



# **SPRING LOADED RETRIEVING TOOL W/ SAFETY PIN, HEAVY DUTY MANDREL, NC-50 BOX 13-3/8" X 4-1/2"**

Manual No:  
**DL-577-13375-1647**

Revision: **A**

Revision Date:  
**02/10/2023**

Authored by: J.Anderson

Approved by: K.Plunkett

## A) DESCRIPTION

The Spring Loaded Retrieving Tool is used to set and retrieve the AS Retrievable Bridge Plug. The safety pin feature allows for safe handling of the bridge plug on the rig floor.

## B) RELATED TOOLS (sold separately)

B-1) 13-3/8" AS Retrievable Bridge Plug (P/N varies)—refer to applicable technical manual.

## C) SPECIFICATION GUIDE

CASING SIZE (INCHES)	TOOL OD (INCHES)	TOOL ID (INCHES)	THREAD CONNECTION BOX UP	PART NUMBER
13-3/8	11.750	3.50	NC 50 TOOL JOINT	57713-3-XBEE

**NOTE<sub>1</sub>:** Auto on / left-hand release.

## D) PRE-INSTALLATION INSPECTION PROCEDURES

**CAUTION<sub>1</sub>:** 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, including set screws, with D&L replacement parts.

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



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## **E) OPERATING PROCEDURES**

### **E-1) RUN IN AND SET AS RETRIEVABLE BRIDGE PLUG**

Attach the Spring Loaded Retrieving Tool to the AS Retrievable Bridge Plug pulling head. Install the safety pin before handling the bridge plug on the rig floor. Remove the safety pin when the bridge plug is ready to be run.

**CAUTION<sub>3</sub>:** Safety pin must be removed before running tool downhole.

Run the work string to desired depth and set the AS Retrievable Bridge Plug normally. After setting plug, slack off tubing weight while holding left-hand torque. Pick up on work string to free tool from plug.

### **E-2) RETRIEVING AS RETRIEVABLE BRIDGE PLUG**

Run to the depth of the AS Retrievable Bridge Plug. The retrieving tool will connect to pulling head automatically. Retrieve the bridge plug normally.

When bridge plug is on the rig floor, install safety pin for safer handling.

## **F) STORAGE RECOMMENDATIONS**

**NOTE<sub>2</sub>:** Most of the component parts are manufactured from heat treated alloy steel. Therefore, extended exposure to corrosives can be detrimental to the metallurgy. Care in cleaning the tool soon after removal from the well can help extend the life of component parts. Close inspection of the parts is necessary, after removal, to identify any parts which require replacement.

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 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

## **H) DISASSEMBLY**

H-1) Clamp J-body (1) in vise.

H-1.1) Remove safety pin (7) from J-body (1).

H-1.2) Unscrew and remove set screws (5) from J-body (1).

H-1.3) Unscrew and remove top sub (2) from J-body (1).

**CAUTION<sub>2</sub>:** Compression spring (4) is compressed with spring tension against top sub (2).

H-1.4) Remove compression spring (4) and plunger (3) from J-body (1).

H-1.5) Unscrew and remove set screws (5) from shoe (6).

H-1.6) Unscrew and remove shoe (6) from J-body (1).

H-2) Unclamp and remove J-body (1) from vise.



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## I) ASSEMBLY

**NOTE<sub>3</sub>:** 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 J-body (1) in vise.

I-1.1) Install plunger (3) and compression spring (4) into J-body (1).

I-1.2) Screw top sub (2) into J-body (1).

**CAUTION<sub>2</sub>:** Compression spring (4) is compressed with spring tension against top sub (2).

I-1.3) Screw set screws (5) from J-body (1).

I-1.4) Screw shoe (6) onto J-body (1).

I-1.5) Screw set screws (5) into shoe (6).

I-1.6) Install safety pin (7) into J-body (1). Secure with cotter pin.

**CAUTION<sub>3</sub>:** Safety pin must be removed before running tool downhole.

I-2) Unclamp J-body (1) in vise and remove assembled tool.

## J) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	PART NUMBER
1	1	J-BODY	DLMS110	57785313
2	1	TOP SUB	DLMS110	57785610-YBEE
3	1	SPRING PLUNGER	DLMS110	57785913
4	1	COMPRESSION SPRING	DLMCRSP	57795920
5	5	3/8-16 UNC X 3/8 SOCKET SET SCREW	STEEL	SSS037C037
6	1	MILLING SHOE	DLMS110	57713316
7	1	SAFETY PIN	-	57785003

ASSEMBLED WEIGHT	218 LBS
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### J-1) OPTIONAL PARTS

**NOTE<sub>4</sub>:** Optional weaker compression spring available. Contact D&L Sales.

DESCRIPTION	MATERIAL	PART NUMBER
COMPRESSION SPRING	DLMCRSP	60373920



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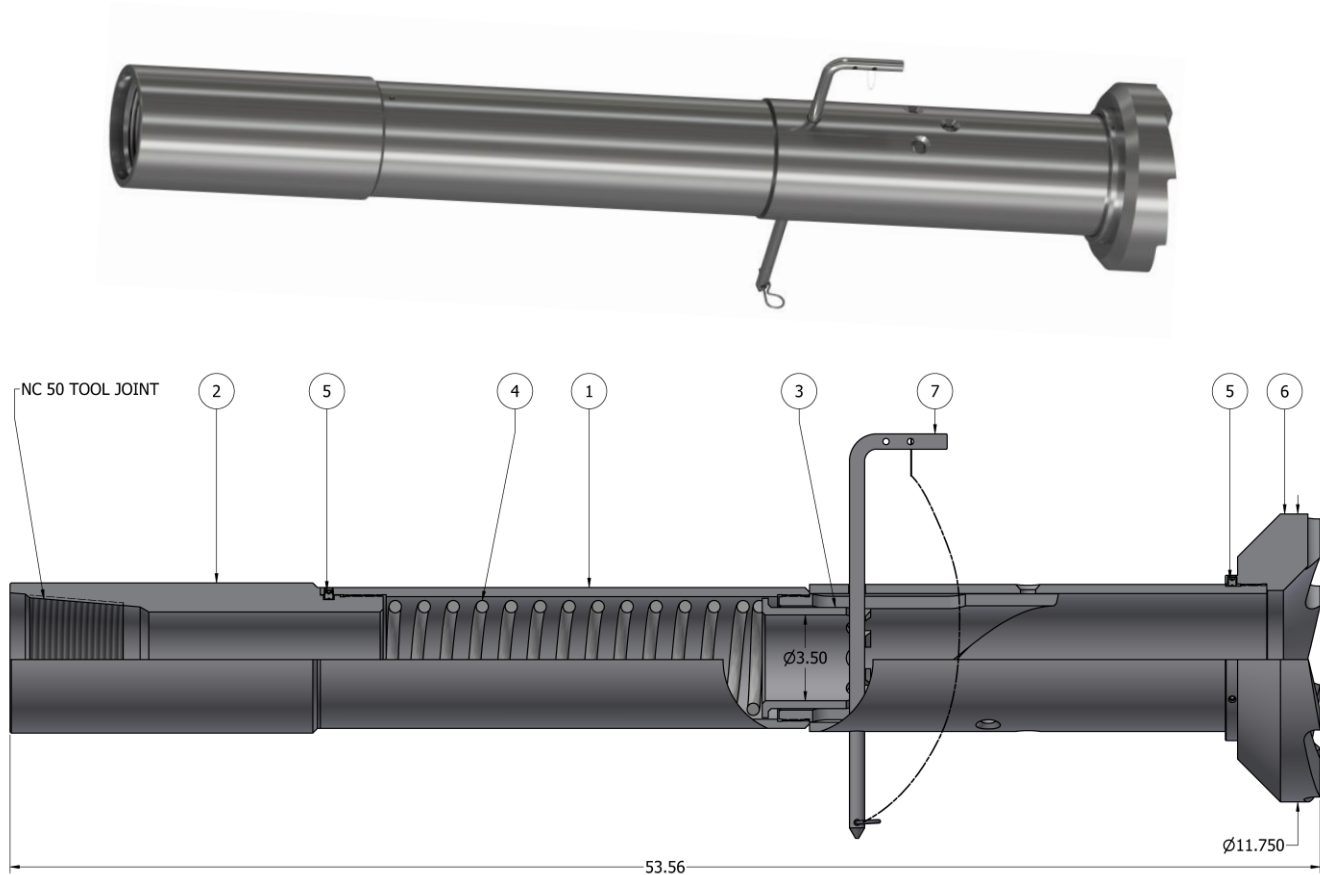
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**K) TECHNICAL ILLUSTRATION**



**L) REVISION HISTORY**

DATE	REVISION	DECRPTION OF CHANGES	REVISED BY	APPROVED BY
02/10/2023	A	Created manual	-	-