

FISHING BUMPER SUBS

Overview

One of the most common tools used for any kind of fishing job is the bumper sub. The tool's design allows full torque and unrestricted fluid circulation at all times. The Logan Fishing Bumper Sub can bump up or down to engage or disengage overshots or spears, or be used as a feed-off tool in milling or cutting operations. Other typical operations include releasing stuck drill pipe, drill collars, tubing, test tools, and safety joints. The fishing bumper sub can be used in conjunction with an overshot or spear.

Construction

This simple tool consists of five major components: a top sub, knocker, middle body, mandrel, and a mandrel body. All components are manufactured from high quality, heat-treated alloy steels.

The mandrel's hexagon shape allows it to slide in and out of the mandrel body's matching shape to transmit downhole torque. The standard stroke length of 20 inches is suitable for most purposes, although longer stroke lengths of 30, 36, 42, 48, and 60 inches are available.

A knocker seal ring, seal protector ring, and non-extrusion ring are provided on a standard knocker. Chevron packing knocker assemblies are available upon request and are recommended for extensive circulation through the fishing bumper sub.

Operation

The Logan Fishing Bumper Sub is typically run directly above the spear, overshot, screw-in sub, or safety joint. When lift load is applied, the bumper sub will slide open until the knocker hits the mandrel body. Slacking weight off the workstring to the fishing bumper sub will cause the mandrel body to slide back down the mandrel until the bottom shoulder of the mandrel body hits the top shoulder of the mandrel.

To Apply a Downward Blow

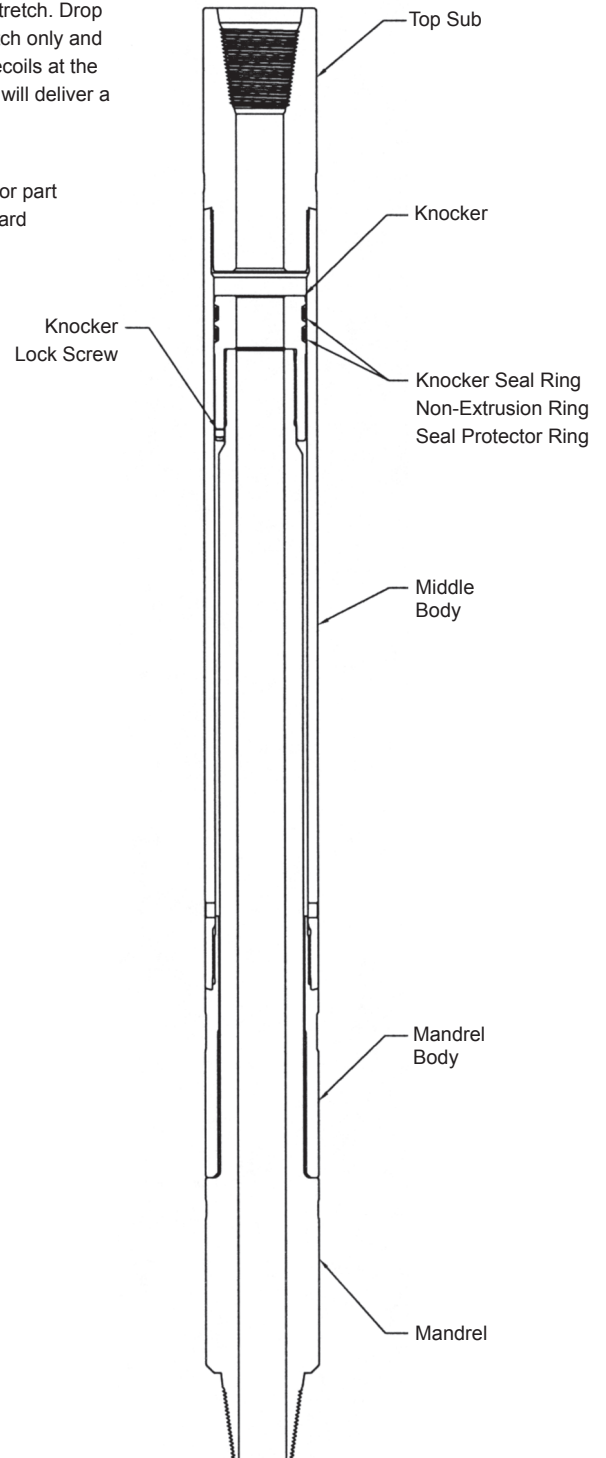
At the surface, mark the pipe to indicate the open and closed positions of the fishing bumper sub. Raise the fishing string to open the bumper sub and allow for extra string stretch. Sharply drop the string and stop with the brake approximately four to six inches above the closed position of the bumper sub to deliver a sharp downward blow. To deliver a solid downward blow, drop the full weight of the fishing string without braking.

To Apply an Upward Blow

At the surface, mark the pipe to indicate the open and closed positions of the fishing bumper sub. Raise the fishing string to open the bumper sub and allow for additional string stretch. Drop the string by the amount of the stretch only and stop it with the brake. As the pipe recoils at the bottom of the hole, the bumper sub will deliver a sharp upward blow.

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



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
TOP SUB	Logan Part No.	AF1000	AF1001	AF10015	AF1002	AF10025	AF1003	AF1004
	Bowen No.	10121	18786	42593	10106	10191	39888	39894
MANDREL BODY	Logan Part No.	AF2000	AF2001	AF20015	AF2002	AF20025	AF2003	AF2004
	Bowen No.	10123	18788	42596	10108	10193	39890	39896
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
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
KNOCKER	Logan Part No.	AF5000	AF5001	AF50015	AF5002	AF50025	AF5003	AF5004
	Bowen No.	10126	18790	42595	10111	10195	39892	39898
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
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
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	2
KNOCKER LOCK SCREW	Logan Part No.	AF6001	AF6000	AF6000	AF6000	AF6001
	Bowen No.	54775	48879	48879	48879	54775

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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.

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

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. ...	...	...	...	...	...	...
KNOCKER	Logan Part No. ...	...	...	...	...	...	...
	Bowen No. ...	...	...	...	...	...	...
PACKING RING	Logan Part No. ...	...	...	...	...	...	...
	Bowen No. ...	...	...	...	...	...	...
CENTER RING	Logan Part No. ...	...	...	...	...	...	...
	Bowen No. ...	...	...	...	...	...	...
CHEVRON PACKING SET	Logan Part No. ...	...	...	...	...	...	...
	Bowen No. ...	...	...	...	...	...	...
RETAINING RING	Logan Part No.
	Bowen No.
PACKING RETAINER	Logan Part No.
	Bowen No.
	No. Req'd

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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 Klocker Seals

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
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
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
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
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

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
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
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

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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

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
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
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

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
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
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

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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

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
TOP SUB	Logan Part No.	AF1005	AF1006	AF1007	AF1008	AF10085	AF1009	AF1010
	Bowen No.	10091	41825	36795	39906	10226	10136	1025
MANDREL BODY	Logan Part No.	AF2005	AF2006	AF2007	AF2008	AF20085	AF2009	AF2010
	Bowen No.	10093	10158	36797	39908	10228	10138	10267
MIDDLE BODY <i>(20-inch stroke)</i>	Logan Part No.	AF3005-20	AF3006-20	AF3007-20	AF3008-20	AF30085-20	AF3009-20	AF3010-20
	Bowen No.	10092	10157	36796	39907	10227	10137	10262
MANDREL <i>(20-inch stroke)</i>	Logan Part No.	AF4005-20	AF4006-20	AF4007-20	AF4008-20	AF40085-20	AF4009-20	AF4010-20
	Bowen No.	10095	41828	36798	39909	10229	10140	10268
KNOCKER	Logan Part No.	AF5005	AF5006	AF5007	AF5008	AF50085	AF5009	AF5010
	Bowen No.	10096	41829	36799	39910	10230	10141	10250
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
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
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
KNOCKER LOCK SCREW	Logan Part No.	AF6002	AF6000	AF6000	AF6000	AF6002	AF6003	AF6003
	Bowen No.	54769	48879	48879	48879	54769	43305	43305

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- (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

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
KNOCKER	Logan Part No.	AF7000	AF7001	AF7002	AF7003	AF70035	AF7004	AF7005
	Bowen No.	30911	59192	62775	59178	81173	50322	62206
PACKING RING	Logan Part No.	AF8000	AF8001	AF8002	AF8003	AF80035	AF8004	AF8005
	Bowen No.	30912	59193	62776	59179	81174	50323	62207
CENTER RING	Logan Part No.	AF9000	AF9001	AF9002	AF9003	AF90035	AF9004	AF9005
	Bowen No.	30913	59194	62777	59180	81175	50324	62208
CHEVRON PACKING SET	Logan Part No.	AF10000	AF10001	AF10002	AF10003	AF100035	AF10004	AF10005
	Bowen No.	30914	59195	62778	59181	81176	50325	62209
RETAINING RING	Logan Part No.	AF11000	AF11001	AF11002	AF11003	AF110035	AF11004	AF11005
	Bowen No.	19812	59196	59182	59182	81177	50326	13177
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

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- (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 Klocker Seals

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
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
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

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
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
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

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
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
MIDDLE BODY	Logan Part No.	AF3005-42	AF3006-42	AF3007-42	AF3008-42	AF30085-42	AF3009-42	AF3010-42
	Bowen No.	29648	46925	46931	46934	29663	29669	29672

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- (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

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

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
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
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

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
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
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

Logan Oil Tools reserves the right to change or discontinue designs without notice.

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.

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

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				
TOP SUB	Logan Part No.	AF1011	AF1012	AF1013				
	Bowen No.	10691	26596	61597				
MANDREL BODY	Logan Part No.	AF2011	AF2012	AF2013				
	Bowen No.	10693	26598	61599				
MIDDLE BODY	Logan Part No.	AF3011-20	AF3012-20	AF3013-20				
<i>20- inch Stroke</i>	Bowen No.	10692	26597	61598				
MANDREL	Logan Part No.	AF4011-20	AF4012-20	AF4013-20				
<i>20- inch Stroke</i>	Bowen No.	10694	26599	61600				
KNOCKER	Logan Part No.	AF5011	AF5012	AF5013				
	Bowen No.	10695	26594	61601				
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				
SEAL PROTECTOR RING	Logan Part No.	L386-58	L386-65	L227-68.5				
	Bowen No.	386-58	386-65	227-68.5				
	No. Req'd	4	4	4				
KNOCKER SEAL RING	Logan Part No.	568-431	568-438	568-441				
	Bowen No.	568431	568438	568441				
	No. Req'd	2	2	2				
KNOCKER LOCK SCREW	Logan Part No.	AF6003	AF6003	AF6004				
	Bowen No.	43305	43305	54770				

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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 Klocker Seals

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	...				
KNOCKER	Logan Part No. AF7006	AF7007	...				
	Bowen No. 57014	61104	...				
PACKING RING	Logan Part No. AF8006	AF8007	...				
	Bowen No. 57015	61105	...				
CENTER RING	Logan Part No. AF9006	AF9007	...				
	Bowen No. 62374	62378	...				
CHEVRON PACKING SET	Logan Part No. AF10006	AF10007	...				
	Bowen No. 57016	61106	...				
RETAINING RING	Logan Part No. AF11006	AF11007	...				
	Bowen No. 57017	59907	...				
PACKING RETAINER	Logan Part No. AF12006	AF12007	...				
	Bowen No. 62375	62379	...				
	No. Req'd 2	2	...				

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Special Notes:

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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 Klocker Seals

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			
MANDREL	Logan Part No.	AF4011-30	AF4012-30	AF4013-30			
	Bowen No.	14522	29569	70410			
MIDDLE BODY	Logan Part No.	AF3011-30	AF3012-30	AF3013-30			
	Bowen No.	14521	29570	70409			

36" STROKE

COMPLETE ASSEMBLY	Logan Part No.	604-675	604-775	604-900			
	Bowen No.	13590	29616	70411			
MANDREL	Logan Part No.	AF4011-36	AF4012-36	AF4013-36			
	Bowen No.	13592	29617	70413			
MIDDLE BODY	Logan Part No.	AF3011-36	AF3012-36	AF3013-36			
	Bowen No.	13591	29618	70412			

42" STROKE

COMPLETE ASSEMBLY	Logan Part No.	604-675	604-775	604-900			
	Bowen No.	29676	29679	70414			
MANDREL	Logan Part No.	AF4011-42	AF4012-42	AF4013-42			
	Bowen No.	29677	29680	70416			
MIDDLE BODY	Logan Part No.	AF3011-42	AF3012-42	AF3013-42			
	Bowen No.	29678	29681	70415			

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Special Notes:

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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 Klocker Seals

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			
MANDREL	Logan Part No. AF4011-48	AF4012-48	AF4013-48				
	Bowen No.	29743	29746	70419			
MIDDLE BODY	Logan Part No. AF3011-48	AF3012-48	AF3013-48				
	Bowen No.	29744	29747	70418			

60" STROKE

COMPLETE ASSEMBLY	Logan Part No. 604-675	604-775	604-900				
	Bowen No.	29796	29799	70420			
MANDREL	Logan Part No. AF4011-60	AF4012-60	AF4013-60				
	Bowen No.	29797	29800	70422			
MIDDLE BODY	Logan Part No. AF3011-60	AF3012-60	AF3013-60				
	Bowen No.	29798	29801	70421			

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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.

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 Klocker Seals