

Overview

The Full Flow Reverse Circulation Junk Basket is similar to the Reverse Circulation Junk Basket. The unique difference is the Full Flow Valve Assembly that enables continuous circulation through the center thereby keeping out shale and debris while running in the hole. Premature reverse flow action caused by clogged valves is eliminated. The tool's drain feature eliminates pulling a wet string.

Construction

The Full Flow Reverse Circulation Junk Basket consists of a lifting sub, top sub, barrel, full flow valve assembly, filter, type A mill shoe, and an upper and lower catcher.

A lifting sub is provided for ease of handling and for storage of the steel drop ball. The short fingers of the upper catcher are designed to break the core that has been cut by the mill shoe. The combination of short and long fingers of the lower catcher are designed to trap and retrieve the core and junk. Both catchers are free-revolving within the mill shoe, eliminating any breakage of the catcher fingers.

The full flow valve assembly consists of a steel ball, ball seat, ball seat retainer, four shear pins, and O-ring seals.

For component breakdown of the junk catcher assemblies, refer to the Junk Catcher Assemblies tables on pages 115 – 123.

Optional Accessories

Mill shoes for all full flow reverse circulation junk baskets are available in three types: A, B, and C

Type A Mill Shoe

Conventional hard metal with side wings.

Type B Mill Shoe

Similar to the Type A design, but dressed with sintered tungsten carbide.

Type C Mill Shoe

Flat bottomed and dressed with sintered tungsten carbide.

Magnet Inserts

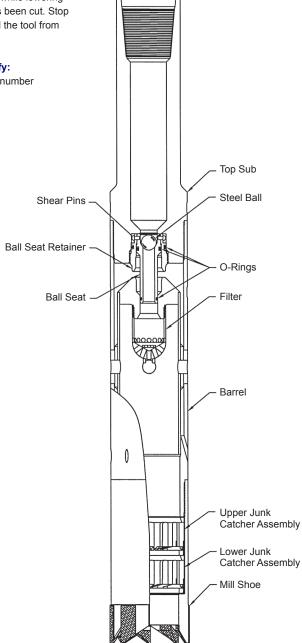
Full Flow Reverse Circulation Junk Baskets can easily be converted to an effective fishing magnet by replacing both junk catcher assemblies with a magnet insert.

Operation

The Full Flow Reverse Circulation Junk Basket is made up to the bottom of the fishing string and lowered to a point within several feet from the bottom of the hole. Begin circulation to wash the hole. Stop circulation and drop the steel ball. Begin circulation again to shear pins and actuate the valve assembly for reverse circulation. Begin slow rotation while lowering the tool until a 10-inch core has been cut. Stop rotation and circulation and pull the tool from the hole.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe





HOLE SIZE		3-3/4	4-1/8	4-5/8 to 5	6-1/8	7-1/2	8-3/8	9-5/8
		to 4	to 4-1/2		to 6-1/2	to 8-1/4	to 9-1/2	to 10-5/8
BARREL O.D.		3-5/8	4	4-1/2	5-3/4	7	7-7/8	9-1/8
MAXIMUM DIAMETER OF	FISH		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16
COMPLETE ASSEMBLY		304-363	304-400	304-450	304-575	304-700	304-788	304-913
	Bowen No.	154583	71226	70702	71127	70908	70923	71198
BALL SEAT		S1008	S1000	S1002	S1002	S1003	S1003	S1005
	Bowen No.	154601	70699	70851	70851	67354	67354	67168
SHEAR PIN		S2008	S2000	S2000	S2000	S2003	S2003	S2003
	Bowen No.	154602	70852	70852	70852	67175	67175	67175
	No. Req'd	4	4	4	4	4	4	4
UPPER JUNK		14000-016	14000-008	14000-009	500-051	14000-011	14000-012	14000-013
CATCHER ASSEMBLY	Bowen No.	154611	22070-W	22075-W	15130-W	22050-W	21640-W	14632-W
(See Note 1)								
LOWER JUNK		600-015	600-016	600-017	600-020	600-022	600-023	600-024
CATCHER ASSEMBLY	Bowen No.	21795W	21855-W	21780-W	28349-W	21725-W	18725-W	14633-W
(See Note 1)								
STEEL BALL		D4010	D4000	D4002	D4002	D4007	D4007	D4009
	Bowen No.	80295	6640	4453	4453	2572	2572	2665
TOP SUB		S4008	S4000	S4001	S4002	S4003	S4004	S4005
	Bowen No.	154598	71227	71104	71125	70935	70926	71202
BARREL		S5008	S5000	S5001	S5002	S5003	S5004	S5005
	Bowen No.	154599	71230	71116	71115	70911	70924	71203
BALL SEAT RETAINER		S6008	S6002	S6002	S6002	S6003	S6003	S6005
	Bowen No.	154600	70850	70850	70850	67353	67353	67167
FILTER		S7008	S7002	S7002	S7002	S7003	S7003	S7005
	Bowen No.	154603	80768	80768	80768	70731	70731	70764
RETAINER		568-225	568-331	568-331	568-331	568-243	568-243	568-248
O-RING SEAL	Bowen No.	568225	27-34	27-34	27-34	30-21	30-21	30-26
UPPER SEAT		568-118	568-325	568-325	568-325	568-231	568-231	568-235
O-RING SEAL	Bowen No.	568118	27-28	27-28	27-28	30-9	30-9	30-13
LOWER SEAT		568-118	568-215	568-215	568-215	568-224	568-224	568-229
O-RING SEAL	Bowen No.	568118	27-20	27-20	27-20	30-2	30-2	30-7
MILL SHOE A		S3008-A	S3000-A	S3001-A	S3002-A	S3003-A	S3004-A	S3005-A

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

154612

Bowen No.

71228

70909

71124

72070

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection

(Hard Faced Mill Teeth)

(3) O.D. and type of shoe

72081

71199

⁽²⁾ For type A, B, or C shoes: unless specified, shoes will be furnished with the same O.D. as minimum hole size shown.

⁽³⁾ Finger shoe replacement is furnished with the same O.D. as standard shoe unless otherwise specified.



FULL FLOW REVERSE CIRCULATION JUNK BASKETS

HOLE SIZE		3-3/4	4-1/8	4-5/8 to 5	6-1/8	7-1/2	8-3/8	9-5/8
		to 4	to 4-1/2		to 6-1/2	to 8-1/4	to 9-1/2	to 10-5/8
BARREL O.D.		3-5/8	4	4-1/2	5-3/4	7	7-7/8	9-1/8
MAXIMUM DIAMETER OF FIS	Н		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16
COMPLETE ASSEMBLY		304-363	304-400	304-450	304-575	304-700	304-788	304-913
В	owen No.	154583	71226	70702	71127	70908	70923	71198

OPTIONAL COMPONENTS

MILL SHOE B		S3008-B	S3000-B	S3001-B	S3002-B	S3003-B	S3004-B	S3005-B
(Tungsten Carbide	Bowen No.	154612	71228	70909	71124	72070	72081	71199
Mill Teeth)								
MILL SHOE C		S3008-C	S3000-C	S3001-C	S3002-C	S3003-C	S3004-C	S3005-C
(Tungsten Carbide Faced)	Bowen No.	154612	71228	70909	71124	72070	72081	71199
LIFTING SUB			D6000	D6002	D6004	D6006	D6008	D6009
	Bowen No.		4568	424	425	1849	426	427
PIPE PLUG			S9000	S9000	S9001	S9002	S9003	S9003
	Bowen No.		61520	61520	61521	61522	61523	61523
T-WRENCH			S10000	S10000	S10000	S10001	S10001	S10002
	Bowen No.		72067	72067	72067	72069	72069	72068

FINGER SHOE

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

- (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.
- (3) Finger shoe replacement is furnished with the same O.D. as standard shoe unless otherwise specified.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe

- (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)



FULL FLOW REVERSE CIRCULATION JUNK BASKETS

HOLE SIZE		3-3/4	4-1/8	4-5/8 to 5	6-1/8	7-1/2	8-3/8	9-5/8
		to 4	to 4-1/2		to 6-1/2	to 8-1/4	to 9-1/2	to 10-5/8
BARREL O.D.		3-5/8	4	4-1/2	5-3/4	7	7-7/8	9-1/8
MAXIMUM DIAMETER OF F	ISH		2-1/2	3-1/16	4-3/8	5-1/8	6-1/16	7-1/16
COMPLETE ASSEMBLY		304-363	304-400	304-450	304-575	304-700	304-788	304-913
	Bowen No.	154583	71226	70702	71127	70908	70923	71198

MAGNET INSERTS

COMPLETE ASSEMBLY		***	600-047	600-050	600-052	600-053	600-054
	Bowen No.	 	61840	61866	61876	61953	61961
ADAPTER			E4016	E4018	E4020	E4021	E4022
	Bowen No.	 	61841	61867	61948	61954	61966
MAGNETIC ASSEMBLY			600-069	600-071	600-073	600-074	600-075
	Bowen No.	 	61812	61816	61820	61822	61826

REPAIR KITS

UPPER CATCHER		14000-008R	14000-009RK	600-020RK	14000-011RK	14000-012RK	14000-013RK
REPAIR KITS	Bowen No.	 22070-WK	22075-WK	28349-WK	22050-WK	21640-WK	14632-WK
LOWER CATCHER		600-016RK	600-017RK	500-051RK	600-022RK	600-023RK	600-024RK
REPAIR KITS	Bowen No.	 21855-WK	21780-WK	15130-WK	21725-WK	18725-WK	14633-WK
VALVE REPAIR KIT		14000-032	14000-033	14000-034	14000-035	14000-036	14000-037
	Bowen No.	 72064	72062	72063	72058	72061	72065

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- (3) Finger shoe replacement is furnished with the same O.D. as standard shoe unless otherwise specified.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe

- (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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TULL	LLOW	REVERSE	CIRCUL	AHUN	JUNK	DASKEIS

FULL FLOW REVERSE	OIIKOOLATIO	IT CONTR DAG	12.0	
HOLE SIZE		10-3/4	11- 3/4	
		to 11-5/8	to 12-1/2	
BARREL O.D.		10-1/8	11	
MAXIMUM DIAMETER OF	FISH	7-11/16	8-5/16	
COMPLETE ASSEMBLY		304-1013	304-1100	
	Bowen No.	71218	70910	
BALL SEAT		S1005	S1005	
	Bowen No.	67168	67168	
SHEAR PIN		S2003	S2003	
	Bowen No.	67175	67175	
	No. Req'd	4	4	
UPPER JUNK		14000-014	14000-015	
CATCHER ASSEMBLY	Bowen No.	25235-W	31046-W	
(See Note 1)				
LOWER JUNK		500-019	600-026	
CATCHER ASSEMBLY	Bowen No.	18945-W	21760-W	
(See Note 1)				
STEEL BALL		D4009	D4009	
	Bowen No.	2665	2665	
TOP SUB		S4006	S4007	
	Bowen No.	71219	70920	
BARREL		S5006	S5007	
	Bowen No.	71220	70921	
BALL SEAT RETAINER		S6005	S6005	
	Bowen No.	67167	67167	
FILTER		S7005	S7005	
	Bowen No.	70764	70764	
RETAINER		568-248	568-248	
O-RING SEAL	Bowen No.	30-26	30-26	
UPPER SEAT		568-235	568-235	
O-RING SEAL	Bowen No.	30-13	30-13	
LOWER SEAT		568-229	568-229	
O-RING SEAL	Bowen No.	30-7	30-7	

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When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe

- (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)



FULL FLOW REVERSE CIRCULATION JUNK BASKETS

HOLE SIZE		10-3/4	11- 3/4	
		to 11-5/8	to 12-1/2	
BARREL O.D.		10-1/8	11	
MAXIMUM DIAMETER OF	FISH	7-11/16	8-5/16	
COMPLETE ASSEMBLY		304-1013	304-1100	
	Bowen No.	71218	70910	
MILL SHOE A		S3006-A	S3007-A	
(Hard Faced Mill Teeth)	Bowen No.	72080	72071	
MILL SHOE B			S3007-B	
(Tungsten Carbide		S3006-B	72071	
Mill Teeth)	Bowen No.	72080		
MILL SHOE C		S3006-C	S3007-C	
(Tungsten Carbide Faced)	Bowen No.	72080	72071	
LIFTING SUB		D6009	D6009	
	Bowen No.	427	427	
PIPE PLUG		S9003	S9003	
	Bowen No.	61523	61523	
T-WRENCH		S10002	S10002	
	Bowen No.	72068	72068	

FINGER SHOE

COMPLETE ASSEMBLY		600-110	600-111
	Bowen No.	2743	2744
BODY		D7010	D7011
	Bowen No.	2743-2	2744-2
REPLACEMENT		D10010	D10011
	Bowen No.	2743-1	2744-1

MAGNET INSERTS

COMPLETE ASSEMBLY		600-055	600-056	
	Bowen No.	61963	61973	
ADAPTER		E4023	E4024	
	Bowen No.	61968	61974	
MAGNETIC ASSEMBLY		600-075	600-076	
	Bowen No.	61826	61828	

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- (3) Finger shoe replacement is furnished with the same O.D. as standard shoe unless otherwise specified.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe

- (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)



FULL FLOW REVERSE CIRCULATION JUNK BASKETS

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

REPAIR KITS

UPPER CATCHER		14000-14RK	14000-015RK
REPAIR KITS	Bowen No.	25235-WK	31046-WK
LOWER CATCHER		500-019RK	600-026RK
REPAIR KITS	Bowen No.	18945-WK	21760-WK
VALVE REPAIR KIT		14000-038	14000-039
	Bowen No.	72059	72060

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When ordering, please specify:

- (1) Complete assembly or part number
- (2) Top Sub connection
- (3) O.D. and type of shoe

- (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)