



DL HIGH SHEAR TENSION PACKER

LEFT-HAND SET

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

Manual No:
DL-412-6625-187

Revision: **C**

Revision Date:
10/11/2022

Authored by: *B.Mathis*

Approved by: *B.Oligschlaeger*

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 work string and then pull tension. To release the packer, slack off the work string and the packer will automatically re-jay into the release position. The packer is released with right-hand rotation to retrieve the work string.

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

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	17.0 – 24.0	5.921 – 6.135	5.750	2.44	2-7/8 EUE	41266HSLH-BBAC 41266HSLHH-BBAC ¹ 41266HSLHV-BBAC ² 41266HSLHC-BBAC ³ 41266HSLHHCBBAC ⁴ 41266HSLHVCBBAC ⁵
	24.0 – 32.0	5.675 – 5.921	5.500	2.44		41265HSLH-BBAC 41265HSLHH-BBAC ¹ 41265HSLHV-BBAC ² 41265HSLHC-BBAC ³ 41265HSLHHCBBAC ⁴ 41265HSLHVCBBAC 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

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.

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.

D & L OIL TOOLS
P.O. BOX 52220 TULSA, OK 74152
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C) PRE-INSTALLATION INSPECTION PROCEDURES (cont'd)

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 pin shears at 4,000 lbs.

Run to setting depth. Set down on 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 12,000 lbs. at the packer is required to pack off the elements.

NOTE₁: Take care not to pull more than two-thirds (2/3) of the safety shear setting.

E) RELEASING PROCEDURES

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

E-1) EMERGENCY RELEASE

In the event the packer will not release normally, 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) 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) 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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H) DISASSEMBLY

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

H-1.1) From lower end of tool, unscrew and remove bottom sub (4) and shear sleeve (8) from mandrel (1).

H-1.1.1) Unscrew and remove pipe plugs (13) from shear sleeve (8).

H-1.1.2) Rotate shear sleeve (8) and remove shear pins (5) from holes in shear sleeve (8).

H-1.1.3) Separate bottom sub (4) and shear sleeve (8).

H-1.1.4) Remove o-ring (16) from bottom sub (4).

H-1.2) Remove element (3) and cone (2) from mandrel (1).

H-1.3) Unscrew and remove button head cap screws (15) from cage ring (9) and remove from J-body (7).

H-1.4) Remove drag springs (10) from J-body (7).

H-1.5) Unscrew and remove button head cap screws (14) from cage ring (9) and remove from J-body (7).

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

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

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

CAUTION3: Do **NOT** wrench or clamp on seal surface.

H-1.8) Remove cage ring (9) from mandrel (1).

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

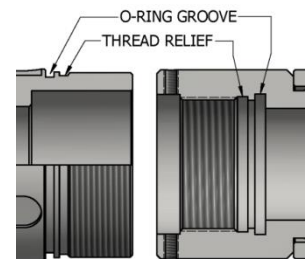


Fig. 2

I) ASSEMBLY

NOTE2: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

CAUTION4: To ensure tool operates properly, install o-rings in o-ring grooves **NOT** thread reliefs unless stated otherwise (Fig. 2).

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

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

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

CAUTION3: Do **NOT** wrench or clamp on seal surfaces.

I-1.3) Assemble J-body assembly:

I-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).

I-1.3.2) Install J-body assembly onto mandrel (1). Align holes in J-body (7) with threaded holes in cage ring (9). Remove wedges.

I-1.3.3) Screw button head cap screws (14) into cage ring (9).

I-1.4) Set drag springs (10) in place on J-body (7) – capture end of springs under lip of ring on J-body (7) (Fig. 4). Align holes in drag springs with threaded holes in J-body (7).

NOTE4: For P/N 41266, install springs in sets of three (3 ea). For P/N 41265, install springs in sets of two (2 ea) (Fig. 4).

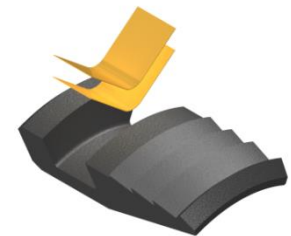


Fig. 3



Fig. 4



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I) ASSEMBLY (cont'd)

- I-1.5) Screw button head cap screws (15) into cage ring (9).
- I-1.6) Install cone (2) and element (3) onto mandrel (1)
- I-1.7) Install o-ring (16) in o-ring groove in bottom sub (4).
- I-1.8) Install bottom sub (4) into shear sleeve (8).
- I-1.9) One at a time, align recessed hole with plug hole and install shear pins (5).
- I-1.10) Once desired quantity of shear pins (5) are in place, screw pipe plugs (13) into shear sleeve (8).
- I-1.11) Screw bottom sub (4) and shear sleeve (8) onto mandrel (1).
- I-2) Unclamp top sub (6) from vise and remove tool.

J) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265HSLH-BBAC	P/N 41266HSLH-BBAC
1	1	MANDREL	DLMS80	41270210-BBACX	
2	1	CONE	DLMS35	40065410	40071410
3	1	ELEMENT	80 DURO NITRILE	40565512	40566512
4	1	BOTTOM SUB	DLMS80	41070616	
5	15	SHEAR PIN (4000#)	DLM360BRS	41000990	
6	1	TOP SUB	DLMS60	40070620	
7	1	J-BODY	-	41065311	41070311
8	1	SHEAR SLEEVE	-	41065851	41066851
9	1	CAGE RING	DLMS60	41070325	
10	-	DRAG SPRING	DLM17CR40	40070920 8 QTY	12 QTY
11	-	SLIP SPRING	-	7170901 8 QTY	24 QTY
12	4	SLIP	DLMS35	60070135	40070110
13	2	PIPE PLUG 1/4	STEEL	SPP025	
14	6	BUTTON HEAD CAP SCREW 5/16-18 UNC X 1/2	STEEL	BHSC031C050	
15	8	BUTTON HEAD CAP SCREW 5/16-18 UNC X 5/8	STEEL	BHSC031C062	
16	1	232 O-RING	90 DURO NITRILE	90232	

REDRESS KIT (RDK)		41265050	41266050
ASSEMBLED WEIGHT-		74 LBS	78 LBS



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J) PARTS LIST (cont'd)

J-1) ELASTOMER TRIM OPTIONS

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

J-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265HSLHH-BBAC	P/N 41266HSLHH-BBAC
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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J-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41265HSLHV-BBAC	P/N 41266HSLHV-BBAC
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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J-2) CARBIDE OPTIONS

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



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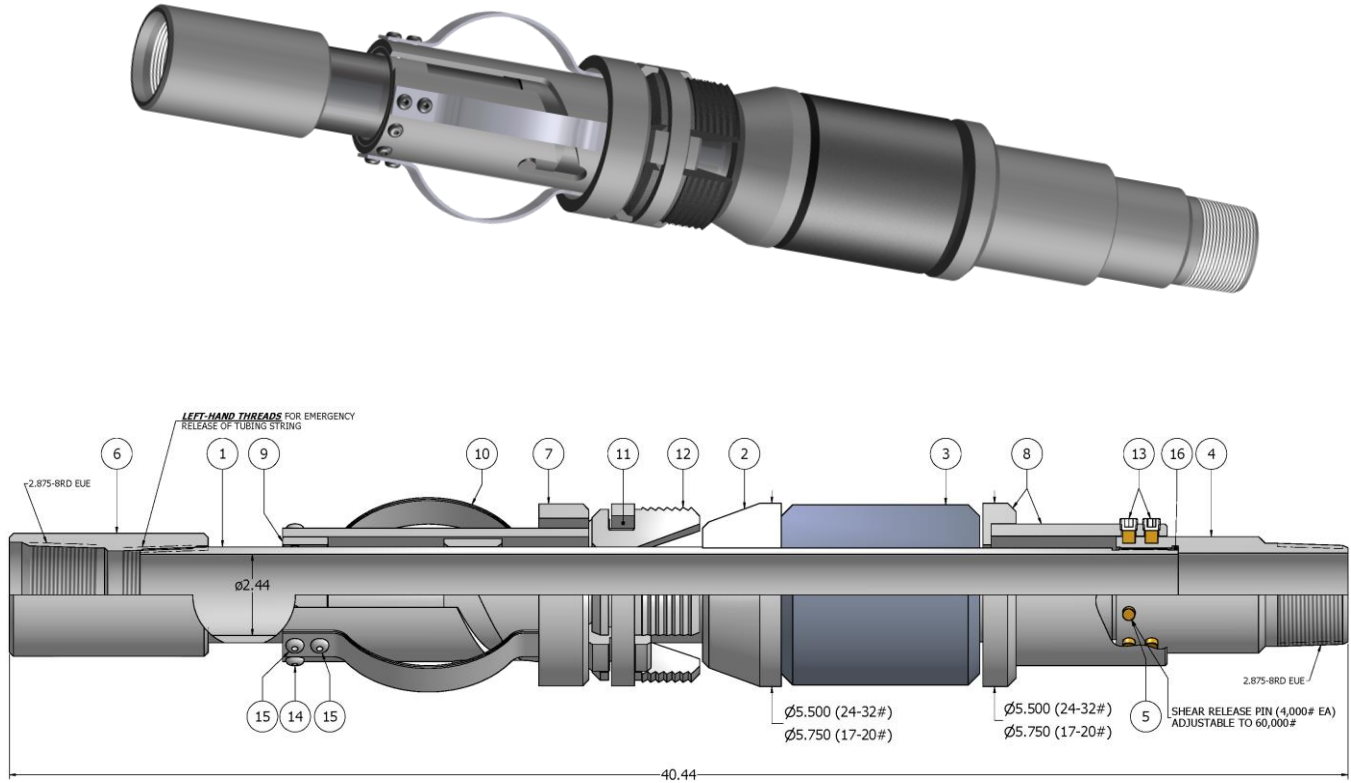
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K) TECHNICAL ILLUSTRATION



L) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
10/1/2022	C	Revised nitrile temp. rating, slip spring quantity for P/N 41266; Added carbide options	J.Anderson	D.McKeon
02/10/2016	B	Added HSN and Viton options, max. differential pressure and tensile load thru tool, Pre-Installation Inspection Procedures, Storage Recommendations, Elastomer Trim Temperature Guide; Revised P/N BHSC031C062 was BHSC031C063	J.Anderson	J.McArthur