



**DUAL BORE RETRIEVABLE SEAL
BORE PACKER, ECNER AFLAS,
W/O UPPER BORE
5-1/2" X 4.000" X 3.000"**

Manual No:
DL-268-5500-1695

Revision: **A**

Revision Date:
08/03/2023

Authored by: *J.Anderson*

Approved by: *D.McKeon*

A) DESCRIPTION

The Retrievable Seal Bore (RSB) Dual Bore Packer delivers high performance with simplicity of design and desirable economics. This packer allows for a larger ID through the packer by sealing in an upper sealbore. This packer is rated for 7,000 PSI and can be equipped to withstand severe corrosion and high temperatures.

NOTE1: Setting and retrieving tools sold separately.

NOTE2: This packer requires at least a 30 second burn on the wireline setting tool to ensure a proper set. A burn time less than 30 seconds may shear the setting tool from the packer before fully setting the packer.

B) RELATED TOOLS (sold separately)

- B-1) 5-1/2" X 4.000" X 3.000" Wireline Adapter Kit (WLAK), 10' (P/N 26955-120)—refer to technical manual *DL-269-5500-751*.
- B-2) 5-1/2" X 4.000" X 3.000" Large/Dual Bore RSB Retrieving Tool (P/N 26955RT)—refer to technical manual *DL-269-5500-1032*.
- B-3) 4.000" Seal Locator Assembly, ATR, 4.625" OD (P/N 58340ATR-3)—refer to technical manual *DL-581-4000-1696*.

C) SPECIFICATION GUIDE

CASING			TOOL OD (INCHES)	SEAL BORE (INCHES)	MIN ID THRU SEALS (INCHES)	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)	RECOMMENDED HOLE SIZE (INCHES)				
5-1/2	13.0 – 20.0	4.778 – 5.044	4.625	4.000	3.000	26855BA-1 26855BAC-1 ¹

¹Carbide Option

DIFFERENTIAL PRESSURE (MAX)	TENSILE LOAD THRU TOOL (MAX)	TEMPERATURE RANGE (MIN - MAX)
7,000 PSI	91,000 LBS	100 – 450° F

D) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION1: D&L ships tool connections made-up **HAND TIGHT**—labeled with hand-tight tape on the tool (Fig. 1)—unless stated otherwise. Tighten/torque all connections properly before operating tool.



Fig. 1

GENERAL THREAD CONNECTION TORQUE RECOMMENDATIONS			
STUB ACME / ACME THREADS	INTERNAL TAPERED TUBING THREADS		PREMIUM THREADS
	UP TO 2-3/8"	GREATER THAN 2-3/8"	
600 – 800 FT-LBS	600 – 800 FT-LBS	800 – 1,200 FT-LBS	Consult thread manufacturer's recommendations.

D & L OIL TOOLS
P.O. BOX 52220 TULSA, OK 74152
PHONE: (800) 441-3504 www.dloiltools.com



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D) PRE-INSTALLATION INSPECTION PROCEDURES (cont'd)

GENERAL SCREW TORQUE RECOMMENDATIONS									
SCREW SIZE (INCHES)	#6	#8	#10	1/4	5/16	3/8	7/16	1/2	5/8 and larger
TORQUE RANGE (INCH-POUNDS)	5 – 8	10 – 15	18 – 25	25 – 40	50 – 80	90 – 135	160 – 210	250 – 330	450 - 650

Before first use, D&L recommends disassembly and inspection of the tool unless stated otherwise. Ensure parts have not been damaged during shipping. Replace damaged parts with D&L replacement parts. Contact D&L sales for replacement part information.

Re-assemble the tool after inspection. Install parts in the correct order and orientation. Properly tighten connections.

Before re-using the tool, D&L recommends disassembly and inspection of the tool. Clean parts and ensure parts are in good working condition. Replace worn or damaged parts with D&L replacement parts.

When redressing the tool, D&L recommends replacement of all seals, elements, o-rings, shear screws, etc. Contact D&L sales for redress kit and/or other replacement part information.

E) SETTING PROCEDURES

CAUTION: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

NOTE: Packers with ECNER packing elements are single-use tools and must be redressed following initial set.

Run the RSB Packer in on a wireline pressure setting assembly with the RSB Wireline Adapter Kit. The RSB Packer may also be set utilizing a hydraulic setting tool run on tubing.

F) RELEASING PROCEDURES

To release the RSB packer, the RSB Retrieving Tool is run into the well on tubing and latched into the packer. Set down a minimum of 6,000 lbs at the packer to shear out the mandrel from the upper latch. The releasing collet will engage the support ring under the collet in the RSB. Straight pick up shears the support ring away from the collet fingers allowing the collet to collapse. Continued upward movement releases the slips and relaxes the packing element. The packer is now free of the casing and can be removed from the well.

G) STORAGE RECOMMENDATIONS

When preparing the tool for storage, follow the Pre-Installation Inspection Procedures. Re-assemble the tool with connections hand-tight only and in running position if applicable. Elements should be in a relaxed state—free from tension, compression, and other stresses that could cause deformation.

Store the tool, if possible, in an enclosed, temperature and humidity controlled environment. Avoid excessively high temperatures over long periods of time. Shield elastomeric parts from ultraviolet light sources. Keep tool dry and protected from condensation. Do not store in contact with or near volatile or corrosive chemicals. Do not store near ozone generating equipment or operations such as welding.



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H) RECOMMENDED HAND TOOLS

- VISE
- GLOVES
- ALLEN WRENCHES
- TAPE MEASURE
- O-RING PICK
- BAR
 - 1/2-INCH
 - 3/4-INCH
- PAINT BRUSH, 2-INCH
- PIPE WRENCH, 3-FT (2 EA)
- "CHEATER" PIPE, 4-FT LONG
- ADJUSTABLE WRENCH, 12-INCH
- CORDLESS DRILL, 18V
- SNAP RING SPREADER PLIERS
- ALIGNING PUNCH
- SCREWDRIVER SET, FLAT-TIPPED
- SOCKET SETS
 - 3/8-INCH DRIVE
 - 1/2-INCH DRIVE
- HAMMERS
 - SLEDGE
 - BALL PEEN
 - DEAD BLOW

I) DISASSEMBLY

- I-1) Clamp lock ring housing (2) in vise.
- I-1.1) From lower end of tool, unscrew and remove set screws (23) from bottom sub (7).
 - I-1.2) Unscrew and remove bottom sub (7) from connector sleeve (8).
 - I-1.2.1) Remove o-ring (17) from bottom sub (7).
 - I-1.3) Unscrew and remove set screws (23) from upper end of connector sleeve (8).
 - I-1.4) Unscrew and remove cap screws (25) from collet (5).
 - I-1.5) Unscrew and remove connector sleeve (8) from collet (5) and lower cone (11).
 - I-1.6) Unscrew and remove collet (5) from inner mandrel (1).
 - I-1.6.1) Unscrew and remove shear screws (24) from collet (5).
 - I-1.6.2) Separate collet (5) from support ring (6)
 - I-1.6.3) Remove o-rings (20, 21) from collet (5).
 - I-1.7) Unscrew upper cone (15) from lower gage ring (16).
 - I-1.8) Wedge slips outwards (if needed). Remove slip body assembly and disassemble:
 - I-1.8.1) Unscrew and remove shear screws (24) from slip body (12).
 - I-1.8.2) Unscrew and remove low head cap screws (26) from lower cone (11).
 - I-1.8.3) Remove lower cone (11) from slip body (12).
 - I-1.8.4) Remove wedges (if needed). Remove slips (13) and slip springs (19) from slip body (12).
 - I-1.8.5) Unscrew and remove low head cap screws (26) from upper cone (15).
 - I-1.8.6) Remove upper cone (15) from slip body (12).
- I-2) Unclamp and remove lock ring housing (2) from vise. Clamp lower end of inner mandrel (1) in vise.
- I-2.1) Unscrew and remove shear screws (27) from lock ring housing (2).
 - I-2.2) Unscrew and remove set screws (14) from top connection (9). Rotate and slide lock ring housing (2) as necessary to access set screws (14) through threaded holes in lock ring housing (2).
 - I-2.3) Unscrew and remove top connection (9) from inner mandrel (1)
 - I-2.3.1) Remove o-rings (18, 22) from top connection (9).
 - I-2.4) Unscrew and remove lock ring (3) from lock ring housing (2).
 - I-2.5) Unscrew and remove lock ring housing (2) from upper gage ring (10).
 - I-2.6) Remove upper gage ring (10), element (7) and lower gage ring (16) from inner mandrel (1).
- I-3) Unclamp and remove inner mandrel (1) from vise.



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J) ASSEMBLY

NOTE₃: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

CAUTION₃: To ensure tool operates properly, install o-rings in o-ring grooves **NOT** thread reliefs (Fig. 2).

J-1) Clamp lower end of inner mandrel (1) in vise.

J-1.1) Install lower gage ring (16), element (7), and upper gage ring (10) onto inner mandrel (1).

J-1.2) Loosely install lock ring housing (2) onto inner mandrel (1).

J-1.3) Install o-rings (18, 22) in o-ring grooves in top connection (9).

J-1.4) Screw and/or slide lock ring (3) onto top connection (9) onto step-up above ratchet threads on top connection (9).

NOTE₄: Using snap ring spreader pliers, lock ring (3) may be spread slightly to pass over ratchet threads.

NOTE₅: Threads on lock ring (3) are directional—it **MUST** be installed in correct direction for tool to work properly.

J-1.5) Install top connection (9) into lock ring housing (2) and screw onto inner mandrel (2).

CAUTION₄: Do not rip or tear o-ring during installation.

J-1.6) Carefully screw lock ring housing (2) onto lock ring (3). While making up lock ring housing (2) onto lock ring (3), align threaded holes for shear screws (27) with threaded holes in top connection (9).

J-1.7) Screw set screws (14) into top connection (9) and continue screwing lock ring housing (2) onto lock ring (3) until fully made up. Align threaded holes in lock ring housing (2) with pocket holes in top connection (9).

J-1.8) Screw shear screws (27) into lock ring housing (2). Tighten until shear screws (27) contact top connection (9). Back shear screws (27) out 1/4 turn.

J-1.9) Screw upper gage ring (10) onto lock ring housing (2).

J-2) Unclamp and remove inner mandrel (1) from vise. Clamp lock ring housing (2) in vise.

J-2.1) Assemble slip body assembly and install:

J-2.1.1) Install upper cone (15) into lower end of slip body (12).

J-2.1.2) Align threaded holes in upper cone (15) with slots in slip body (12). Screw low head cap screws (26) into upper cone (15).

J-2.1.3) Install slip springs (19) and slips (13) into slip body (12). Wedge slips outwards.

J-2.1.4) Install lower cone (11) into slip body (12).

J-2.1.5) Align threaded holes in lower cone (11) with slots in slip body (12). Screw low head cap screws (26) into lower cone (11).

J-2.1.6) Align threaded holes in slip body (12) with pocket holes in upper and lower cones (15, 11). Screw shear screws (24) into slip body (12). Tighten until shear screws (24) contact cones. Back shear screws (24) out 1/4 turn.

J-2.1.7) Install slip body assembly onto inner mandrel (1) and screw upper cone (15) into lower gage ring (16). Remove wedges.

J-2.2) Install support ring (6) into collet (5). Align threaded holes in collet (5) with pocket holes in support ring (6).

J-2.3) Screw shear screws (24) into collet (5). Tighten until shear screws (24) contact support ring (6). Back shear screws (24) out 1/4 turn.

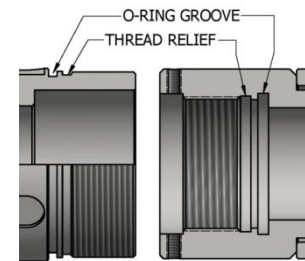


Fig. 2



**DUAL BORE RETRIEVABLE SEAL
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K) ASSEMBLY (cont'd)

J-2.4) Install o-rings (20, 11) in o-ring grooves in collet (5).

J-2.5) Screw collet (5) onto inner mandrel (1).

CAUTION4: Do not rip or tear o-ring during installation.

J-2.6) Install connector sleeve (8) onto collet (5) and screw onto lower cone (11) and collet (5).

CAUTION4: Do not rip or tear o-ring during installation.

J-2.7) Align slots in connector sleeve (14) with threaded holes in collet (5). Screw cap screws (25) into collet (5).

J-2.8) Screw set screws (23) into upper end of connector sleeve (8).

J-2.9) Install o-ring (17) in o-ring groove in bottom sub (7).

J-2.10) Screw bottom sub (7) into connector sleeve (8).

CAUTION4: Do not rip or tear o-ring during installation.

J-2.11) Screw set screws (23) into connector sleeve (8).

J-3) Unclamp lock ring housing (2) from vise and remove assembled tool.

K) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 26855BA-1
1	1	MANDREL	DLMS80	26555211
2	1	LOCK RING HOUSING	DLMS80	26855850
3	1	LOCK RING	DLMS41X80	26555720
4	1	ECNER ELEMENT ARRAY	80 DURO AFLAS	OEM55BA
5	1	COLLET	DLMS110	26555661
6	1	SUPPORT RING	DLMS80	26555530
7	1	BOTTOM SUB	DLMS80	26555621
8	1	CONNECTOR SLEEVE	DLMS110	26555611
9	1	TOP CONNECTION	DLMS80	26855610
10	1	UPPER GAGE RING	DLMS35	26555931ECNER
11	1	LOWER CONE	DLMS80	26555420
12	1	SLIP BODY	DLMS110	26555320
13	4	SLIP	DLMS35	26555110
14	2	1/4-20 UNC X 1/4 SOCKET SET SCREW	STEEL	SSS025C025
15	1	UPPER CONE	DLMS110	26555410
16	1	RUBBER RETAINER	DLMS35	26555861ECNER
17	1	341 O-RING	90 DURO AFLAS	90341A
18	2	342 O-RING	90 DURO AFLAS	90342A
19	4	SLIP SPRING		DL94829
20	1	239 O-RING	90 DURO AFLAS	90239A
21	1	152 O-RING	90 DURO AFLAS	90152A



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L) PARTS LIST (cont'd)

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 26855BA-1
22	1	237 O-RING	90 DURO AFLAS	90237A
23	4	1/4-20 UNC X 5/16 SOCKET SET SCREW	STEEL	SSS025C031
24	12	1/4-20 UNC X 1/4 SLOTTED SHEAR SCREW (1200#)	DLM360BRS	BSSSLT025C025
25	2	1/4-20 UNC X 1/4 SOCKET CAP SCREW	STEEL	SCS025C025
26	4	5/16-24 UNF X 5/16 LOW HEAD SOCKET CAP SCREW	STEEL	LHSC031F031
27	4	3/8-16 UNC X 3/8 SLOTTED SHEAR SCREW (3400#)	DLM360BRS	BSSSLT037C037
28	10	5/16 X 1" DRIV-LOK PIN (4800#)	4140	DLP031100*

*Refer to WLAK technical manual for placement.

REDRESS KIT (RDK)	26855050BA
ASSEMBLED WEIGHT	93 LBS

K-1) CARBIDE OPTION

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 26855BAC-1
13	4	CARBIDE SLIP	DLMS110	26555110C



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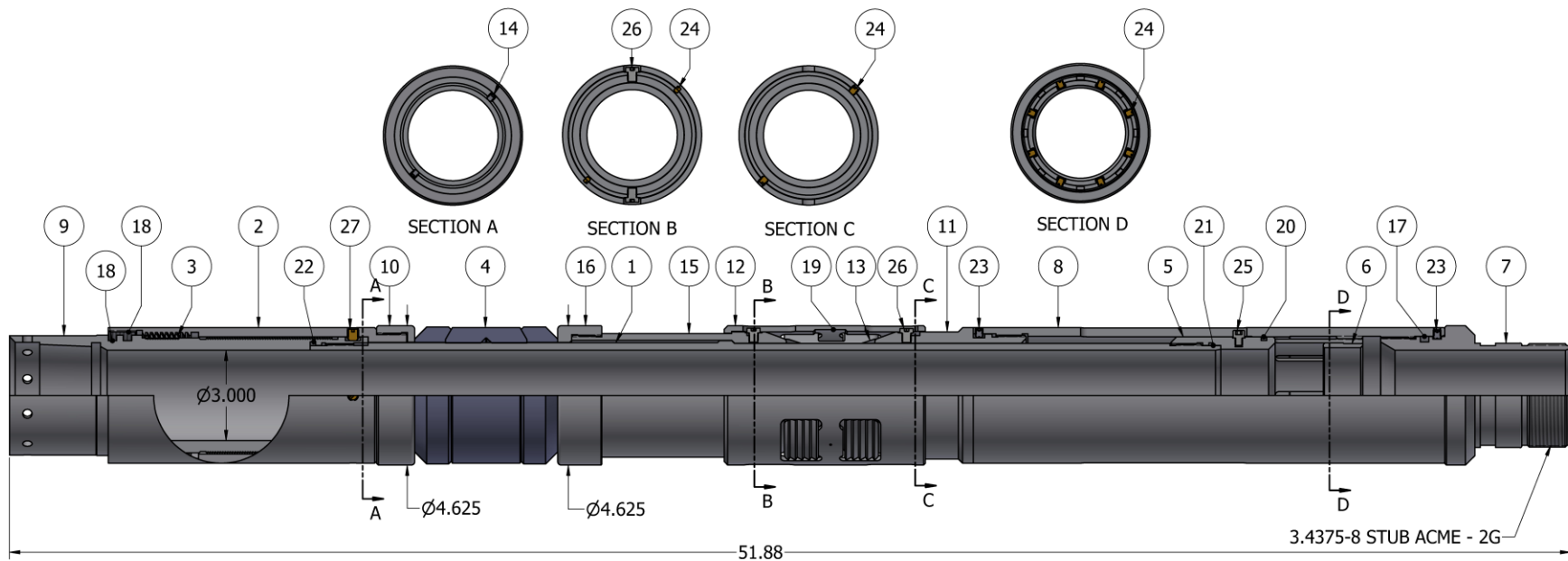
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L) TECHNICAL ILLUSTRATION



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M) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
08/03/2023	A	Created manual	-	-