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) RELATED TOOLS (sold separately)

B-1) 5” X 2.688” RSB Packer (P/N varies)—refer to applicable technical manual.

C) SPECIFICATION GUIDE

CASING SIZE (INCHES)	TOOL OD (INCHES)	NOMINAL ID (INCHES)	THREAD CONNECTION BOX UP	PART NUMBER
5	3.50	1.00	2-3/8 EUE	26650

D) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION$_1$: 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.

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 shear screws, etc. Contact D&L sales for redress kit and/or other replacement part information.

E) OPERATING PROCEDURES

CAUTION$_2$: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

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 lbs (2,000 lbs/screw). This allows the threaded latch to fully engage the top sub of the RSB Packer before the releasing collet moves downward and latches into the profile below the support ring of the RSB Packer.

E) OPERATING PROCEDURES (cont’d)

E-1) EMERGENCY RELEASE

If the packer fails to release, apply 20,400 lbs of tension to shear the shear screws (3,400#/screw) pinning the shear ring to the lower mandrel on the retrieving tool. Disengage the running tool 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.

Store the tool, if possible, in an enclosed, temperature and humidity controlled environment. Avoid excessively high temperatures over long periods of time. 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 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

H) DISASSEMBLY

H-1) Clamp upper mandrel (2) in vise – clamp between striker nut (3) and center coupling (7).

H-1.1) From lower end of tool, unscrew and remove set screws (15) from bottom cap (12).

H-1.2) Unscrew and remove bottom cap (12) from lower mandrel (8).

H-1.3) Unscrew and remove shear screws (14) from shear ring (9).

CAUTION$_3$: Compression spring (11) is compressed with spring tension against shear ring (9).

H-1.4) Remove shear ring (9) from lower mandrel (8).

H-1.5) Unscrew and remove set screws (16) from center coupling (7).

H-1.6) Unscrew and remove lower mandrel (8) from center coupling (7).

H-1.6.1) Remove compression spring (11) and collet (10) from lower mandrel (8).

H-1.7) Unscrew and remove center coupling (7) from upper mandrel (2).

H-1.8) Moving to upper end of tool, unscrew and remove set screws (16) from top sub (1).

H-1.9) Unscrew and remove top sub (1) from upper mandrel (2).

H-1.10) Unscrew and remove latch cover (6) from latch mandrel (5).

H-1.11) Remove threaded latch (4) from latch mandrel (5).

H-1.12) Unscrew and remove shear screws (13) from latch mandrel (5).

H-1.13) Remove latch mandrel (5) from upper mandrel (2).

H-1.14) Unscrew and remove striker nut (3) from upper mandrel (2).

H-2) Unclamp upper mandrel (2) and remove from vise.

I) ASSEMBLY

NOTE$_1$: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

I-1) Clamp upper mandrel (2) in vise – clamp between location of striker nut (3) and center coupling (7).

I-1.1) From upper end of tool, screw striker nut (3) onto upper mandrel (2)

I-1.2) Install latch mandrel (5) onto upper mandrel (2). Align threaded holes in latch mandrel with shear screw groove in upper mandrel.

I-1.3) Screw shear screws (13) into latch mandrel (5). Tighten until shear screws (13) make contact with upper mandrel (2). Back shear screws (13) out 1/4 turn.

I-1.4) Install threaded latch (4) onto latch mandrel (5).

I-1.5) Screw latch cover (6) onto latch mandrel (5).

I-1.6) Screw top sub (1) onto upper mandrel (2).

I-1.7) Screw set screws (16) into top sub (1).

I-1.8) Moving to lower end of tool, screw center coupling (7) onto upper mandrel (2).

I-1.9) Install collet (10) and compression spring (11) onto lower mandrel (8).

I-1.10) Screw lower mandrel (8) into center coupling (7).

I-1.11) Screw set screws (16) into center coupling (7).

I-1.12) Install shear ring (9) onto lower mandrel (8). Align threaded holes in shear ring (9) with shear screw groove in lower mandrel (8).

I-1.13) Screw shear screws (14) into shear ring (9). Tighten until shear screws (14) make contact with lower mandrel (8). Back shear screws out 1/4 turn.

CAUTION$_3$: Compression spring (11) will be compressed with spring tension against shear ring (9).

I-1.14) Screw bottom cap (12) onto lower mandrel (8).

I-1.15) Screw set screws (15) into bottom cap (12).

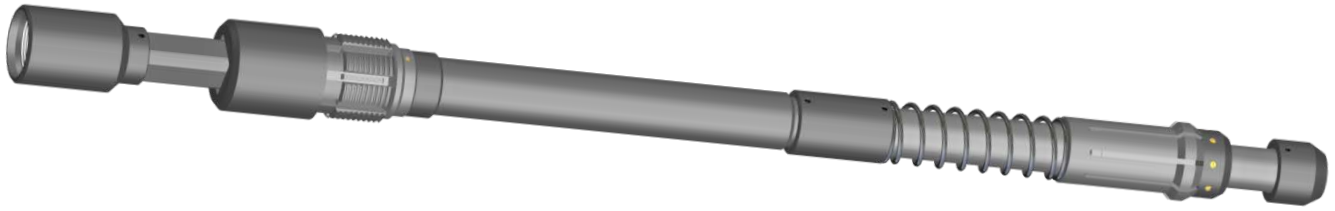
I-2) Unclamp upper mandrel (2) from vise and remove assembled tool.

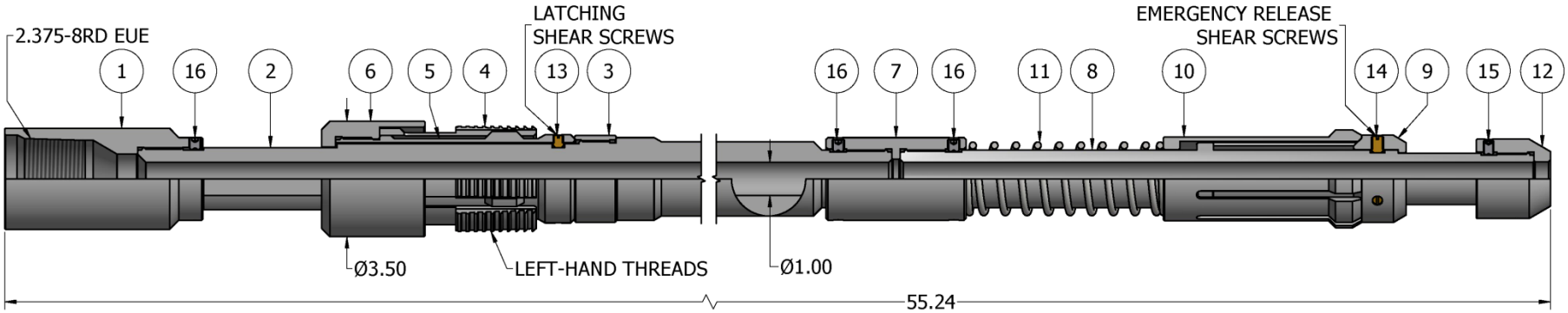
J) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	PART NUMBER
1	1	TOP SUB	P-110	26650610
2	1	UPPER MANDREL	P-110	26650210
3	1	STRIKER NUT	P-110	26650851
4	1	THREADED LATCH	DLMS110	58226003
5	1	LATCH MANDREL	P-110	26650861
6	1	LATCH COVER	P-110	26650850
7	1	COUPLING	P-110	26950670
8	1	LOWER MANDREL	P-110	26950220
9	1	SHEAR RING	P-110	26950107
10	1	COLLET	P-110	26650660
11	1	COMPRESSION SPRING	DLMCRSP	60335920
12	1	BOTTOM CAP	P-110	26950621
13	2	SHEAR SCREW (2000#) 5/16-18 UNC X 3/8	DLM360BRS	BSSSLT031C037
14	6	SHEAR SCREW (3400#) 3/8-16 UNC X 1/2	DLM360BRS	BSSSLT037C050
15	2	SET SCREW 5/16-18 UNC X 7/16	STEEL	SSS031C043
16	6	SET SCREW 3/8-16 UNC X 3/8	STEEL	SSS037C037

REDRESS KIT (RDK)		26950RT050
ASSEMBLED WEIGHT		55 LBS

K) TECHNICAL ILLUSTRATION





L) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
03/08/2016	A	Created new tech manual;	-	-