



DL SHEAR TENSION PACKER

6-5/8" X 2-7/8"

Manual No:
DL-412-6625-163

Revision: **D**

Revision Date:
10/11/2022

Written by: *B.Mathis*

Approved by: *H.Bringham*

A) DESCRIPTION

The DL Shear Tension Packer is an economical, compact tool for injection, pumping, medium range treating and production applications. This packer is set by 1/4 right-hand rotation of the tubing and then pulling tension. To release the packer, slack off the tubing and the packer will automatically re-jay into the release position. This packer has a right-hand rotation release allowing retrieval of the work string.

The DL Shear Tension Packer features an adjustable straight pull safety shear release. This packer is not designed to be run in compression.

NOTE1: If running the packer with high pressure from below, risk of unsetting the packer exists. Contact D&L sales for recommendations.

B) SPECIFICATION GUIDE

CASING			TOOL		THREAD CONNECTION BOX UP / PIN DOWN	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)	RECOMMENDED HOLE SIZE (INCHES)	GAGE OD (INCHES)	NOMINAL ID (INCHES)		
6-5/8	24.0 – 32.0	5.675 – 5.921	5.500	2.44	2-7/8 EUE	41265 41265H ¹ 41265V ² 41265C ³ 41265HC ⁴ 41265VC ⁵
	17.0 – 24.0	5.921 – 6.135	5.750	2.44	2-7/8 EUE	41266 41266H ¹ 41266V ² 41266C ³ 41266HC ⁴ 41266VC ⁵

Tool Options: ¹HSN, ²Viton, ³Nitrile, Carbide, ⁴HSN, Carbide, ⁵Viton, Carbide

DIFFERENTIAL PRESSURE (MAX)	TENSILE LOAD THRU TOOL (MAX)
5,000 PSI	57,000 LBS

C) 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.dloilttools.com



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C) 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.

D) SETTING PROCEDURES

CAUTION₂: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

Before running the packer, check the safety shear release to see that the proper quantities of shear pins are installed. Each shear pin shears at 4,000 lbs. Use of all shear pins is recommended.

NOTE₂: Optional shear pins that shear at 6,000 lbs are also available.

Run to setting depth. Set down the work string and rotate 1/4 turn to the right at the packer. Pull tension on the packer to set the slips and compress the packing elements. A minimum pull of 15,000 lbs. at the packer is required to pack off the elements.

CAUTION₃: Take care not to pull more than two-thirds (2/3) of the safety shear setting.

E) RELEASING PROCEDURES

Set down the work string to unset the slips, relax the packing elements and re-jay the packer. The tool may now be moved and reset, or pulled from the well.

If this does not un-set the packer, pull to shear the safety shear release. Once it shears, the tool must be tripped out. If the safety shear release will not shear, torque the work string to the right until the secondary release threads break loose. Rotate 12-15 additional turns to the right at the tool and trip out.

F) ELASTOMER TRIM TEMPERATURE GUIDE

RUBBER TYPE	TEMPERATURE RANGE
NITRILE	40° - 250°F
HSN (HNBR)	70° - 300°F
VITON	100° - 350°F



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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.

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 top sub (6) in vise.

I-1.1) Unscrew and remove bottom sub (4) and shear sleeve (8) from mandrel (1).

I-1.2) Disassemble bottom sub (4) and shear sleeve (8):

I-1.2.1) Unscrew and remove pipe plug (13) from shear sleeve (8).

I-1.2.2) Rotate shear sleeve (8) and remove shear pins (5) one at a time through hole in shear sleeve (8).

I-1.2.3) Separate bottom sub (4) and shear sleeve (8).

I-1.2.4) Remove o-ring (16) from bottom sub (4).

I-1.3) Remove element (3) and cone (2) from mandrel (1).

I-1.4) Unscrew and remove button head cap screws (14) from J-body (7) and remove drag springs (10) from J-body (7).

I-1.5) Unscrew and remove button head cap screws (15) from cage ring (9).

I-1.6) Wedge slips (12) outward (if needed). Remove J-body assembly from mandrel (1) and disassemble:

I-1.6.1) Remove wedges (if needed). Remove slips (12) and slip springs (11) from J-body (7).

I-1.7) Unscrew and remove mandrel (1) from top sub (6) (**NOTE**₃: Left-hand threads).

CAUTION₄: Do not wrench or clamp on seal surfaces.

I-1.7.1) Remove cage ring (9) from mandrel (1).

I-2) Unclamp and remove top sub (6) from vise.



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J) ASSEMBLY

NOTE4: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

CAUTION5: To ensure tool operates properly, install o-rings in o-ring grooves **NOT** thread reliefs unless stated otherwise (Fig. 2).

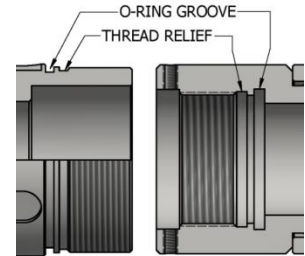


Fig. 2

J-1) Clamp top sub (6) in vise.

J-1.1) Install cage ring (9) onto upper end of mandrel (1).

J-1.2) Screw mandrel (1) into top sub (6) (**NOTE3:** Left-hand threads).

CAUTION4: Do not wrench or clamp on seal surfaces.

J-1.3) Assemble J-body assembly and install:

J-1.3.1) Install slips (12) and slip springs (11) into J-body (7). Wedge slips outward.

NOTE4: For P/N 41266, install six (6 ea) springs per slip. For P/N 41265, install two (2 ea) springs per slip. (Fig. 4).

J-1.3.2) Install J-body (7) onto mandrel (1). Remove wedges.

J-1.4) Align holes in J-body (7) with threaded holes in cage ring (9). Screw button head cap screws (15) into cage ring (9).

J-1.5) Set drag springs (10) in place on J-body (7) – capture end of drag springs (10) under lip of ring on J-body (7).

NOTE6: Install drag springs (10) in sets of two (2ea) (P/N 41265) or sets of three (3ea) (P/N 41266).

J-1.6) Align holes in drag springs (10) and J-body (7) with threaded holes in cage ring (9). Screw button head cap screws (14) into cage ring (9).

J-1.7) Install cone (2) and element (3) onto mandrel (1)

J-1.8) Assemble bottom sub (4) and shear sleeve (8) and install:

J-1.8.1) Install o-ring (16) in o-ring groove in bottom sub (4).

J-1.8.2) Install shear sleeve (8) onto bottom sub (4).

J-1.8.3) Rotate shear sleeve (8) to align threaded hole in shear sleeve (8) with recessed hole in bottom sub (4). Insert one shear pin (5) at a time.

NOTE7: Each shear pin must set down in recessed hole in bottom sub (4) before shear sleeve (8) can rotate.

J-1.8.4) Once desired quantity of shear pins (5) are in place, screw pipe plug (13) into shear sleeve (8).

J-1.8.5) Screw bottom sub (4) and shear sleeve (8) onto mandrel (1).

CAUTION6: Do not rip or tear o-ring during installation.

J-2) Unclamp top sub (6) from vise and remove assembled tool.

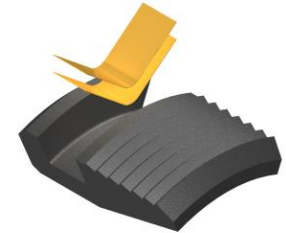


Fig. 3

K) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265	P/N 41266
1	1	MANDREL	DLMS60	41270210	
2	1	CONE	DLMS35	40065410	40071410
3	1	ELEMENT	80 DURO NITRILE	40565512	40566510
4	1	BOTTOM SUB	DLMS60	41070615	
5	10	SHEAR PIN (4000#)	DLM360BRS	41000990	



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K) PARTS LIST (cont'd)

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265	P/N 41266
6	1	TOP SUB	DLMS60	40070620	
7	1	J-BODY	DLMS60	41065310	41070310
8	1	SHEAR SLEEVE	DLMS60	41065850	41066850
9	1	CAGE RING	DLMS60	41070325	
10	-	DRAG SPRING	DLMSSP301	40070920	
				8 EA	12 EA
11	-	SLIP SPRING	-	7170901	
				8 EA	24 EA
12	4	SLIP	DLMS35	60070135	40070110
13	1	1/4" PIPE PLUG	STEEL	SPP025	
14	8	BUTTON HEAD SCREW 5/16-18 UNC X 5/8	STEEL	BHSC031C062	
15	6	BUTTON HEAD SCREW 5/16-18 UNC X 1/2	STEEL	BHSC031C050	
16	1	232 O-RING	90 DURO NITRILE	90232	

REDRESS KIT (RDK)		41265050	41266050
ASSEMBLED WEIGHT		73 LBS	78 LBS

K-1) ELASTOMER TRIM OPTIONS

NOTE: For temperature range, refer to Elastomer Trim Temperature Guide.

K-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265H	P/N 41266H
3	1	ELEMENT	80 DURO HSN	40565512H	40566512H
16	1	232 O-RING	90 DURO HSN	90232H	

REDRESS KIT (RDK)		41265050H	41266050H
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K-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265V	P/N 41266V
3	1	ELEMENT	80 DURO VITON	40565512V	40566512V
16	1	232 O-RING	90 DURO VITON	90232V	

REDRESS KIT (RDK)		41265050V	41266050V
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K-2) CARBIDE OPTIONS

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265C	P/N 41266C
12	4	CARBIDE SLIP	DLMS110	60070135C	40070110C



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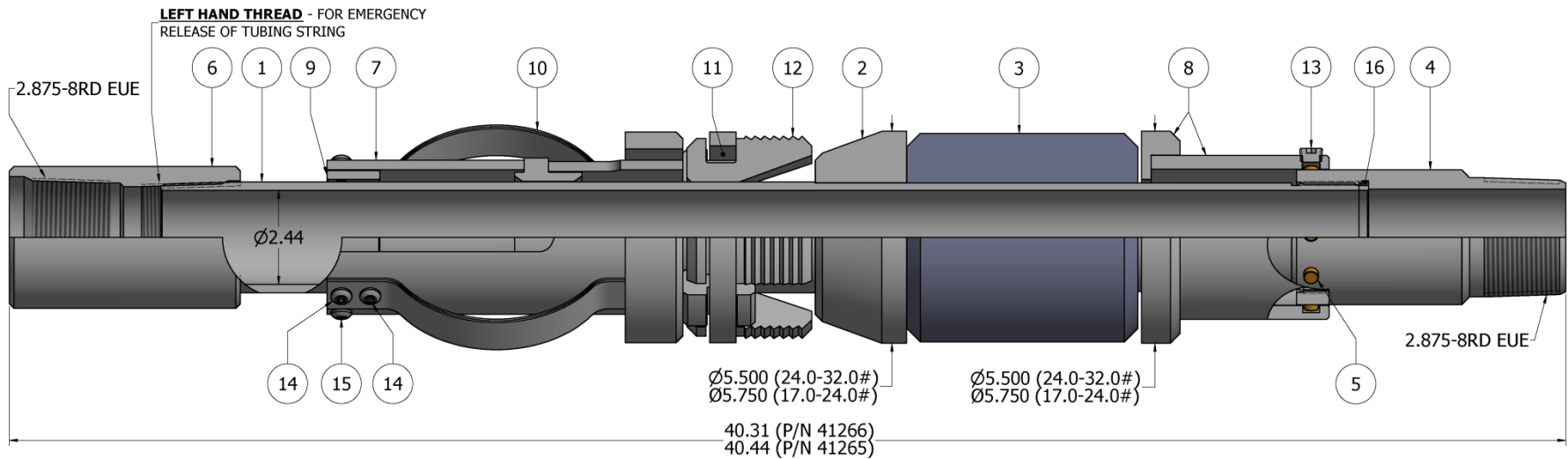
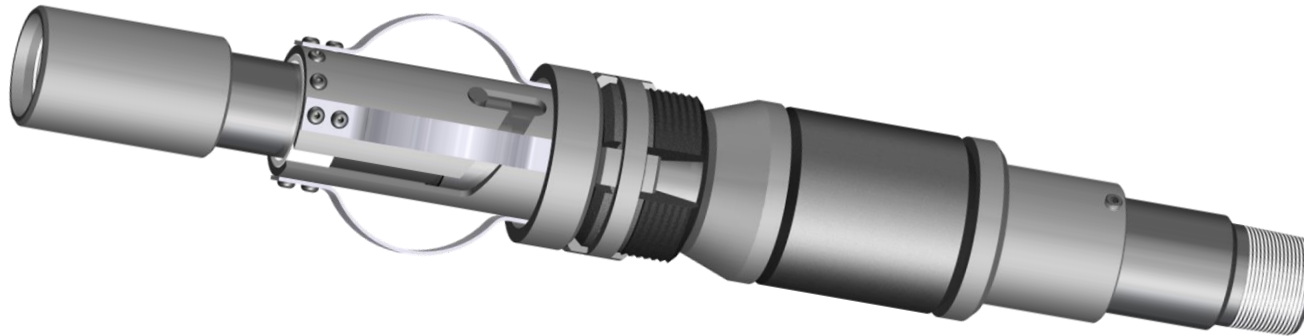
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L) TECHNICAL ILLUSTRATION



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M) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
10/11/2022	D	Removed tool drift ID; Added carbide options, torque recommendations; revised temp. ratings, P/N 7170901 qty 24 was 8 for P/N 41266	J.Anderson	D.McKeon
03/09/15	C	Revised P/N 40566512 was 40566510; Added tool Drift ID, max. differential pressure, tensile load thru tool, Pre-Installation Inspection and Storage Procedures	J.Anderson	D.Hushbeck