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
TOP THRUST TO CUT COUPLING	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
TOP THRUST	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
SLIP	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
WIPER BLOCK	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
BOTTOM NUT	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...
KNIFE BLOCK	**Logan Part No.**	**...**	**...**
	Bowen No.	...	...
	Price	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

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Logan Internal Cutters

PIPE SIZE TO CUT		2-3/8 Tbg	3-1/2 0D Tbg	3-1/2 0D Tbg	4-1/2 FHDP	4-1/2 FHDP	4-1/2 IFDP	4-1/2 IFDP
CAN BE DRESSED TO CUT Csg		2-7/8 IF DP	4 OD Tbg & 2-7/8 Tbg	4-1/2 OD	4-1/2 Tbg	4-1/2 OD X-Hole DP	4-1/2 OD Csg	4-3/4 OD Tbg & Csg
CUTTER O.D. (MINIMUM)		1-13/16	2-5/8	2-5/8	2-1/2	2-1/2	3-3/8	3-3/8
STANDARD ASSEMBLY		Drag Spring	Wiper Block	Wiper Block	Drag Spring	Drag Spring	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-002**	**409-005**	**409-005**	**409-006**	**409-006**	**409-007**	**409-007**
	Bowen No.	2174	8570	8570	9465	9465	8844	8844
TOP THRUST	**Logan Part No.**	**Q39000**	**Q39003**	**Q34005**	**...**	**...**	**...**	**Q10008**
	Bowen No.	8437	8613	8581	...	...	...	8847
	Price	$747	$1,333	$1,333	...	...	...	$2,001
SLIP	**Logan Part No.**	**Q40000**	**Q40003**	**Q35005**	**...**	**Q40006**	**Q40007**	**Q40007**
	Bowen No.	2181	8577	8587	...	23945	8932	8932
	No. Req'd	3	3	3	...	3	3	3
	Price Each	$417	$589	$591	...	$589	$621	$621
WIPER BLOCK	**Logan Part No.**	**...**	**Q41003**	**Q36005**	**...**	**...**	**Q41007**	**Q41007**
	Bowen No.	...	8614	8605	...	...	8933	8933
	No. Req'd	...	3	3	...	...	3	3
	Price	...	$325	$359	...	...	$367	$367
DRAG SPRING	**Logan Part No.**	**...**	**Q42003**	**...**	**Q42005**	**Q42006**	**...**	**Q42005**
	Bowen No.	...	8611	...	8611	23946	...	8611
	No. Req'd	...	3	...	3	3	...	3
	Price	...	$136	...	$134	$114	...	$134
BOTTOM NUT	**Logan Part No.**	**...**	**Q43003**	**Q43004**	**Q43005**	**...**	**...**	**Q43008**
	Bowen No.	...	8602	8634	9457	...	...	8934
	Price	...	$423	$470	$53	...	...	$518
KNIFE BLOCK	**Logan Part No.**	**...**	**...**	**Q38005**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	22278	...	...	...	...
	No. Req'd	...	...	3	...	...	...	...
	Price	...	...	$268	...	...	...	...
TOP THRUST CUT COUPLING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
KNIFE	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

Logan Internal Cutters

PIPE SIZE TO CUT		4-1/2 IFDP	4-1/2 IFDP	5 OD Csg	5-1/2 Csg	7 OD Csg		
CAN BE DRESSED TO CUT		5 OD Csg	5-1/2 OD Csg	5-1/2 OD Csg	5-3/4 OD Csg	7-5/8 OD Csg		
CUTTER O.D. (MINIMUM)		3-3/8	3-3/8	4	4	5-11/16		
STANDARD ASSEMBLY		Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block		
COMPLETE ASSEMBLY	**Logan Part No.**	**409-007**	**409-007**	**409-009**	**409-009**	**409-011**		
	Bowen No.	8844	8844	8200	8200	8745		
TOP THRUST	**Logan Part No.**	**Q10008**	**Q10008**	**Q39009**	**Q39020**	**Q34011**		
	Bowen No.	8847	8847	8242	54550	8749		
	Price	$2,001	$2,001	$2,118	$2,409	$2,471		
SLIP	**Logan Part No.**	**Q40008**	**Q40020**	**Q40009**	**Q40021**	**Q40012**		
	Bowen No.	14004	53055	8405	54551	8764		
	No. Req'd	3	3	3	3	3		
	Price Each	$647	$682	$621	$737	$873		
WIPER BLOCK	**Logan Part No.**	**Q41008**	**Q41020**	**Q41009**	**Q41021**	**Q41012**		
	Bowen No.	14001	53056	8219	54552	8770		
	No. Req'd	3	3	3	3	3		
	Price	$367	$470	$439	$530	$643		
DRAG SPRING	**Logan Part No.**	**Q42005**	**...**	**Q42009**	**Q42013**	**Q42010**		
	Bowen No.	8611	...	8207	54553	8249		
	No. Req'd	3	...	3	3	3		
	Price	$134	...	$705	$134	$136		
BOTTOM NUT	**Logan Part No.**	**Q43009**	**Q43009**	**Q43010**	**Q43010**	**Q43013**		
	Bowen No.	14002	14002	8234	8234	8774		
	Price	$581	$581	$643	$643	$1,619		
KNIFE BLOCK	**Logan Part No.**	**Q44009**	**Q44010**	**...**	**...**	**...**		
	Bowen No.	14003	53057	...	...	...		
	No. Req'd	3	3	...	...	...		
	Price	$268	$291	...	...	...		
TOP THRUST CUT COUPLING	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**		
	Bowen No.	...	...	...	...	...		
	Price	...	...	...	...	...		
KNIFE	**Logan Part No.**	**...**	**Q5008**	**...**	**...**	**...**		
	Bowen No.	...	9042	...	...	...		
	Price	...	$299	...	...	...		

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Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
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Logan Internal Cutters

PIPE SIZE TO CUT		7 OD Csg	8 5/8 – 9 OD Csg	9-5/8 OD Csg	9-5/8 OD Csg	11-3/4 OD Csg	16 OD Csg	20 OD Csg
CAN BE DRESSED TO CUT		8 & 8-1/8 OD Csg	9-5/8 OD Csg	10-3/4 OD Csg	11-3/4 OD Csg	12 LP	18-5/8 OD Csg	20-3/4 OD Csg
CUTTER O.D. (MINIMUM)		5-11/16	7-1/4	8-1/4	8-1/4	...	14-1/2	18-5/8
STANDARD ASSEMBLY		Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block	Wiper Block
COMPLETE ASSEMBLY	**Logan Part No.**	**409-011**	**409-012**	**409-013**	**409-013**	**409-014**	**409-016**	**409-017**
	Bowen No.	8745	15532	15080	15080	41876	21240	19760
TOP THRUST	**Logan Part No.**	**Q34011**	**Q34012**	**Q39015**	**Q45015**	**Q34014**	**...**	**Q39019**
	Bowen No.	8749	15541	15083	15116	41896	...	19776
	Price	$2,471	$3,104	$3,181	$3,181	$3,317	...	$5,823
SLIP	**Logan Part No.**	**Q40013**	**Q40014**	**Q40015**	**Q40016**	**Q40017**	**Q40018**	**Q40019**
	Bowen No.	15408	15551	15088	15079	41894	21672	19777
	No. Req'd	3	3	3	3	3	3	3
	Price Each	$873	$972	$994	$1,075	$1,220	$2,347	$2,624
WIPER BLOCK	**Logan Part No.**	**Q41013**	**Q41014**	**Q41015**	**Q41016**	**Q41017**	**Q41018**	**Q41019**
	Bowen No.	15407	15554	15101	15078	41893	21671	19775
	No. Req'd	3	3	3	3	3	3	3
	Price	$699	$813	$827	$905	$915	$1,005	$1,220
DRAG SPRING	**Logan Part No.**	**Q42010**	**Q42011**	**Q42011**	**Q28012**	**...**	**...**	**...**
	Bowen No.	8249	15109	15109	15129	...	...	...
	No. Req'd	3	3	3	3	...	...	...
	Price	$136	*	*	*	...	...	...
BOTTOM NUT	**Logan Part No.**	**Q43014**	**Q43017**	**Q43015**	**Q43016**	**Q43018**	**...**	**...**
	Bowen No.	15405	15552	15268	15077	41895	...	...
	Price	$1,766	$2,751	$2,914	$3,163	$4,604	...	...
KNIFE BLOCK	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	...	...	...	...	...
	No. Req'd	...	...	...	...	...	...	...
	Price	...	...	...	...	...	...	...
TOP THRUST CUT COUPLING	**Logan Part No.**	**...**	**Q45014**	**Q45015**	**...**	**...**	**...**	**...**
	Bowen No.	...	15549	15116	...	...	...	...
	Price	...	$1,873	$3,043	...	...	...	...
KNIFE	**Logan Part No.**	**Q46013**	**...**	**...**	**...**	**Q46018**	**...**	**...**
	Bowen No.	15406	...	...	...	21673	...	...
	Price	$629	...	...	...	$647	...	...

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Special Notes:

(1) Slip number Q15009 is for 5" 15-21# casing. For 5" 11.5-13# casing use Slip number Q40009.

(2) Where both Wiper Block and Drag Spring parts are shown, the cutter can be ordered with either. If not specified, Wiper Block parts will be furnished. (Note: Assemblies are priced differently.)

When ordering, please specify:

(1) Name and part number of assembly or part
(2) Size of pipe to cut
(3) Whether or not Bottom Nut is to be fitted for collar finder
(4) Knives with carbide tips available upon request
(5) Size and type of top connection

Recommended Spare Parts:

(1) 6 sets of Knives
(2) 2 sets of Knife Pins
(3) 6 sets of Knife Springs
(4) 2 sets of Knife Spring Screws
(5) 1 set of Slips
(6) 1 set of Wiper Blocks
(7) 1 set of Wiper Block Springs
(8) 1 set of Wiper Block Screws
(9) 1 set of Grip Jaw Springs
(10) 1 Wickered Sleeve
(11) 1 set of Drag Springs
(12) 1 set of Drag Springs Screws

LOGAN INTERNAL PRESSURE PIPE CUTTERS

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Logan Internal Pressure Pipe Cutters

PIPE SIZE TO CUT		4	4-1/2 to 6-1/8	6-5/8 to 7-5/8	8-5/8 to 11-3/4	9-5/8 to 36	10-3/4 to 36	13-3/8 to 36
CUTTER O.D.		3-1/4	3-5/8	5-9/16	7-3/8	8-1/4	9-1/2	11-3/4
CONNECTION SIZE (BOX UP)		2-3/8 Reg	2-3/8 IF	3-1/2 IF	Blank	Blank	Blank	Blank
CONNECTION SIZE (BOX DOWN)		2-3/8 Reg	2-3/8 Reg	3-1/2 Reg	Blank	Blank	Blank	Blank
COMPLETE ASSEMBLY	**Logan Part No.**	**412-325**	**412-363**	**412-556**	**412-738**	**412-825**	**412-950**	**412-1175**
	Bowen No.	150444	147483	147489	150959	147495	147343	147369
	Price	$12,675	$13,827	$19,123	...	$43,646	$51,516	$75,903
BODY	**Logan Part No.**	**R1000**	**R1001**	**R1002**	**R1003**	**R1004**	**R1005**	**R1006**
	Bowen No.	150445	147484	147490	151022	147496	147344	147370
	Price	$6,169	$4,137	$6,647	...	$19,036	$21,698	$38,850
KNIFE (UNDRESSED)	**Logan Part No.**	**R2000**	**R2001**	**R2002**	**R2003**	**R2004**	**R2005**	**R2013**
	Bowen No.	150446	80357	80717	151023	147008	147357	147358
	No. Req'd	3	3	3	3	3	3	3
	Price	*	*	*	*	*	*	*
KNIFE PIN	**Logan Part No.**	**R3000**	**R3000**	**R3002**	**R3003**	**R3004**	**R3005**	**R3005**
	Bowen No.	80359	80359	80719	151024	147009	147371	147371
	No. Req'd	3	3	3	3	3	3	3
	Price	$141	$141	$90	*	$581	$581	$581
KNIFE PIN RETAINER SCREW	**Logan Part No.**	**AK9004**	**AK9004**	**R4002**	**R4003**	**R4003**	**R4004**	**R4004**
	Bowen No.	23508	23508	13847	148526	148526	148256	148256
	No. Req'd	3	3	3	3	3	3	3
	Price	$2	$2	$2	$3	$3	$3	$55
SPRING SLEEVE	**Logan Part No.**	**...**	**R5001**	**R5002**	**...**	**R5003**	**...**	**...**
	Bowen No.	...	147487	147493	...	147499	...	...
	Price	...	$174	$172	...	$210	...	...
SPRING	**Logan Part No.**	**R6000**	**R6001**	**R6002**	**R6003**	**R6003**	**R6004**	**R6004**
	Bowen No.	150449	147488	147494	147500	147500	147384	147384
	Price	$404	$119	$119	$172	$172	$256	$256
PISTON	**Logan Part No.**	**R7000**	**R7001**	**R7002**	**R7003**	**R7004**	**R7005**	**R7005**
	Bowen No.	150450	147485	147491	151025	147497	147373	147373
	Price	$1,354	$1,487	$1,973	...	$3,104	$3,899	$3,899
PISTON O.D. SEAL	**Logan Part No.**	**568-330**	**568-333**	**568-346**	**R8003**	**R8004**	**R8005**	**R8005**
	Bowen No.	27-33	27-36	27-49	151026	147012	147374	147374
	Price	$3	$3	$9	*	$444	$818	$818
PISTON I.D. SEAL	**Logan Part No.**	**568-220**	**568-220**	**568-220**	**568-228**	**568-331**	**568-331**	**568-331**
	Bowen No.	27-25	27-25	27-25	568228	27-34	27-34	27-34
	Price	$3	$3	$3	$3	$3	$3	$3
PISTON BUSHING	**Logan Part No.**	**R10000**	**R10000**	**R10000**	**R10002**	**R10002**	**R10002**	**R10002**
	Bowen No.	80356	80356	80356	147013	147013	147013	147013
	Price	$564	$564	$564	$450	$450	$450	$450
PISTON BUSHING RETAINER RING	**Logan Part No.**	**R11000**	**R11000**	**R11000**	**R11001**	**R11001**	**R11001**	**R11001**
	Bowen No.	21116	21116	21116	147014	147014	147014	147014
	Price	$8	$8	$8	$16	$16	$16	$16
BIT JET RETAINER	**Logan Part No.**	**R12000**	**R12000**	**R12001**	**R12002**	**R12002**	**R12003**	**R12003**
	Bowen No.	80352	80352	80714	147015	147015	147377	147377
	Price	$1,004	$1,004	$1,294	$3,015	$3,015	$3,193	$3,193

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Optional bullnose nut available upon request.

When ordering, please specify:

(1) Size and type of top connection

(2) O.D. of pipe to be cut

(3) Dressed or undressed knives when ordering

Logan Internal Pressure Pipe Cutters

PIPE SIZE TO CUT		4	4-1/2 to 6-1/8	6-5/8 to 7-5/8	8-5/8 to 11-3/4	9-5/8 to 36	10-3/4 to 36	13-3/8 to 36
CUTTER O.D.		3-1/4	3-5/8	5-9/16	7-3/8	8-1/4	9-1/2	11-3/4
CONNECTION SIZE (BOX UP)		2-3/8 Reg	2-3/8 IF	3-1/2 IF	Blank	Blank	Blank	Blank
CONNECTION SIZE (BOX DOWN)		2-3/8 Reg	2-3/8 Reg	3-1/2 Reg	Blank	Blank	Blank	Blank
COMPLETE ASSEMBLY	**Logan Part No.**	**412-325**	**412-363**	**412-556**	**412-738**	**412-825**	**412-950**	**412-1175**
	Bowen No.	150444	147483	147489	150959	147495	147343	147369
BIT JET RETAINER SEAL	**Logan Part No.**	**568-117**	**568-117**	**568-117**	**568-219**	**568-219**	**568-219**	**568-219**
	Bowen No.	568117	568117	568117	27-24	27-24	27-24	27-24
	Price	$3	$3	$3	$7	$7	$7	$7
BIT JET RETAINER STEM	**Logan Part No.**	**R16000**	**R16000**	**R16000**	**R16001**	**R16001**	**R16001**	**R16001**
	Bowen No.	80354	80354	80354	147017	147017	147017	147017
	Price	$1,432	$1,432	$1,432	$2,698	$2,698	$2,698	$2,698
STOP SPIDER	**Logan Part No.**	**R17000**	**R17001**	**R17002**	**R17003**	**R17004**	**R17005**	**R17006**
	Bowen No.	150451	80353	80715	151027	145168	147347	147381
	Price	$1,533	$1,393	$1,752	*	$1,927	$2,033	$2,238
STOP SPIDER SET SCREW	**Logan Part No.**	**P12008**	**R18001**	**R18002**	**AX10002**	**AX10002**	**AX10002**	**R18004**
	Bowen No.	23705	23706	23709	145165	145165	145165	23384
	No. Req'd	3	3	3	3	3	3	3
	Price	$3	$2	$2	$7	$7	$7	$2
BIT JET	**Logan Part No.**	**R14000**	**R14001**	**R14001**	**R14002**	**R14002**	**R14002**	**R14002**
	Bowen No.	150682	80453	80453	147016	147016	147016	147016
	Price	*	$106	$106	$272	$272	$272	$272
BIT JET RETAINER RING	**Logan Part No.**	**R15000**	**R15000**	**R15000**	**R15002**	**R15002**	**R15002**	**R15002**
	Bowen No.	54131	54131	54131	33788	33788	33788	33788
	Price	$12	$12	$12	$7	$7	$7	$7
TOP SUB	**Logan Part No.**	**R19000**	**R19001**	**R19002**	**R19003**	**R19004**	**R19005**	**R19006**
	Bowen No.	150452	80351	80713	151028	147018	147356	147383
	Price	$2,471	$1,632	$2,278	*	$4,962	$9,023	$18,147
TOP SUB SEAL	**Logan Part No.**	**568-231**	**568-234**	**568-249**	**568-359**	**568-438**	**568-440**	**568-447**
	Bowen No.	30-9	30-12	30-27	568359	27-65	568440	27-74
	Price	$3	$7	$12	$19	$19	$20	$22
TOP SUB SEAL	**Logan Part No.**	**...**	**...**	**...**	**...**	**568-437**	**...**	**...**
	Bowen No.	...	...	...	...	27-64	...	...
	Price	...	...	...	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Optional bullnose nut available upon request.

When ordering, please specify:

(1) Size and type of top connection

(2) O.D. of pipe to be cut

(3) Dressed or undressed knives when ordering

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Logan Internal Pressure Pipe Cutters

CENTRALIZING TOP SUBS

5" O.D.	**Logan Part No.**	**...**	**R2100**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	80566	...	...	...	...	...
	Price	...	...	...	...	...	...	...
5-1/2" O.D.	**Logan Part No.**	**...**	**R2101**	**...**	**...**	**...**	**...**	**...**
	Bowen No.	...	80567	...	...	...	...	...
	Price	...	...	...	...	...	...	...
7" O.D.	**Logan Part No.**	**...**	**...**	**R2102**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	80720	...	...	...	...
	Price	...	...	...	...	...	...	...
7-5/8" O.D.	**Logan Part No.**	**...**	**...**	**R2103**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	80721	...	...	...	...
	Price	...	...	...	...	...	...	...

KNIVES (UNDRESSED)

7-5/8" to 9-5/8" O.D.	**Logan Part No.**	**...**	**...**	**R2006**	**...**	**...**	**...**	**...**
	Bowen No.	...	...	81896	...	...	...	...
	Price	...	...	...	...	...	...	...
10-3/4" O.D.	**Logan Part No.**	**...**	**...**	**...**	**R2007**	**R2008**	**...**	**...**
	Bowen No.	...	...	...	151029	147021	...	...
	Price	...	...	...	*	...	...	...
11-3/4" to 13-3/8" O.D.	**Logan Part No.**	**...**	**...**	**...**	**R2007**	**...**	**R2026**	**...**
	Bowen No.	...	...	...	151029	...	147358	...
	Price	...	...	...	*	...	...	...
13-3/8" to 16" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**R2011**	**R2026**	**R2013**
	Bowen No.	...	...	...	...	147022	147359	147358
	Price	...	...	...	...	*	...	*
16" to 18-5/8" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**R2014**
	Bowen No.	...	...	...	...	...	...	147359
	Price	...	...	...	...	...	...	*
18" to 20" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**R2015**	**...**	**...**
	Bowen No.	...	...	...	...	147023	...	...
	Price	...	...	...	...	...	...	...
18-5/8 to 24" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**R2027**	**R2017**
	Bowen No.	...	...	...	...	...	...	147360
	Price	...	...	...	...	...	...	...
24" to 30" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**R2018**	**R2020**	**...**
	Bowen No.	...	...	...	...	147024	147361	...
	Price	...	...	...	...	...	...	...
26" to 30" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**...**	**...**	**R2020**
	Bowen No.	...	...	...	...	...	...	147361
	Price	...	...	...	...	...	...	...
30" to 34" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**R2021**	**...**	**...**
	Bowen No.	...	...	...	...	147025	...	...
	Price	...	...	...	...	...	...	...
34" to 36" O.D.	**Logan Part No.**	**...**	**...**	**...**	**...**	**R2022**	**R2024**	**R2024**
	Bowen No.	...	...	...	...	147026	147362	147362
	Price	...	...	...	...	...	...	...

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** Available upon request.*

Special Notes:

(1) Optional bullnose nut available upon request.

When ordering, please specify:

(1) Size and type of top connection

(2) O.D. of pipe

(3) Dressed or undressed knives when ordering

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Notes

Logan HE DH Releasable Washover External Tubing Cutter

OUTSIDE DIAMETER (CUTTER)		4-1/8"	4-9/16"	5-9/16"
INSIDE DIAMETER (CUTTER)		3-3/16"	3-3/8"	4
TUBING TO CUT		1.900" - 2-3/8"	1.900"- 2-3/8"	2-3/8" - 2-7/8"
EUE OR INT. JOINT				
COMPLETE ASSEMBLY				
W/T-DOG - SLIP	**Logan Part No.**	**14094**	**14095**	**14096**
OVERSHOT ASSEMBLY	Assembly Price	*	*	*
T-DOG OVERSHOT:	**Logan Part No.**	**14172**	**14173**	**14174**
T-DOG KIT	Price Each	*	*	*
CONSIST OF FOLLOWING:				
T-DOG CAGE	**Logan Part No.**	**213455**	**213475**	**213482**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
T-DOGS	**Logan Part No.**	**213456**	**213476**	**213493**
	Qty. Req'd	1	3	3
	Price Each	*	*	*
T-DOG SPRING	**Logan Part No.**	**113282**	**113282**	**113299**
	Qty. Req'd	3	3	3
	Price Each	*	*	*
RATCHET PAWL	**Logan Part No.**	**113866**	**113571**	**113571**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
RATCHET PAWL SPRING	**Logan Part No.**	**113568**	**113579**	**113582**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
PAWL PIN	**Logan Part No.**	**113865**	**113284**	**113572**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
T-DOG RETAINER RING	**Logan Part No.**	**113277**	**113290**	**13300**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
RETAINER RING SCREW	**Logan Part No.**	**FSHS10-24-250**	**FSHS-510-24-375**	**FSHS-250-20-500**
	Qty. Req'd	1	1	1
	Price Each	*	*	*

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When ordering, please specify:

(1) Part Name and Number
(2) Size, type and weight of Washpipe connection
(3) Size and type of Tubing to be cut (Collared or Integral)
(4) Washpipe connections at additional cost

*Available only in sets

** NOTE: 2-3.8" O.D. x 4.7Lb Tubing is the minimum diameter tubing this tool will cut through , heavier than 2-3/8" Lb./Ft.

A special centeralizer is required to cut the 2-3/8" 4.7 Lb Tubing

Recommended Spare Parts:

(1) 1 complete overshot assembly (collared or integral)
(2) 3 Sets of Race and Ball Bearing Rings
(3) 3 Sets of Knives
(4) 3 Sets of Knife Pins
(5) 3 Sets of T-Dogs for Slip Dogs and Springs

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Logan HE DH Releasable Washover External Tubing Cutter

OUTSIDE DIAMETER (CUTTER)		4-1/8"	4-9/16"	5-9/16"
INSIDE DIAMETER (CUTTER)		3-3/16"	3-3/8"	4
TUBING TO CUT		1.900" - 2-3/8"	1.900"- 2-3/8"	2-3/8" - 2-7/8"
EUE OR INT. JOINT				
REPLACEMENT PARTS				
TOP SUB	**Logan Part No.**	**213446**	**213466**	**213483**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
DRIVE SLEEVE	**Logan Part No.**	**213447**	**213467**	**213484**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
OVERSHOT BODY	**Logan Part No.**	**213448**	**213468**	**213485**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
SPRING RETAINER	**Logan Part No.**	**213449**	**213469**	**213486**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
ACTUATOR SLEEVE	**Logan Part No.**	**213450**	**213470**	**213487**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
KNIFE BODY	**Logan Part No.**	**213451**	**213471**	**213488**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
KNIFE (CARBIDE TIP)	**Logan Part No.**	**213452**	**213472**	**213489**
	Qty. Req'd	4	4	5
	Price Each	*	*	*
KNIFE PIN	**Logan Part No.**	**113274**	**113284**	**113305**
	Qty. Req'd	4	4	5
	Price Each	*	*	*
DRIVE BODY	**Logan Part No.**	**213453**	**213473**	**213490**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
***THRUST BEARING RACE**	**Logan Part No.**	**113275**	**113285**	**113295**
	Qty. Req'd	2	2	2
	Price Each	*	*	*
***BALL BEARING RING**	**Logan Part No.**	**113276**	**113286**	**113296**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
RETRACTOR SPRING	**Logan Part No.**	**113280**	**113287**	**113297**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
DRIVE SPRING	**Logan Part No.**	**113281**	**113288**	**113298**
	Qty. Req'd	1	1	1
	Price Each	*	*	*
GUIDE BUSHING	**Logan Part No.**	**213463**	**213482**	**213503**
	Qty. Req'd	1	1	1
	Price Each	*	*	*

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When ordering, please specify:

(1) Part Name and Number
(2) Size, type and weight of Washpipe connection
(3) Size and type of Tubing to be cut (Collared or Integral)
(4) Washpipe connections at additional cost

*Available only in sets

** NOTE: 2-3.8" O.D. x 4.7Lb Tubing is the minimum diameter tubing this tool will cut through , heavier than 2-3/8" Lb./Ft.

A special centerlizer is required to cut the 2-3/8" 4.7 Lb Tubing

Recommended Spare Parts:

(1) 1 complete overshot assembly (collared or integral)
(2) 3 Sets of Race and Ball Bearing Rings
(3) 3 Sets of Knives
(4) 3 Sets of Knife Pins
(5) 3 Sets of T-Dogs for Slip Dogs and Springs

LOGAN CASING ROLLERS

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Logan Casing Rollers

CASING SIZE TO ROLL		3-1/2 Tbg 3-1/2 LP 4 Tbg	4 4-3/4 5	4-1/2 5-3/4 6	5-1/2 7	6-5/8		
TOP CONNECTION		API 1-1/4 Reg	API 2-3/8 Reg	API 2-3/8 Reg	API 2-7/8 Reg	API 3-1/2 Reg		
CIRCULATION HOLE		5/16	1/4	1/2	5/8	1		
ROLLER LENGTH		3	4	4	5	6		
COMPLETE ASSEMBLY	**Logan Part No.**	**502-350**	**502-400**	**502-450**	**502-550**	**502-663**		
	Bowen No.	29046	28963	20660	20910	20920		
	Price	*	*	*	*	*		
MANDREL	**Logan Part No.**	**W1002**	**W1003**	**W1004**	**W1005**	**W1006**		
	Bowen No.	29051	28964	20661	20911	20921		
	Price	*	*	*	*	*		
NOSE CONE	**Logan Part No.**	**W2002**	**W2003**	**W2004**	**W2005**	**W2006**		
	Bowen No.	29050	28965	20662	20912	20922		
	Price	*	*	*	*	*		
BOTTOM ROLLER	**Logan Part No.**	**W3002**	**W3003**	**W3004**	**W3005**	**W3006**		
	Bowen No.	29049	28966	20663	20913	20923		
	Price	*	*	*	*	*		
MIDDLE ROLLER	**Logan Part No.**	**W4002**	**W4003**	**W4004**	**W4005**	**W4006**		
	Bowen No.	29048	28967	20664	20914	20924		
	Price	*	*	*	*	*		
TOP ROLLER	**Logan Part No.**	**W5002**	**W5003**	**W5004**	**W5005**	**W5006**		
	Bowen No.	29047	28968	20665	20915	20925		
	Price	*	*	*	*	*		
BALL BEARINGS	**Logan Part No.**	**W6002**	**W6003**	**W6003**	**W6003**	**W6006**		
	Bowen No.	27940	20666	20666	20666	20926		
	No. Req'd.	9	7	9	13	15		
	Price	*	*	*	*	*		
SET SCREW (LOADING SLOT)	**Logan Part No.**	**W7002**	**W7005**	**W7005**	**W7005**	**W7006**		
	Price	*	*	*	*	*		

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** Available upon request.*

When ordering, please specify:

(1) Name and number of assembly or part
(2) Casing O.D. and weight
(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Middle Roller for each casing size
(2) 1 Nose Cone for each casing size
(3) 1 set of Ball Bearings
(4) 2 Loading Slot Set Screws

Logan Casing Rollers

CASING SIZE TO ROLL		7-5/8 8-5/8	9 9-5/8 10	10-3/4 11-3/4 12	13 13-3/8	16 18-5/8		
TOP CONNECTION		API 4-1/2 Reg	API 4-1/2 Reg	API 6-5/8 Reg	API 6-5/8 Reg	API 6-5/8 Reg		
CIRCULATION HOLE		1-1/4	1-1/2	1-3/4	2	2		
ROLLER LENGTH		7	8	9	10	11		
COMPLETE ASSEMBLY	**Logan Part No.**	**502-763**	**502-900**	**502-1075**	**502-1300**	**502-1600**		
	Bowen No.	20930	20940	20950	20960	20970		
	Price	*	*	*	*	*		
MANDREL	**Logan Part No.**	**W1007**	**W1008**	**W1009**	**W1010**	**W1011**		
	Bowen No.	20931	20941	20951	20961	20971		
	Price	*	*	*	*	*		
NOSE CONE	**Logan Part No.**	**W2007**	**W2008**	**W2009**	**W2010**	**W2011**		
	Bowen No.	20932	20942	20952	20962	20972		
	Price	*	*	*	*	*		
BOTTOM ROLLER	**Logan Part No.**	**W3007**	**W3008**	**W3009**	**W3010**	**W3011**		
	Bowen No.	20933	20943	20953	20963	20973		
	Price	*	*	*	*	*		
MIDDLE ROLLER	**Logan Part No.**	**W4007**	**W4008**	**W4009**	**W4010**	**W4011**		
	Bowen No.	20934	20944	20954	20964	20974		
	Price	*	*	*	*	*		
TOP ROLLER	**Logan Part No.**	**W5007**	**W5008**	**W5009**	**W5010**	**W5011**		
	Bowen No.	20935	20945	20955	20965	20975		
	Price	*	*	*	*	*		
BALL BEARINGS	**Logan Part No.**	**W6007**	**W6007**	**W6007**	**W6010**	**W6010**		
	Bowen No.	20936	20936	20936	20966	20966		
	Qty. Req'd.	12	16	24	21	28		
	Price	*	*	*	*	*		
SET SCREW (LOADING SLOT)	**Logan Part No.**	**W7007**	**W7007**	**W7009**	**W7010**	**W7011**		
	Price	*	*	*	*	*		

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When ordering, please specify:

(1) Name and number of assembly or part
(2) Casing O.D. and weight
(3) Top connection, if other than standard

Recommended Spare Parts:

(1) 1 Middle Roller for each casing size
(2) 1 Nose Cone for each casing size
(3) 1 set of Ball Bearings
(4) 2 Loading Slot Set Screws

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Logan Casing Roller Range Sheet

CASING DATA		UPPER ROLLER			MIDDLE ROLLER		
SIZE	CASING WEIGHT	PART NO.	OUTSIDE DIA.	SEQ. NO.	PART NO.	OUTSIDE DIA.	SEQ. NO.
3-1/2	7.7	**W5002 29047**	2.8121	001	**W4002 29048**	2.674	001
4	9.5	**W5003 28968**	3.219	001	**W4003 28967**	3.281	001
4-1/2	9.5	**W5004 20665**	3.688	001	**W4004 20664**	3.875	002
	11.6					3.688	001
	13.6					3.526	003
4-3/4	15.8					3.875	001
5	11.5		4.250	002		4.250	008
	13.0					4.114	005
	15.0					4.192	006
	17.7		4.000	004		3.976	007
	18.0					3.965	004
	21.0		3.688	001		4.000	009
5-1/2	13.0	**W5005 20915**	4.662	005	**W4005 20914**	4.554	004
	14.0					4.738	005
	15.0					4.666	003
	15.5		4.609	001			
	17.0					4.802	001
	20.0		4.359	002		4.574	002
	23.0					4.358	006
5-3/4	14.0		4.875	004		5.082	007
	17.0					4.894	008
	19.5		4.662	005			
	22.5					4.694	009
6	15.0		5.125	006		5.300	010
	16.0					5.250	011
	18.0					5.100	012
	20.0					4.956	013
	23.0		4.875	004		4.982	014
6-5/8	17.0	**W5006 20925**	5.734	007	**W4006 20924**	5.910	001
	20.0					5.745	002
	22.0		5.609	002			
	24.0					5.609	003
	26.0					5.478	004
	26.0					5.442	005
	28.0		5.359	003		5.350	006
	29.0					5.547	007
	32.0					5.375	008
7	17.0		6.250	004		6.202	009
	20.0					6.038	010
	22.0					6.164	011
	23.0		6.000	001		6.108	012
	24.0					6.048	013
	26.0		5.830	006		6.094	014
	28.0					5.970	015
	29.0					5.910	001
	30.0					5.854	016
	32.0		5.734	007		5.830	017
	35.0		5.609	002		5.776	018
	38.0					5.609	003
	40.0					5.442	005

Logan Casing Roller Range Sheet

CASING DATA		LOWER ROLLER			NOSE CONE		
SIZE	CASING WEIGHT	PART NO.	OUTSIDE DIA.	SEQ. NO.	PART NO.	OUTSIDE DIA.	SEQ. NO.
3-1/2	7.7	**W3002 29049**	2.812	001	**W2002 29050**	2.437	001
4	9.5	**W3003 28966**	3.219	001	**W2003 28965**	2.875	001
4-1/2	9.5	**W3004 20663**	3.688	001	**W2004 20662**	3.125	001
	11.6						
	13.6						
4-3/4	15.8						
5	11.5		4.250	002			
	13.0						
	15.0		4.000	004			
	17.7						
	18.0						
	21.0		3.688	001			
5-1/2	13.0	**W3005 20913**	4.662	005	**W2005 20912**	3.750	001
	14.0						
	15.0						
	15.5		4.609	001			
	17.0						
	20.0		4.359	002			
	23.0						
5-3/4	14.0		4.875	003			
	17.0						
	19.5		4.662	005			
	22.5						
6	15.0		5.125	004			
	16.0						
	18.0						
	20.0						
	23.0		4.875	003			
6-5/8	17.0	**W3006 20923**	5.734	005	**W2006 20922**	5.000	002
	20.0						
	22.0		5.609	002			
	24.0						
	26.0						
	26.0						
	28.0		5.359	003			
	29.0						
	32.0						
7	17.0		6.250	004			
	20.0					5.500	001
	22.0		6.000	001			
	23.0						
	24.0						
	26.0		5.830	006			
	28.0						
	29.0						
	30.0		5.734	005			
	32.0						
	35.0		5.609	002			
	38.0					5.000	002
	40.0						

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CASING DATA		UPPER ROLLER			MIDDLE ROLLER		
SIZE	CASING WEIGHT	PART NO.	OUTSIDE DIA.	SEQ. NO.	PART NO.	OUTSIDE DIA.	SEQ. NO.
7-5/8	20.0	W5007 20935	6.500	001	W4007 20934	6.875	001
	24.0					6.676	002
	26.4					6.562	003
	29.7		6.188	002		6.686	004
	33.7					6.468	005
	39.0					6.188	006
8-5/8	24.0		7.562	003		7.758	007
	28.0					7.594	008
	32.0		7.375	004			
	36.0					7.402	009
	38.0					7.302	010
	40.0		7.125	005		7.452	011
	43.0					7.304	012
	44.5					7.250	013
	49.0					7.024	014
9	34.0	W5008 20945	8.000	003	W4008 20944	7.676	009
	38.0		7.718	002		7.768	011
	40.0					7.676	009
	45.0		7.343	001		7.812	010
	55.0					7.375	004
9-5/8	29.3		8.500	004		8.720	005
	32.3					8.696	006
	36.0					8.438	007
	40.0		8.250	005		8.514	008
	43.0					8.354	001
	47.0		8.000	003		8.456	003
	53.5					8.164	002
10	33.0		8.812	006		9.050	012
10-3/4	32.7	W5009 20955	9.500	001	W4009 20954	9.728	001
	40.0					9.444	002
	40.5						
	45.0					9.254	003
	45.5						
	48.0					9.148	004
	51.0		9.250	002		9.294	005
	54.0					9.162	006
	55.5					9.114	007
11-3/4	38.0		10.250	003		10.896	008
	42.0					10.754	009
	47.0					10.594	010
	54.0					10.354	011
	60.0					10.138	012
12	40.0		10.750	004		10.862	013
13	40.0	W5010 20965	11.625	002	W4010 20964	11.846	006
	45.0					11.677	002
	50.0					11.534	003
	54.0					11.410	004
13-3/8	48.0		12.000	001		12.024	005
	54.5					11.812	001
	61.0					11.625	007
	68.0		11.626	002		11.812	001
	72.0					11.677	002
	83.0					11.320	009
	85.0					11.288	010
16	55.0	W5011 20975	14.500	001	W4011 20974	14.844	001
	65.0					14.554	002
	75.0					14.344	003
	84.0					14.114	004
18-5/8	78.0		17.000	002		17.304	005
	87.5					17.104	006
	96.6					16.904	007

CASING DATA		LOWER ROLLER			NOSE CONE		
SIZE	CASING WEIGHT	PART NO.	OUTSIDE DIA.	SEQ. NO.	PART NO.	OUTSIDE DIA.	SEQ. NO.
7-5/8	20.0	W3007 20933	6.500	001	W2007 20932	5.375	001
	24.0						
	26.4						
	29.7		6.188	002			
	33.7					6.500	002
	39.0		7.562	003			
8-5/8	24.0						
	28.0						
	32.0		7.375	004		6.000	003
	36.0						
	38.0						
	40.0		7.125	005			
	43.0						
	44.5						
	49.0						
9	34.0	W3008 20943	8.000	003	W2008 20942	6.625	001
	38.0		7.718	002			
	40.0						
	45.0		7.343	001			
	55.0						
9-5/8	29.3		8.500	004			
	32.3						
	36.0						
	40.0		8.250	005			
	43.0						
	47.0		8.000	003			
	53.5						
10	33.0		8.812	006			
10-3/4	32.7	W3009 20953	9.500	001	W2009 20952	8.250	001
	40.0						
	40.5						
	45.0						
	45.5						
	48.0						
	51.0		9.250	002		8.750	002
	54.0						
	55.5						
11-3/4	38.0		10.250	003			
	42.0						
	47.0						
	54.0						
	60.0						
12	40.0		10.750	004			
13	40.0	W3010 20963	11.625	002	W2010 20962	10.000	001
	45.0						
	50.0						
	54.0						
13-3/8	48.0		12.000	001			
	54.5						
	61.0						
	68.0		11.626	002			
	72.0						
	83.0						
	85.0						
16	55.0	W3011 20973	14.500	001	W2011 20972	14.000	001
	65.0						
	75.0						
	84.0						
18-5/8	78.0		17.000	002			
	87.5						
	96.6						

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Notes

LOGAN TUBING SCRAPERS

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Logan Tubing Scrapers

SIZE TO SCRAPE (O.D.)		2-7/8 Tbg	3-1/2 Tbg					
WEIGHT (LBS)		9.5 to 15.1						
CONNECTION		1-13/16 WFJ	1-13/16 WFJ					
TOOL O.D.		2.10	2.25					
COMPLETE ASSEMBLY	**Logan Part No.**	**508-213**	**508-225**					
	Price	$8,049	$9,105					
MANDREL	**Logan Part No.**	**AX1006**	**AX1007**					
	Price	$2,403	*					
TOP BLADE	**Logan Part No.**	**AX2006-A**	**AX2007-A**					
	Price	$1,749	$2,360					
BOTTOM BLADE	**Logan Part No.**	**AX2006-B**	**AX2007-B**					
	Price	$2,175	*					
BLADE SLEEVE	**Logan Part No.**	**AX11000**	**AX11001**					
	No. Req'd	2	2					
	Price	$348	*					
BLADE RETAINING SCREW	**Logan Part No.**	**AK4001**	**AK4001**					
	No. Req'd	4	4					
	Price	$2	$2					
BULL NOSE NUT	**Logan Part No.**	**AX12000**	**AX12000**					
	Price	$498	$498					

OPTIONAL COMPONENTS

BOTTOM ADAPTER	**Logan Part No.**	**AX13000**	**AX13001**					
	Price	$1,028	*					

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and weight of tubing

LOGAN CASING SCRAPERS

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Logan Casing Scrapers

SIZE TO SCRAPE (O.D.)		4-1/2	5-1/2	7	9-5/8	10-3/4	13-3/8
WEIGHT (LBS)		9.5 to 15.1 5 13.0 to 26.7	14.0 to 23.0	17.0 to 38.0	32.2 to 64.9	32.75 to 73.2	48.0 to 98.0
CONNECTION		2-3/8 API Reg	2-7/8 API Reg	3-1/2 API Reg	4-1/2 API Reg	6-5/8 API Reg	6-5/8 API Reg
TOOL O.D.		3-5/8	4-1/2	5-3/8	7-1/2	8-3/4	11
COMPLETE ASSEMBLY	**Logan Part No.**	**508-361**	**508-450**	**508-538**	**508-750**	**508-875**	**508-1100**
	Price	$9,983	$11,550	$12,029	$19,898	$26,790	$49,736
MANDREL	**Logan Part No.**	**AX800**	**AX10011**	**AX1002**	**AX1003**	**AX1004**	**AX1005**
	Price	$7,420	$8,121	$8,425	$12,700	$13,798	$25,083
BLADE	**Logan Part No.**	**AX2000**	**AX2001**	**AX2002**	**AX2003**	**AX2004**	**AX2005**
	No. Req'd	6	6	6	6	8	6
	Price	$222	$279	$438	$606	$1,152	$1,813
SPRING	**Logan Part No.**	**AX802**	**AX40011**	**AX4000**	**AX4003**	**AX40013**	**AX4005**
	No. Req'd	18	18	30	30	24	30
	Price	$11	$11	$11	$12	$11	$40
TOP RETAINER RING NUT (LEFT-HAND THREAD)	**Logan Part No.**	**AX7000**	**AX7001**	**AX7002**	**AX7003**	**AX7004**	**AX7005**
	Price	$366	$438	$475	$1,177	$1,359	$1,779
BTM RETAINER RING NUT (RIGHT-HAND THREAD)	**Logan Part No.**	**AX8000**	**AX8001**	**AX8002**	**AX8003**	**AX8004**	**AX8005**
	Price	$306	$329	$475	$1,085	$1,127	$1,779
RETAINER RING	**Logan Part No.**	**AX9000**	**AX9001**	**AX9002**	**AX9003**	**AX9004**	**AX9005**
	No. Req'd	2	2	2	2	2	2
	Price	$222	$262	$283	$583	$601	$1,271
SET SCREW	**Logan Part No.**	**P12004**	**P12004**	**AX10002**	**AX10002**	**AX10002**	**AX10004**
	No. Req'd	2	2	2	2	2	2
	Price	$3	$3	$7	$7	$7	$7

OPTIONAL DRESS FOR SIZE (O.D.)		5-1/2	5-3/4	7-5/8	10-3/4	...	...
WEIGHT (LBS)		20 to 26	14 to 24.4	24 to 47.1	32 to 73	...	...
BLADE	**Logan Part No.**	**AX2000-002**	**AX30012**	**AX3002**	**AX2003-004**	**...**	**...**
	No. Req'd	6	6	6	6	...	...
	Price	$560	$366	$542	...	...	...
SPRING	**Logan Part No.**	**AX802**	**AX40012**	**AX4000**	**...**	**...**	**...**
	No. Req'd	18	18	30	...	...	...
	Price	$11	$11	$11	...	...	...

OPTIONAL DRESS FOR SIZE (O.D.)		**...**	6-5/8	**...**	**...**	**...**	**...**
WEIGHT (LBS)		...	17 to 24	...	...	...	...
BLADE	**Logan Part No.**	**...**	**AX30013**	**...**	**...**	**...**	**...**
	No. Req'd	...	6	...	...	...	...
	Price	...	$408	...	...	...	...
SPRING	**Logan Part No.**	**...**	**AX40013**	**...**	**...**	**...**	**...**
	No. Req'd	...	18	...	...	...	...
	Price	...	$11	...	...	...	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

When ordering, please specify:

(1) Name and number of assembly or part

(2) Size and weight of casing

Recommended Spare Parts:

(1) 1 set of Blades for each size casing

(2) 1 set of Springs

(3) 1 set of Set Screws

LOGAN TYPE A PACKER TYPE TUBING PATCHES

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Logan Type A Packer Type Tubing Patches – 5,000 PSI

O.D. TUBING		2-3/8	2-7/8	3-1/2
O.D. PATCH		3-1/8	3-5/8	4-11/16
COMPLETE ASSEMBLY	**Logan Part No.**	**503-002**	**503-003**	**503-004**
	Bowen No.	...	...	...
	Price	$11,551	$12,156	$17,099
TOP SUB	**Logan Part No.**	**Z1002**	**Z1003**	**Z10035**
	Bowen No.	...	36295	...
	Price	$1,078	$11,951	$1,434
TOP SUB SEAL	**Logan Part No.**	**568-143**	**568-233**	**568-241**
	Bowen No.	568143	568233	568241
	Price	$7	$7	$8
BOWL	**Logan Part No.**	**Z2002**	**Z2003**	**Z20035**
	Bowen No.	...	36827	...
	Price	$3,229	$3,341	$3,783
BOWL SEAL	**Logan Part No.**	**568-146**	**568-235**	**568-241**
	Bowen No.	568146	568235	568241
	No. Req'd	2	1	1
	Price	$7	$7	$8
PACKER PROTECTOR	**Logan Part No.**	**Z3002**	**Z3003**	**Z30035**
	Bowen No.	...	36296	...
	Price	$497	$514	$596
PACKER	**Logan Part No.**	**A4001**	**A4005**	**A4019**
	Bowen No.	9309	8550	...
	No. Req'd	7	7	7
	Price	$63	$75	$131
GRAPPLE	**Logan Part No.**	**A5001**	**A5005**	**A5019**
	Bowen No.	9307	9272	6662
	Price	$525	$543	$639
GRAPPLE CONTROL	**Logan Part No.**	**A6001**	**A6005**	**A6019**
	Bowen No.	9308	9273	6674
	Price	$207	$209	$272
GUIDE	**Logan Part No.**	**A3001**	**A3005**	**A3019**
	Bowen No.	9312	9275	6667
	Price	$606	$606	$683
UPPER PACK-OFF ADAPTER	**Logan Part No.**	**Z9002**	**Z9003**	**Z90035**
	Bowen No.	...	36297	...
	Price	$2,891	$2,993	$3,741
LOWER PACK-OFF ADAPTER	**Logan Part No.**	**Z10002**	**Z10003**	**Z100035**
	Bowen No.	...	36298	...
	Price	$2,211	$2,311	$2,848
PACK-OFF ADAPTER EXTENSION	**Logan Part No.**	**Z11002**	**...**	**Z110035**
	Bowen No.	...	...	...
	Price	$1,261	...	$1,261

Innovex reserves the right to change or discontinue designs and/or prices without notice.

Note: Price for H2S casing patches available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

LOGAN TYPE A PACKER TYPE CASING PATCHES

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Logan Type A Packer Type Casing Patches – 5,000 PSI

O.D. CASING		4-1/2 Csg	5	5-1/2	5-3/4	6	6-5/8	7
O.D. PATCH		5-3/4	6-1/4	6-13/16	7-1/16	7-5/16	7-15/16	8-3/8
COMPLETE ASSEMBLY	**Logan Part No.**	**503-005**	**503-006**	**503-007**	**503-008**	**503-009**	**503-010**	**503-011**
	Bowen No.	11215	11220	11225	...	11230	11235	11240
	Price	$10,126	$11,871	$11,752	*	*	*	$14,225
TOP SUB	**Logan Part No.**	**Z1005**	**Z1006**	**Z1007**	**Z1008**	**Z1009**	**Z1010**	**Z1011**
	Bowen No.	5186	4866	4886	...	4966	4986	5026
	Price	$1,341	$1,468	$1,687	...	...	...	$2,160
TOP SUB SEAL	**Logan Part No.**	**568-247**	**568-251**	**568-255**	**568-257**	**568-259**	**568-261**	**568-262**
	Bowen No.	568247	568251	568255	568257	568259	568261	568262
	No. Req'd	1	1	1	1	1	1	1
	Price	$12	$14	$17	*	*	*	$19
BOWL	**Logan Part No.**	**Z2005**	**Z2006**	**Z2007**	**Z2008**	**Z2009**	**Z2010**	**Z2011**
	Bowen No.	11217	11222	11227	...	11232	11237	11242
	Price	$5,114	$5,308	$5,437	...	...	...	$6,307
PACKER PROTECTOR	**Logan Part No.**	**Z3005**	**Z3006**	**Z3007**	**Z3008**	**Z3009**	**Z3010**	**Z3011**
	Bowen No.	5188	4868	4888	...	4968	4988	5028
	Price	$546	$562	$583	...	...	...	$647
PACKER	**Logan Part No.**	**Z4005**	**Z4006**	**Z4007**	**Z4008**	**Z4009**	**Z4010**	**Z4011**
	Bowen No.	11216	11221	11226	...	11231	11236	11241
	Price	$154	$161	$161	*	*	*	$177
BASKET GRAPPLE	**Logan Part No.**	**Z5005**	**Z5006**	**Z5007**	**Z5008**	**Z5009**	**Z5010**	**Z5011**
	Bowen No.	11218	11223	11228	...	11233	11238	11243
	Price	$1,416	$1,546	$1,601	...	...	...	$2,079
GRAPPLE CONTROL	**Logan Part No.**	**Z6005**	**Z6006**	**Z6007**	**Z6008**	**Z6009**	**Z6010**	**Z6011**
	Bowen No.	11459	11461	11463	...	11465	11467	11469
	Price	$906	$1,725	$1,001	...	...	...	$2,132
GUIDE	**Logan Part No.**	**Z7005**	**Z7006**	**Z7007**	**Z7008**	**Z7009**	**Z7010**	**Z7011**
	Bowen No.	11219	11224	11229	...	11234	11239	11244
	Price	$979	$1,092	$1,182	...	...	...	$1,535

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Note: Price for H2S casing patches available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

Logan Type A Packer Type Casing Patches – 5,000 PSI

O.D. CASING		7-5/8	8-5/8	9-5/8	10-3/4	11-3/4	13-3/8	13-5/8
O.D. PATCH		9	10-1/16	11-1/8	12-5/16	13-3/8	15-1/4	16
COMPLETE ASSEMBLY	**Logan Part No.**	**503-012**	**503-013**	**503-014**	**503-015**	**503-016**	**503-017**	**503-018**
	Bowen No.	11245	11250	11255	11260	39136	41042	...
	Price	$17,075	$19,858	$23,099	*	*	$61,800	*
TOP SUB	**Logan Part No.**	**Z1012**	**Z1013**	**Z1014**	**Z1015**	**Z1016**	**LP1007**	**Z1018**
	Bowen No.	5046	5151	5206	5162	39137		...
	Price	$2,377	$3,052	$3,473	*	*	$21,368	*
TOP SUB SEAL	**Logan Part No.**	**568265**	**568269**	**568273**	**568274**	**568278**	**568280**	**...**
	Bowen No.	568265	568269	568273	568274	568278		...
	No. Req'd	1	1	1	1	1	1	...
	Price	$21	$26	$28	*	*	$59	...
TOP SUB SEAL	**Logan Part No.**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**568279**	**...**
	Bowen No.	N/A	N/A	N/A	N/A	N/A		...
	No. Req'd	N/A	N/A	N/A	N/A	N/A	2	...
	Price	*	*	*	*	*	$55	...
BOWL	**Logan Part No.**	**Z2012**	**Z2013**	**Z2014**	**Z2015**	**Z2016**	**LP2007**	**Z2018**
	Bowen No.	11247	11252	11257	11262	39138		...
	Price	$8,046	$9,031	$10,165	*	*	$20,519	*
PACKER PROTECTOR	**Logan Part No.**	**Z3012**	**Z3013**	**Z3014**	**Z3015**	**Z3016**	**LP7007**	**Z3018**
	Bowen No.	5048	5153	5208	5164	39139		...
	Price	$724	$1,191	$1,275	*	*	$2,940	*
PACKER	**Logan Part No.**	**Z4012**	**Z4013**	**Z4014**	**Z4015**	**Z4016**	**AT6007**	**Z4018**
	Bowen No.	11246	11251	11256	11261	39140		...
	No. Req'd	N/A	N/A	N/A	N/A	N/A	2	...
	Price	$177	$183	$221	*	*	$627	*
BASKET GRAPPLE	**Logan Part No.**	**Z5012**	**Z5013**	**Z5014**	**Z5015**	**Z5016**	**AT11007**	**Z5018**
	Bowen No.	11248	11253	11258	11263	39142		...
	Price	$2,459	$3,035	$3,823	*	*	$7,413	*
MILL CONTROL	**Logan Part No.**	**Z6012**	**Z6013**	**Z6014**	**Z6015**	**Z6016**	**AT10007 ****	**Z6018**
	Bowen No.	11471	11473	11475	11477	39141		...
	Price	$1,393	$1,911	$2,262	*	*	$4,721	*
GUIDE	**Logan Part No.**	**Z7012**	**Z7013**	**Z7014**	**Z7015**	**Z7016**	**LP3007**	**Z7018**
	Bowen No.	11249	...	11259	11264	39144		...
	Price	$1,742	$2,292	$3,002	*	*	$5,859	*
SHEAR PINS	**Logan Part No.**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**AC14002**	**...**
	Bowen No.	N/A	N/A	N/A	N/A	N/A	2	...
	Price	*	*	*	*	*	$22	*

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** Available upon request.*

*** Basket Grapple Control*

Note:

(1) Price for H2S casing patches available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

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NOTES

LOGAN TYPE L PACKER TYPE CASING PATCHES – 7,000 PSI

Logan Type L Packer Type Casing Patch for 7K, 10K, and 12K Assemblies

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Logan Type L Packer Type Casing Patches – 7,000 psi

O.D. CASING		4-1/2	5	5-1/2	5-3/4	6	6-5/8	7	7-5/8
O.D. PATCH		5-3/4	6-1/4	6-13/16	7-1/16	7-5/16	7-15/16	8-3/8	9
COMPLETE ASSEMBLY	**Logan Part No.**	**509-709**	**509-710**	**509-700**	**509-701**	**509-712**	**509-713**	**509-711**	**509-714**
	Price	$12,469	...	$14,471	*	*	*	$17,515	
TOP SUB	**Logan Part No.**	**ZL1005**	**LP1010**	**LP1000**	**LP1001**	**LP1012**	**LP1013**	**LP1011**	**LP1014**
	Price	$1,121	...	$16,378	*	*	*	$7,047	*
TOP SUB SEAL (SMALL)	**Logan Part No.**	**568248**	*	**568-257**	*	*	*	**568-263**	**568-265**
	No. Req'd	2	...	2	...	...	...	2	2
	Price	$12	...	$19	...	...	...	$20	...
TOP SUB SEAL (LARGE)	**Logan Part No.**	**568251**	*	**568-257**	*	*	*	**568-265**	**568-266**
	No. Req'd	1	...	1	...	...	...	1	1
	Price	$14	...	$19	...	...	...	$21	...
BOWL	**Logan Part No.**	**ZL2005**	**LP2010**	**LP2000**	**LP2001**	**LP2012**	**LP2013**	**LP2011**	**LP2014**
	Price	$6,366	...	$6,694	*	*	*	$13,185	*
GUIDE	**Logan Part No.**	**ZL7005**	**LP3010**	**LP3000**	**LP3001**	**LP3012**	**LP3013**	**Z7011**	**Z7012**
	Price	$979	...	$1,010	*	*	*	$1,535	
SHEAR PINS	**Logan Part No.**	**AC14002**	*	**AC14002**	*	*	*	**AC14002**	**AC14002**
	No. Req'd	2	...	2	...	...	...	2	2
	Price	$22	...	$22	...	...	...	$22	...
TYPE L PACKER	**Logan Part No.**	**AT6009**	**AT6010**	**AT6000**	**AT6011**	**AT6012**	**AT6013**	**AT6001**	**AT6014**
	No. Req'd	4	4	4	4	4	4	4	4
	Price	$501	...	$507	*	*	*	$627	*
PACKER PROTECTOR	**Logan Part No.**	**ZL3005**	**AT7010**	**ZL5007**	**AT7001**	**AT7012**	**AT7013**	**ZL3011**	**AT7014**
	Price	$911	...	$937	*	*	*	$2,262	*
GRAPPLE CONTROL	**Logan Part No.**	**ZL6005**	**AT10010**	**ZL6007**	**AT10001**	**AT10012**	**AT10013**	**Z6011**	**Z6012**
	Price	$906	$920	$348	*	*	*	$2,132	*
GRAPPLE	**Logan Part No.**	**ZL5005**	**AT11010**	**ZL3007**	**AT11001**	**AT11012**	**AT11013**	**Z5011**	**AT1014**
	Price	$1,416	$1,587	$1,601	*	*	*	$2,079	*

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**ZLE1005**	**LPE1010**	**LPE1000**	**LPE1001**	**LPE1012**	**LPE1013**	**LPE1011**	**LPE1014**
(5 feet long)	Price	*	*	$8,620	*	*	*	$15,257	*
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	**568248**	*	**568257**	*	*	*	**568263**	*
	No. Req'd	2	...	2	...	...	...	2	...
	Price	$12	...	$19	...	...	...	$20	...
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	**568251**	*	**568257**	*	*	*	**568265**	*
	No. Req'd	1	...	1	...	...	...	1	...
	Price	$14	...	$19	...	...	...	$21	...

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

Special Notes:

(1) Price for H2S casing patches available upon request.

(2) Prices for higher pressure casing patches of this design are available upon request.

(3) With or without five foot extension

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

Logan Type L Packer Type Casing Patches – 7,000 psi

O.D. CASING		8-5/8	9-5/8	11-3/4	11-3/4	11-7/8	13-3/8	13-5/8
O.D. PATCH		10-1/16	11-1/4	12-5/16	13-3/8	13-7/8	15-1/2	15-3/4
COMPLETE ASSEMBLY	**Logan Part No.**	**509-715**	**509-702**	**509-704**	**509-705**	**509-706**	**509-707**	**509-708**
	Price	*	$35,995	$38,068**	*	*	$88,100	*
TOP SUB	**Logan Part No.**	**LP1015**	**LP1002**	**LP1004**	**LP1005**	**LP1006**	**LP1007**	**LP1008**
	Price	*	$6,366	$5,060	*	*	$23,154	*
TOP SUB SEAL (SMALL)	**Logan Part No.**	*	**568-274**	**568-275**	...	...	**568-279**	**568-280**
	No. Req'd	...	2	2	...	...	2	2
	Price	...	$28	$31	...	...	$55	$59
TOP SUB SEAL (LARGE)	**Logan Part No.**	*	**568-274**	**568-276**	*	...	**568-280**	**568-280**
	No. Req'd	...	1	1	...	...	2	2
	Price	...	$26	$37	...	...	$59	$59
BOWL	**Logan Part No.**	**LP2015**	**LP2002**	**LP2004**	**LP2005**	**LP2006**	**LP2007**	**LP2008**
	Price	*	$9,605	$14,367	*	*	$21,870	*
GUIDE	**Logan Part No.**	**LP3015**	**LP3002**	**LP3004**	**LP3005**	**LP3006**	**LP3007**	**LP3008**
	Price	*	$2,237	$2,842	*	*	$5,872	*
SHEAR PINS	**Logan Part No.**	*	**AC14002**	**AC14002**	...	...	**AC14002**	**AC14008**
	No. Req'd	...	2	2	...	...	2	2
	Price	...	$22	$21	...	...	$22	$21
TYPE L PACKER	**Logan Part No.**	**AT6015**	**AT6002**	**AT6004**	**AT6005**	**AT6006**	**AT6007**	**AT6008**
	No. Req'd	4	4	4	4	4	4	4
	Price	*	$911	$957	*	*	$627	*
PACKER PROTECTOR	**Logan Part No.**	**AT7015**	**AT7002**	**AY6004**	**AT7005**	**AT7006**	**AT7007**	**AT7008**
	Price	*	$2,099	$3,173	*	*	$3,732	*
GRAPPLE CONTROL	**Logan Part No.**	**AT10015**	**AT10002**	**AY9004**	**AT10005**	**AT10006**	**AT10007**	**AT10008**
	Price	*	$2,988	$2,927	*	*	$4,721	*
GRAPPLE	**Logan Part No.**	**AT11015**	**AT11002**	**AY10004**	**AT11005**	**AT11006**	**AT11007**	**AT11008**
	Price	*	$4,580	$4,612	*	*	$7,413	*

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**LPE1015**	**LPE1002**	**LPE1004**	**LPE1005**	**LPE1006**	**LPE1007**	**LPE1008**
(5 feet long)	Price	*	$15,262	*	*	*	$27,577	*
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	*	**568-274**	...	...	**568-278**	**568-279**	**568-280**
	No. Req'd	...	2	...	...	2	2	2
	Price	...	$28	...	...	$52	$55	$59
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	*	**568-274**	...	...	**568-278**	**568-280**	**568-280**
	No. Req'd	...	1	...	...	1	1	1
	Price	...	$28	...	...	$52	$59	$59

Innovex reserves the right to change or discontinue designs and/or prices without notice.

** Available upon request.*

*** 6,000 psi working pressure*

Special Notes:

(1) Price for H2S casing patches available upon request.

(2) Prices for higher pressure casing patches of this design are available upon request.

(3) With or without five foot extension

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

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Logan Type L Packer Type Casing Patches – 7,000 psi

O.D. CASING		20						
O.D. PATCH		23-1/2						
COMPLETE ASSEMBLY	**Logan Part No.**	**514-520**						
	Price	*						
TOP SUB	**Logan Part No.**	**BP1025**						
	Price	*						
TOP SUB SEAL (SMALL)	**Logan Part No.**	**568-390**						
	No. Req'd.	2						
	Price	*						
TOP SUB SEAL (LARGE)	**Logan Part No.**	**568-390**						
	No. Req'd.	1						
	Price	*						
BOWL	**Logan Part No.**	**BP2020**						
	Price	*						
GUIDE	**Logan Part No.**	**BP3020**						
	Price	*						
SHEAR PINS (2 REQ'D)	**Logan Part No.**	**AC14008**						
	Price	*						
TYPE L PACKER	**Logan Part No.**	**AT6017**						
	No. Req'd	4						
	Price	*						
PACKER PROTECTOR	**Logan Part No.**	**BP4020**						
	Price	*						
GRAPPLE CONTROL	**Logan Part No.**	**BP5020**						
	Price	*						
GRAPPLE	**Logan Part No.**	**BP6020**						
	Price	*						

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**BPE1020**						
(5 feet long)	Price	*						
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	**568-390**						
	No. Req'd	2						
	Price	*						
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	**568-390**						
	No. Req'd	1						
	Price	*						

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** Available upon request.*

Special Notes:

(1) Price for H2S casing patches available upon request.

(2) Prices for higher pressure casing patches of this design are available upon request.

(3) With or without five foot extension

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

Logan Type L Packer Type Casing Patches – 10,000 psi

O.D. CASING		4-1/2	5-1/2	7	9-5/8	9-7/8	10-3/4	13-3/8
O.D. PATCH		5-7/8	7	8-5/8	11.43	11-3/4	12-3/4	15-5/8
PRESSURE RATING (PSI)		10,000	10,000	10,000	10,000	10,000	10,000	10,000
COMPLETE ASSEMBLY	**Logan Part No.**	**510L-005**	**510L-007**	**510L-011**	**510-963-010**	**510-1175-010**	**510-1275-010**	**510-1338**
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**ZL1005-10**	**ZL1007-10**	**ZL1011-10**	**BT1002-010**	**BT1003-010**	**BT2004-010**	**BT2007-010**
	Price	*	*	*	*	*	*	
TOP SUB SEAL (SMALL)	**Logan Part No.**	**568248-200**	**568257-200**	**568263-200**	**568274-200**	**568274-400**	**568275-200**	**568279-200**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
TOP SUB SEAL (LARGE)	**Logan Part No.**	**568251-200**	**568257-200**	**568265-200**	**568274-200**	**568275-400**	**568276-200**	**568280-200**
	No. Req'd	1	1	1	1	1	1	1
	Price	*	*	*	*	*	*	*
BOWL	**Logan Part No.**	**ZL2005-10**	**ZL2007-10-001**	**ZL2011-10**	**BT12002-010**	**BT2003-010**	**BT11004-010**	**BT11007-010**
	Price	*	*	*	*	*	*	
GUIDE	**Logan Part No.**	**Z7005-10**	**ZL3007-10**	**Z7011-10**	**BT13002-010**	**BT3003-010**	**BT12004-010**	**BT12007-010**
	Price	*	*	*	*	*	*	*
SHEAR PINS	**Logan Part No.**	**AC14002**	**AC14002**	**AC14002**	**AC14008**	**AC14002**	**AC14008**	**AC14000**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
TYPE L PACKER	**Logan Part No.**	**AT6009**	**AT6000**	**AT6001**	**AT6002**	**AT6003**	**AT6004**	**AT6007**
	No. Req'd	4	4	4	4	4	4	4
	Price	*	*	*	*	*	*	*
PACKER PROTECTOR	**Logan Part No.**	**ZL3005**	**ZL3007-10**	**ZL3011**	**AT7002**	**AT7003**	**AY6004-500**	**AT7007**
	Price	*	*	*	*	*	*	*
GRAPPLE CONTROL	**Logan Part No.**	**Z6005 ****	**ZL6007**	**Z6011**	**AT10002**	**AT10003**	**AY9004**	**AT10007**
	Price	*	*	*	*	*	*	*
GRAPPLE	**Logan Part No.**	**Z5005**	**ZL5007**	**Z5011**	**AY11002**	**AT11003**	**AY10004**	**AT11007**
	Price	*	*	*	*	*	*	*

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**ZLE1005-10**	**ZLE1007-10**	**ZLE1011-10**	**BT3002-010**	**BTE1003-010**	**BTE3004-010**	**BT3007-010**
(5 feet long)	Price	*	*	*	*	*	*	*
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	**568248-200**	**568257-200**	**568263-200**	**568274-200**	**568274-400**	**568275-200**	**568279-200**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	**568251-200**	**568257-200**	**568265-200**	**568274-200**	**568275-400**	**568276-200**	**568280-200**
	No. Req'd	1	1	1	1	1	1	1
	Price	*	*	*	*	*	*	*

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** Available upon request.*

*** Furnished with Mill Control instead of Grapple Control.*

Special Notes:

(1) H2S casing patches available upon request.

(2) Higher pressure casing patches of this design are available upon request.

(3) Other sizes of casing patches are available upon request.

(4) Casing patches can be made from special materials. Prices and delivery information is available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) With or without five-foot extensions

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Logan Type L Packer Type Casing Patches – 12,000 psi

O.D. CASING		5-1/2	9-5/8	9-7/8	10-3/4	11-3/4	13-3/8	13-5/8
O.D. PATCH		7-1/8	11-5/8	11-7/8	12-7/8	14-3/8	15-3/4	16-1/8
PRESSURE RATING (PSI)		12,000	12,000	12,000	12,000	12,000	12,000	12,000
COMPLETE ASSEMBLY	**Logan Part No.**	**512-550-012**	**512-963-012**	**507-1188-12K**	**512-1288-012**	**507-1438-12K-500**	**507-1544-012-500**	**512-1363**
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**AT1000-12**	**AT1002-012**	**AY2003-12K**	**	**AY2006-12K-500**	**AY2007-012**	**AT1008-012**
	Price	*	*	*	*	*	*	*
TOP SUB SEAL (SMALL)	**Logan Part No.**	**568257-200**	**568273-200**	**568274-200**	**	**568278-200**	**568279-200**	**568279-200**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
TOP SUB SEAL (LARGE)	**Logan Part No.**	**568257-200**	**568273-200**	**568275-200**	**	**568278-200**	**568280-200**	**568280-200**
	No. Req'd	1	1	1	1	1	1	1
	Price	*	*	*	*	*	*	*
BOWL	**Logan Part No.**	**AT12000-12**	**AT12002-012**	**AY11003-12K-500**	**	**AY11006-12K-500**	**AY11007-012-502**	**AT12008-012**
	Price	*	*	*	*	*	*	*
GUIDE	**Logan Part No.**	**AT13000-12**	**AT13002-012**	**AY12003-12K-500**	**	**AY12006-12K-500**	**AY12007-012-502**	**AT13008-012**
	Price	*	*	*	*	*	*	*
SHEAR PINS	**Logan Part No.**	**AC14002**	**AC14002**	**AC14002**	**	**AC14002**	**AC14008**	**AC14008**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
TYPE L PACKER	**Logan Part No.**	**AT6000**	**AT6002**	**AT6003**	**AT6004**	**AT6006**	**AT6004**	**AT6008**
	No. Req'd	4	4	4	4	4	4	4
	Price	*	*	*	*	*	*	*
PACKER PROTECTOR	**Logan Part No.**	**ZL3007**	**AT7002**	**AY6003-500**	**	**AY6006-12K-500**	**AY6007-012-502**	**AT7008**
	Price	*	*	*	*	*	*	*
GRAPPLE CONTROL	**Logan Part No.**	**Z6007**	**AT10002**	**AY9003-500**	**	**AY9006-12K-500**	**AY9007-501**	**AT10008**
	Price	*	*	*	*	*	*	*
GRAPPLE	**Logan Part No.**	**Z5007**	**AT11002**	**AY10003**	**	**AY10006**	**AY10007-502**	**AT11008**
	Price	*	*	*	*	*	*	*

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**AT3000-12**	**AT3002-012**	**AY3003-12K-500**	**	**AY3006-12K-500**	**AY3007-012-502**	**AT3008-012**
(5 feet long)	Price	*	*	*	*	*	*	*
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	**568257-200**	**568273-200**	**568274-200**	**	**568278-200**	**568279-200**	**568279-200**
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	**568257-200**	**568273-200**	**568275-200**	**	**568278-200**	**568280-200**	**568280-200**
	No. Req'd	1	1	1	1	1	1	1
	Price	*	*	*	*	*	*	*

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** Available upon request.*

Special Notes:

(1) H2S casing patches available upon request.

(2) Higher pressure casing patches of this design are available upon request.

(3) Other sizes of casing patches are available upon request.

(4) Casing patches can be made from special materials. Prices and delivery information is available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) With or without five-foot extensions

LOGAN TYPE L PACKER TYPE CASING PATCHES – 15,000 PSI

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Logan Type L Packer Type Casing Patches – 15,000 psi

O.D. CASING		4-1/2	5-1/2	14
O.D. PATCH		6-1/4	7-1/8	17-3/8
PRESSURE RATING (PSI)		15,000	15,000	15,000
COMPLETE ASSEMBLY	**Logan Part No.**	**515-625-15**	**515-713**	**515-1738**
	Price	*	*	*
TOP SUB	**Logan Part No.**	**BT10056-15**	**ZL1007-15**	**AT1009-15**
TOP SUB SEAL (SMALL)	**Logan Part No.**	**568248-200**	**568257-200**	**568280-200**
	No. Req'd	2	2	2
	Price	*	*	*
TOP SUB SEAL (LARGE)	**Logan Part No.**	**568251-200**	**568257-200**	**568281-200**
	No. Req'd	1	1	1
	Price	*	*	*
BOWL	**Logan Part No.**	**BT2005-15**	**ZL2007-15**	**AT12009-15**
	Price	*	*	*
GUIDE	**Logan Part No.**	**BT7005-15**	**ZL7007-15**	**AT13009-15**
	Price	*	*	*
SHEAR PINS	**Logan Part No.**	**AC14002**	**AC14002**	**AC14008**
	No. Req'd	2	2	4
	Price	*	*	*
TYPE L SEAL RING SET	**Logan Part No.**	**...**	**...**	**AT15009-15**
	No. Req'd.	...	...	1 Set
	Price	*	*	*
NON-EXTRUSION RING (STEEL)	**Logan Part No.**	**...**	**...**	**AT15009-15-004**
	No. Req'd.	...	...	4
*Consisting of: **	Price	*	*	*
TYPE L PACKER **	**Logan Part No.**	**AT6009**	**AT6000**	**...**
	No. Req'd	4	4	...
	Price	*	*	*
SEAL PROTECTOR RING (LEAD) **	**Logan Part No.**	**AT15009-15-003**	**...**	**...**
	No. Req'd	4	...	...
	Price	*	*	*
PACKER PROTECTOR	**Logan Part No.**	**ZL3005-001**	**ZL3007**	**AT7009-15**
	Price	*	*	*
GRAPPLE CONTROL	**Logan Part No.**	**Z6005 *****	**ZL6007-15**	**AT10009-15**
	Price	*	*	*
GRAPPLE	**Logan Part No.**	**Z5005**	**ZL5007-15**	**AT11009-15**
	Price	*	*	*

OPTIONAL

EXTENSION SUB	**Logan Part No.**	**BTE1005-15**	**BTE1007-15**	**AT3009-15**
(5 feet long)	Price	*	*	*
EXTENSION SUB SEAL (SMALL)	**Logan Part No.**	**568248-200**	**568257-200**	**568280-200**
	No. Req'd	2	2	2
	Price	*	*	*
EXTENSION SUB SEAL (LARGE)	**Logan Part No.**	**568251-200**	**568257-200**	**568281-200**
	No. Req'd	1	1	1
	Price	*	*	*

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** Available upon request.*

Special Notes:

(1) H2S casing patches available upon request.

(2) Other sizes of casing patches are available upon request.

(3) Casing patches can be made from special materials. Prices and delivery information is available upon request.

When ordering, please specify:

(1) Complete assembly or part number

(2) Size and type of connection for Top Sub

(3) With or without five-foot extensions

LOGAN LEAD SEAL CASING PATCHES

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Logan Lead Seal Casing Patches

O.D. CASING		2-3/8	2-7/8	3-1/2	4	4-1/2	5	5-1/2
O.D. PATCH		3-7/16	4	4-3/4	5-1/4	5-3/4	6-1/4	6-13/16
COMPLETE ASSEMBLY	**Logan Part No.**	**504-343**	**504-400**	**504-475**	**504-525**	**504-575**	**504-625**	**504-681**
	Bowen No.	17258	16140	26525	22400	13270	13280	12315
	Price	$12,260	$11,795	$18,921	*	$8,963	$12,419	$11,052
BOWL	**Logan Part No.**	**AA1000**	**AA1001**	**AA10015**	**AA1002**	**AA1003**	**AA1004**	**AA1005**
	Bowen No.	17259	16141	26526	22401	13271	13281	12316
	Price	$4,031	$4,641	$5,148	*	$3,328	$5,729	$3,745
GRAPPLE CARRIER	**Logan Part No.**	**AA2000**	**AA2001**	**AA20015**	**AA2002**	**AA2003**	**AA2004**	**AA2005**
	Bowen No.	17260	16142	26527	22402	13272	13282	12317
	Price	$3,685	$4,728	$5,325	*	$2,639	$2,746	$2,550
SPIRAL GRAPPLE	**Logan Part No.**	**AA3000**	**AA3001**	**AA30015**	**AA3002**	**AA3003**	**AA3004**	**AA3005**
	Bowen No.	17261	16143	26528	22403	13273	13283	12318
	Price	$1,115	$824	$720	*	$905	$1,024	$1,056
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**AA4000**	**AA4001**	**AA40015**	**AA4002**	**AA4003**	**AA4004**	**AA4005**
	Bowen No.	17262	16144	26529	22404	13274	13284	12319
	Price	$302	$279	$419	*	$305	$325	$363
GUIDE	**Logan Part No.**	**AA5000**	**AA5001**	**AA50015**	**AA5002**	**AA5003**	**AA5004**	**AA5005**
	Bowen No.	17263	16145	26530	22405	13275	13285	12320
	Price	$576	$1,288	$3,896	*	$872	$1,243	$1,036
LEAD SEAL	**Logan Part No.**	**AA6000**	**AA6001**	**AA60015**	**AA6002**	**AA6003**	**AA6004**	**AA6005**
	Bowen No.	17264	16146	26531	22406	13276	13286	12324
	No. Req'd	2	2	2	2	2	2	2
	Price	$172	$105	$179	*	$120	$340	$119
END SEAL RING	**Logan Part No.**	**AA7000**	**AA7001**	**AA70015**	**AA7002**	**AA7003**	**AA7004**	**AA7005**
	Bowen No.	17265	16147	26532	22407	13277	13287	12322
	No. Req'd	2	2	2	2	2	2	2
	Price	$397	$457	$705	*	$238	$185	$545
CENTER SEAL RING	**Logan Part No.**	**AA8000**	**AA8001**	**AA80015**	**AA8002**	**AA8003**	**AA8004**	**AA8005**
	Bowen No.	17266	16148	26533	22408	13278	13288	12323
	Price	$536	$536	$1,648	*	$358	$485	$306
CONTROL SET SCREW	**Logan Part No.**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**
	Bowen No.	12329	12329	12329	12329	12329	12329	12329
	No. Req'd	2	2	2	2	2	2	2
	Price	$2	$2	$2	$2	$2	$2	$2

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(2) Casing O.D.

(3) Size and type of connection

Logan Lead Seal Casing Patches

O.D. CASING		5-3/4	6	6-5/8	7	7-5/8	8-5/8	9-5/8
O.D. PATCH		7-1/16	7-5/16	7-15/16	8-3/8	9	10-1/16	11-1/8
COMPLETE ASSEMBLY	**Logan Part No.**	**504-706**	**504-731**	**504-793**	**504-825**	**504-900**	**504-1006**	**504-1113**
	Bowen No.	22410	13290	13300	12500	13070	13310	12475
	Price	$9,207	$9,516	$10,079	$10,518	$11,565	$18,934	$20,524
BOWL	**Logan Part No.**	**AA1006**	**AA1007**	**AA1008**	**AA1009**	**AA1010**	**AA1011**	**AA1012**
	Bowen No.	22411	13291	13301	12501	13071	13311	12476
	Price	$3,406	$3,619	$3,844	$3,947	$5,364	$8,151	$8,083
GRAPPLE CARRIER	**Logan Part No.**	**AA2006**	**AA2007**	**AA2008**	**AA2009**	**AA2010**	**AA2011**	**AA2012**
	Bowen No.	22412	13292	13302	12502	13072	13312	12477
	Price	$2,351	$2,507	$2,633	$2,781	$2,810	$4,307	$4,271
SPIRAL GRAPPLE	**Logan Part No.**	**AA3006**	**AA3007**	**AA3008**	**AA3009**	**AA3010**	**AA3011**	**AA3012**
	Bowen No.	22413	13293	13303	12503	13073	13313	12478
	Price	$1,085	$1,117	$1,227	$1,271	$1,333	$1,804	$1,885
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**AA4006**	**AA4007**	**AA4008**	**AA4009**	**AA4010**	**AA4011**	**AA4012**
	Bowen No.	22414	13294	13304	12504	13074	13314	12479
	Price	$364	$364	$409	$427	$427	$496	$689
GUIDE	**Logan Part No.**	**AA5006**	**AA5007**	**AA5008**	**AA5009**	**AA5010**	**AA5011**	**AA5012**
	Bowen No.	22415	13295	13305	12505	13075	13315	12480
	Price	$989	$1,001	$1,051	$1,059	$1,268	$2,021	$3,154
LEAD SEAL	**Logan Part No.**	**AA6006**	**AA6007**	**AA6008**	**AA6009**	**AA6010**	**AA6011**	**AA6012**
	Bowen No.	22416	13296	13306	12506	13076	13316	12481
	No. Req'd	2	2	2	2	2	2	2
	Price	$133	$138	$149	$159	$166	$175	$185
END SEAL RING	**Logan Part No.**	**AA7006**	**AA7007**	**AA7008**	**AA7009**	**AA7010**	**AA7011**	**AA7012**
	Bowen No.	22417	13297	13307	12507	13077	13317	12482
	No. Req'd	2	2	2	2	2	2	2
	Price	$216	$216	$231	$234	$254	$291	$274
CENTER SEAL RING	**Logan Part No.**	**AA8006**	**AA8007**	**AA8008**	**AA8009**	**AA8010**	**AA8011**	**AA8012**
	Bowen No.	22418	13298	13308	12508	13078	13318	12483
	Price	$174	$174	$194	$216	$253	$272	$1,530
CONTROL SET SCREW	**Logan Part No.**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9001**	**AA9001**
	Bowen No.	12329	12329	12329	12329	12329	12484	12484
	No. Req'd	2	2	2	2	2	2	2
	Price	$2	$2	$2	$2	$2	$2	$2

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(2) Casing O.D.

(3) Size and type of connection

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Logan Lead Seal Casing Patches

O.D. CASING		10-3/4	11-3/4	13-3/8				
O.D. PATCH		12-5/16	13-1/4	15-1/2				
COMPLETE ASSEMBLY	**Logan Part No.**	**504-1231**	**504-1325**	**504-1550**				
	Bowen No.	13320	20855	18445				
	Price	$21,274	$27,621	$37,155				
BOWL	**Logan Part No.**	**AA1013**	**AA1014**	**AA1015**				
	Bowen No.	13321	20856	18446				
	Price	$8,918	$12,301	$15,461				
GRAPPLE CARRIER	**Logan Part No.**	**AA2013**	**AA2014**	**AA2015**				
	Bowen No.	13322	20857	18447				
	Price	$4,411	$5,419	$7,992				
SPIRAL GRAPPLE	**Logan Part No.**	**AA3013**	**AA3014**	**AA3015**				
	Bowen No.	13323	20858	18448				
	Price	$2,460	$3,323	$4,454				
SPIRAL GRAPPLE CONTROL	**Logan Part No.**	**AA4013**	**AA4014**	**AA4015**				
	Bowen No.	13324	20859	18449				
	Price	$867	$1,220	$1,619				
GUIDE	**Logan Part No.**	**AA5013**	**AA5014**	**AA5015**				
	Bowen No.	13325	20860	18450				
	Price	$3,186	$3,597	$5,496				
LEAD SEAL	**Logan Part No.**	**AA6013**	**AA6014**	**AA6015**				
	Bowen No.	13326	20861	18451				
	No. Req'd	2	2	2				
	Price	$226	$254	$491				
END SEAL RING	**Logan Part No.**	**AA7013**	**AA7014**	**AA7015**				
	Bowen No.	13327	20862	18452				
	No. Req'd	2	2	2				
	Price	$596	$441	$750				
CENTER SEAL RING	**Logan Part No.**	**AA8013**	**AA8014**	**AA8015**				
	Bowen No.	13328	20863	18453				
	Price	$671	$441	$750				
CONTROL SET SCREW	**Logan Part No.**	**AA9001**	**AA9001**	**AA9001**				
	Bowen No.	12484	12484	12484				
	No. Req'd	2	2	2				
	Price	$3	$3	$3				

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(3) Size and type of connection

LOGAN LEAD SEAL CEMENTING CASING PATCHES

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Logan Lead Seal Cementing Casing Patches

O.D. CASING		2-3/8	2-7/8	3-1/2	4	4-1/2	5	5-1/2
O.D. PATCH		4-1/8	4-5/8	5-1/4	5-3/4	6-1/2	6-3/4	7-7/16
COMPLETE ASSEMBLY	**Logan Part No.**	**505-413**	**505-463**	**505-525**	**505-575**	**505-650**	**505-675**	**505-744**
	Bowen No.	40514	41209	41210	40596	40619	40649	38179
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**AB12000**	**AB12001**	**AB12016**	**AB12002**	**AB12003**	**AB12004**	**AB12005**
	Bowen No.	41092	41098	41104	41110	41116	41122	38415
	Price	*	*	*	*	*	*	*
BOWL	**Logan Part No.**	**AB1000**	**AB1001**	**AB1016**	**AB1002**	**AB1003**	**AB1004**	**AB1005**
	Bowen No.	41093	41099	41105	41111	41117	41123	38416
	Price	*	*	*	*	*	*	*
GRAPPLE CARRIER	**Logan Part No.**	**AB2000**	**AB2001**	**AB2016**	**AB2002**	**AB2003**	**AB2004**	**AB2005**
	Bowen No.	41095	41101	41107	41113	41119	41125	38417
	Price	*	*	*	*	*	*	*
GRAPPLE	**Logan Part No.**	**AA3000**	**AA3001**	**AB3016**	**AA3002**	**AA3003**	**AA3004**	**AA3005**
	Bowen No.	17261	16143	26528	22403	13273	13283	12318
	Price	*	*	*	*	*	*	*
GRAPPLE CONTROL	**Logan Part No.**	**AA4000**	**AA4001**	**AB4016**	**AA4002**	**AA4003**	**AA4004**	**AA4005**
	Bowen No.	17262	16144	26529	22404	13274	13284	12319
	Price	*	*	*	*	*	*	*
GUIDE	**Logan Part No.**	**AB5000**	**AB5001**	**AB5016**	**AB5002**	**AB5003**	**AB5004**	**AB5005**
	Bowen No.	41094	41100	41106	41112	41118	41124	38421
	Price	*	*	*	*	*	*	*
LEAD SEAL	**Logan Part No.**	**AA6000**	**AA6001**	**AB6016**	**AA6002**	**AA6003**	**AA6004**	**AA6005**
	Bowen No.	17264	16146	26531	22406	13276	13286	12324
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
END SEAL RING	**Logan Part No.**	**AA7000**	**AA7001**	**AB7016**	**AA7002**	**AA7003**	**AA7004**	**AA7005**
	Bowen No.	17265	16147	26532	22407	13277	13287	12322
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
CENTER SEAL RING	**Logan Part No.**	**AA8000**	**AA8001**	**AB8016**	**AA8002**	**AA8003**	**AA8004**	**AA8005**
	Bowen No.	17266	16148	26533	22408	13278	13288	12323
	Price	*	*	*	*	*	*	*
PACKER STINGER	**Logan Part No.**	**AB10000**	**AB10001**	**AB10016**	**AB10002**	**AB10003**	**AB10004**	**AB10005**
	Bowen No.	41096	41102	41108	41114	41120	41126	38420
	Price	*	*	*	*	*	*	*
STINGER RETAINER	**Logan Part No.**	**AB11000**	**AB11001**	**AB11016**	**AB11002**	**AB11003**	**AB11004**	**AB11005**
	Bowen No.	41097	41103	41109	41115	41121	41127	38419
	Price	*	*	*	*	*	*	*
CONTROL SET SCREW	**Logan Part No.**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**
	Bowen No.	12329	12329	12329	12329	12329	12329	12329
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
BOWL SEAL	**Logan Part No.**	**568-237**	**568-240**	**568-246**	**568-250**	**568-255**	**568-258**	**568-260**
	Bowen No.	30-15	30-18	30-24	30-28	30-33	30-36	30-38
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*

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(3) Size and type of connection for Top Sub

Logan Lead Seal Cementing Casing Patches

O.D. CASING		5-3/4	6	6-5/8	7	7-5/8	8-5/8	9-5/8
O.D. PATCH		7-3/4	8	8-5/8	9-1/8	9-7/8	11-1/8	11-15/16
COMPLETE ASSEMBLY	**Logan Part No.**	**505-775**	**505-800**	**505-863**	**505-913**	**505-988**	**505-1113**	**505-1194**
	Bowen No.	41088	40679	40858	40859	40869	41004	41085
	Price	*	*	*	*	*	*	*
TOP SUB	**Logan Part No.**	**AB12006**	**AB12007**	**AB12008**	**AB12009**	**AB12010**	**AB12011**	**AB12012**
	Bowen No.	41128	41134	41140	41146	41152	41158	41164
	Price	*	*	*	*	*	*	*
BOWL	**Logan Part No.**	**AB1006**	**AB1007**	**AB1008**	**AB1009**	**AB1010**	**AB1011**	**AB1012**
	Bowen No.	41129	41135	41141	41147	41153	41159	41165
	Price	*	*	*	*	*	*	*
GRAPPLE CARRIER	**Logan Part No.**	**AB2006**	**AB2007**	**AB2008**	**AB2009**	**AB2010**	**AB2011**	**AB2012**
	Bowen No.	41131	41137	41143	41149	41155	41161	41167
	Price	*	*	*	*	*	*	*
GRAPPLE	**Logan Part No.**	**AA3006**	**AA3007**	**AA3008**	**AA3009**	**AA3010**	**AA3011**	**AA3012**
	Bowen No.	22413	13293	13303	12503	13073	13313	12478
	Price	*	*	*	*	*	*	*
GRAPPLE CONTROL	**Logan Part No.**	**AA4006**	**AA4007**	**AA4008**	**AA4009**	**AA4010**	**AA4011**	**AA4012**
	Bowen No.	22414	13294	13304	12504	13074	13314	12479
	Price	*	*	*	*	*	*	*
GUIDE	**Logan Part No.**	**AB5006**	**AB5007**	**AB5008**	**AB5009**	**AB5010**	**AB5011**	**AB5012**
	Bowen No.	41130	41136	41142	41148	41154	41160	41166
	Price	*	*	*	*	*	*	*
LEAD SEAL	**Logan Part No.**	**AA6006**	**AA6007**	**AA6008**	**AA6009**	**AA6010**	**AA6011**	**AA6012**
	Bowen No.	22416	13296	13306	12506	13076	13316	12481
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
END SEAL RING	**Logan Part No.**	**AA7006**	**AA7007**	**AA7008**	**AA7009**	**AA7010**	**AA7011**	**AA7012**
	Bowen No.	22417	13297	13307	12570	13077	13317	12482
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
CENTER SEAL RING	**Logan Part No.**	**AA8006**	**AA8007**	**AA8008**	**AA8009**	**AA8010**	**AA8011**	**AA8012**
	Bowen No.	22418	13298	13308	12508	13078	13318	12483
	Price	*	*	*	*	*	*	*
PACKER STINGER	**Logan Part No.**	**AB10006**	**AB10007**	**AB10008**	**AB10009**	**AB10010**	**AB10011**	**AB10012**
	Bowen No.	41132	41138	41144	41150	41156	41162	41168
	Price	*	*	*	*	*	*	*
STINGER RETAINER	**Logan Part No.**	**AB11006**	**AB11007**	**AB11008**	**AB11009**	**AB11010**	**AB11011**	**AB11012**
	Bowen No.	41133	41139	41145	41151	13074	13314	12479
	Price	*	*	*	*	*	*	*
CONTROL SET SCREW	**Logan Part No.**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9000**	**AA9001**	**P12003**
	Bowen No.	12329	12329	12329	12329	12329	12484	12484
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*
BOWL SEAL	**Logan Part No.**	**568-262**	**568-263**	**568-265**	**568-267**	**568-270**	**568-449**	**568-450**
	Bowen No.	30-40	30-41	30-43	30-45	30-48	27-76	27-77
	No. Req'd	2	2	2	2	2	2	2
	Price	*	*	*	*	*	*	*

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Logan Lead Seal Cementing Casing Patches

O.D. CASING		10-3/4	11-3/4	13-3/8				
O.D. PATCH		13-5/8	14-3/4	16-5/8				
COMPLETE ASSEMBLY	**Logan Part No.**	**505-1363**	**505-1475**	**505-1663**				
	Bowen No.	41086	41089	41087				
	Price	*	*	*				
TOP SUB	**Logan Part No.**	**AB12013**	**AB12014**	**AB12015**				
	Bowen No.	41170	41176	41185				
	Price	*	*	$11,214				
BOWL	**Logan Part No.**	**AB1013**	**AB1014**	**AB1015**				
	Bowen No.	41171	41177	41182				
	Price	*	*	*				
GRAPPLE CARRIER	**Logan Part No.**	**AB2013**	**AB2014**	**AB2015**				
	Bowen No.	41173	41179	41183				
	Price	*	*	*				
GRAPPLE	**Logan Part No.**	**AA3013**	**AA3014**	**AA3015**				
	Bowen No.	13323	20858	18448				
	Price	*	*	*				
GRAPPLE CONTROL	**Logan Part No.**	**AA4013**	**AA4014**	**AA4015**				
	Bowen No.	13324	20859	18449				
	Price	*	*	*				
GUIDE	**Logan Part No.**	**AB5013**	**AB5014**	**AB5015**				
	Bowen No.	41172	41178	41184				
	Price	*	*	$12,399				
LEAD SEAL	**Logan Part No.**	**AA6013**	**AA6014**	**AA6015**				
	Bowen No.	13326	20861	18451				
	No. Req'd	2	2	2				
	Price	*	*	*				
END SEAL RING	**Logan Part No.**	**AA7013**	**AA7014**	**AA7015**				
	Bowen No.	13327	20862	18452				
	No. Req'd	2	2	2				
	Price	*	*	*				
CENTER SEAL RING	**Logan Part No.**	**AA8013**	**AA8014**	**AA8015**				
	Bowen No.	13328	20863	18453				
	Price	*	*	*				
PACKER STINGER	**Logan Part No.**	**AB10013**	**AB10014**	**AB10015**				
	Bowen No.	41174	41180	41186				
	Price	*	*	*				
STINGER RETAINER	**Logan Part No.**	**AB11013**	**AB11014**	**AB11015**				
	Bowen No.	13324	20859	18449				
	Price	*	*	*				
CONTROL SET SCREW	**Logan Part No.**	**AA9001**	**AA9001**	**AA9001**				
	Bowen No.	12484	12484	12484				
	No. Req'd	2	2	2				
	Price	*	*	*				
BOWL SEAL	**Logan Part No.**	**568-455**	**568-453**	**568-459**				
	Bowen No.	27-82	27-80	27-86				
	No. Req'd	2	2	2				
	Price	*	*	*				

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Recommended Spare Parts:

(1) Name and number of assembly or part

(2) Casing O.D.

(3) Size and type of connection for Top Sub

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