



RSB RETRIEVING TOOL

7" X 4.000" w/ 2-7/8" (7.9#) HYDRIL PH-6

Manual No:
DL-266-7000-635

Revision: **B**

Revision Date:
02/10/2023

Authored by: J.Anderson

Approved by: K.Plunkett

A) DESCRIPTION

The RSB Retrieving Tool is used to retrieve RSB Packers. This retrieving tool latches into the top sub with a standard anchor latch to allow the RSB Packer to be retrieved with a straight pull. A spring-loaded collet locates below the support ring that keeps the packer locked in a set position. Latch fingers latch into the packer. A pull shears the support ring and releases the packer. If the packer cannot be retrieved normally, this retrieving tool has a safety release that allows it to be disconnected from the packer with right-hand rotation.

B) SPECIFICATION GUIDE

| CASING SIZE (INCHES) | TOOL OD (INCHES) | TOOL ID (INCHES) | THREAD CONNECTION BOX UP | PART NUMBER |
|----------------------|------------------|------------------|--------------------------|-------------|
| 7 | 5.062 | 1.75 | 2-7/8 (7.9#) HYDRIL PH-6 | 26670-XGNBA |

C) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION: 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. |

| 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.

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



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D) OPERATING PROCEDURES

Run the Retrieving Tool to depth and stab into the RSB packer.

The Retrieving Tool has two (2 qty) shear screws below the threaded latch that will shear at 4,000# to allow the threaded latch to fully engage the top sub of the RSB Packer before the release collet moves downward and latches into the profile below the support ring of the RSB Packer.

E) RELEASING PROCEDURES

Tension is applied shearing the 12 shear screws in the support ring in the RSB Packer.

If the packer fails to release, tension of 24,000# will shear the shear screws releasing the shear ring on the retrieving tool allowing the tool to disengage from the packer with right-hand rotation.

F) 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.

G) 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
- STRAP WRENCH
- 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

H) DISASSEMBLY

H-1) Clamp upper mandrel (1) in vise between striker nut (2) and central coupling (9).

H-1.1) Unscrew and remove set screws (7) from bottom sub (15).

H-1.2) Unscrew and remove bottom sub (15) from lower mandrel (11).

H-1.3) Unscrew and remove shear screws (14) from shear ring (12).

CAUTION: Compression spring (16) is compressed with spring tension against shear ring (12).

H-1.4) Remove shear ring (12) from lower mandrel (11).

H-1.5) Unscrew and remove set screws (10) from central coupling (9).

H-1.6) Unscrew and remove lower mandrel (11) from central coupling (9).

CAUTION: Compression spring (16) is compressed with spring tension against collet (13).

H-1.6.1) Remove collet (13), collet stop rings (17) and compression spring (16) from lower mandrel (11).

H-1.7) Unscrew and remove central coupling (9) from upper mandrel (1).



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H) DISASSEMBLY (cont'd)

- H-1.8) Moving to upper end of tool, unscrew and remove set screws (7) from top sub (6).
- H-1.9) Unscrew and remove top sub (6) from upper mandrel (1).
- H-1.10) Unscrew and remove upper sleeve (5) from lower sleeve (3).
- H-1.11) Remove anchor latch collet (4) from lower sleeve (3).
- H-1.12) Unscrew and remove shear screws (8) from lower sleeve (3).
- H-1.13) Remove lower sleeve (3) from upper mandrel (1).
- H-1.14) Unscrew and remove striker nut (2) from upper mandrel (1).
- H-2) Unclamp and remove upper mandrel (1) from vise.

I) ASSEMBLY

NOTE₁: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order and orientation.

- I-1) Clamp upper mandrel (1) in vise between striker nut (2) and central coupling (9).
 - I-1.1) Screw striker nut (2) onto upper mandrel (1)
 - I-1.2) Install lower sleeve (3) onto upper mandrel (1)
 - I-1.3) Screw shear screws (8) into lower sleeve (3). Tighten until shear screws (8) make contact with upper mandrel (1). Back shear screws (8) out 1/4 turn.
 - I-1.4) Install anchor latch (4) onto lower sleeve (3).
 - I-1.5) Screw upper sleeve (5) onto lower sleeve (3).
 - I-1.6) Screw top sub (6) onto upper mandrel (1).
 - I-1.7) Screw set screws (7) into top sub (6).
 - I-1.8) Moving to lower end of tool, screw central coupling (9) onto upper mandrel (1).
 - I-1.9) Install collet (13), collet stop rings (7) and compression spring (16) onto lower mandrel (11).
 - I-1.10) Screw lower mandrel (11) into central coupling (9).
 - CAUTION₂:** Compression spring (16) is compressed with spring tension against collet (13).
 - I-1.11) Screw set screws (10) into central coupling (9).
 - I-1.12) Install shear ring (12) onto lower mandrel (11). Align threaded holes in shear ring (12) with groove in lower mandrel (11).
 - I-1.13) Screw shear screws (14) into shear ring (12). Tighten until shear screws (14) contact lower mandrel (11). Back out 1/4 turn.
 - CAUTION₂:** Compression spring (16) is compressed with spring tension against shear ring (12).
 - I-1.14) Screw bottom sub (15) onto lower mandrel (11).
 - I-1.15) Screw set screws (7) into bottom sub (15).
- I-2) Unclamp upper mandrel (1) and remove assembled tool from vise.



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J) PARTS LIST

| ITEM | QTY | DESCRIPTION | MATERIAL | PART NUMBER |
|------|-----|--|-----------|----------------|
| 1 | 1 | UPPER MANDREL | DLMS110 | 26670210 |
| 2 | 1 | STRIKER NUT | DLMS110 | 26670851 |
| 3 | 1 | LOWER SLEEVE | DLMS110 | 26674861 |
| 4 | 1 | ANCHOR LATCH COLLET | DLMS110 | 58240003 |
| 5 | 1 | UPPER SLEEVE | DLMS110 | 26674850 |
| 6 | 1 | TOP SUB | P-110 | 26674611-YGNBA |
| 7 | 4 | 3/8-16 UNC X 3/8 SOCKET SET SCREW | STEEL | SSS037C037 |
| 8 | 2 | 5/16-18 UNC X 7/16 SLOTTED SHEAR SCREW (2000#) | DLM360BRS | BSSSLT031C043 |
| 9 | 1 | CENTRAL COUPLING | DLMS110 | 26674670 |
| 10 | 4 | 3/8-16 UNC X 1/2 SOCKET SET SCREW | STEEL | SSS037C050 |
| 11 | 1 | LOWER MANDREL | DLMS110 | 26674221 |
| 12 | 1 | SHEAR RING | DLMS110 | 26670106 |
| 13 | 1 | COLLET | DLMS110 | 26674660 |
| 14 | 8 | 3/8-16 UNC X 3/8 SLOTTED SHEAR SCREW (3000#) | DLM360BRS | BSSSLT037C037 |
| 15 | 1 | BOTTOM SUB | DLMS110 | 26674620 |
| 16 | 1 | COMPRESSION SPRING | DLMCRSP | 26670920 |
| 17 | 2 | COLLET STOP RING | DLMS110 | 26674665 |

| | |
|------------------|---------|
| ASSEMBLED WEIGHT | 129 LBS |
|------------------|---------|



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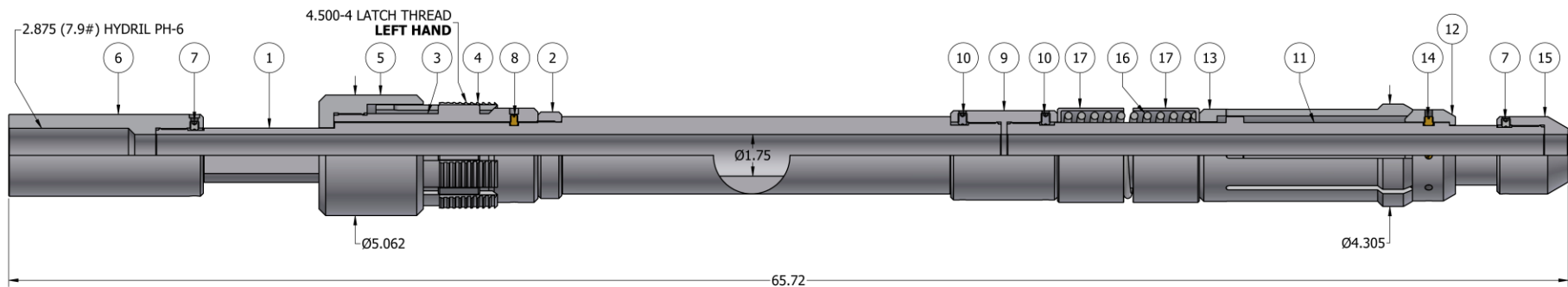
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K) TECHNICAL ILLUSTRATION



L) REVISION HISTORY

| DATE | REVISION | DESCRIPTION OF CHANGES | REVISED BY | APPROVED BY |
|------------|----------|---|------------|-------------|
| 02/10/2023 | B | Added P/N 26674665, pre-installation procedures, storage recommendations, recommended tools; revised disassembly, assembly, illustrations | J.Anderson | K.Plunkett |
| 11/07/13 | A | Created new manual | - | - |