



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL

2-7/8" X 1.315"

Manual No:
DL-412-2875-190

Revision: **B**

Revision Date:
11/08/2023

Written by: *B.Mathis*

Approved by: *J.McArthur*

A) DESCRIPTION

The DL Shear Tension Packer is an economical, compact tool used for injection, pumping, medium range treating and production applications.

The DL Shear Tension Packer features an adjustable, straight-pull, safety shear release. It has a right-hand rotation release allowing retrieval of the tubing string. It is not made to be run in compression.

CAUTION₁: Prior to installing these optional shear pins, contact D&L Oil Tools for recommendation on maximum shear value allowed for tool.

B) SPECIFICATION GUIDE

CASING			TOOL OD (INCHES)	TOOL ID (INCHES)	THREAD CONNECTION BOX UP / PIN DOWN	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)	RECOMMENDED HOLE SIZE (INCHES)				
2-7/8	6.4 – 6.5	2.441	2.250	0.75	1.315 EUE	41225RM 41225RMH ¹ 41225RMV ² 41225RMC ³ 41225RMHC ⁴ 41225RMVC ⁵

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

DIFFERENTIAL PRESSURE (MAX)	TENSILE LOAD THRU TOOL (MAX)
5,000 PSI	9,500 LBS

C) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION₂: 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.dloiltools.com



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL

2-7/8" X 1.315"

Manual No:
DL-412-2875-190

Revision: **B**

Revision Date:
11/08/2023

Written by: *B.Mathis*

Approved by: *J.McArthur*

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

CAUTION₃: 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 desired quantities of shear pins are installed. Use of all shear pins is recommended.

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 5,750 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. Rotate 1/4 turn to the left at the packer to re-jay the packer. The packer 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 tubing 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.



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL

2-7/8” X 1.315”

Manual No:
DL-412-2875-190

Revision: **B**

Revision Date:
11/08/2023

Written by: *B.Mathis*

Approved by: *J.McArthur*

G) ELASTOMER TRIM TEMPERATURE GUIDE

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

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 pipe plug (13) from shear sleeve assy (8).

I-1.2) Remove shear pins (5) from hole in shear sleeve assy (8). Rotate shear sleeve assy (8) to remove shear pins (5) one at a time.

I-1.3) Unscrew and remove bottom sub (4) from shear sleeve assy (8).

I-1.3.1) Remove o-ring (14) from bottom sub (4).

I-1.4) Remove shear sleeve assy (8) from mandrel assy (1).

I-1.5) Remove element (3) and cone (2) from mandrel assy (1).

I-1.6) Unscrew and remove button head cap screws (9) from mandrel assy (1).

I-1.7) Remove drag springs (10) from J-body (7).

I-1.8) Wedge slips (12) outward (if needed). Remove J-body (7) from mandrel assy (1).

I-1.8.1) Remove wedges (if needed). Remove slips (12) and slip springs (11) from J-body (7).

I-1.9) Unscrew and remove mandrel assy (1) from top sub (6) (**NOTE**₂: Left-hand threads).

CAUTION₄: Do NOT wrench or clamp on seal surfaces.

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



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL 2-7/8" X 1.315"

Manual No:
DL-412-2875-190

Revision: B

Revision Date:
11/08/2023

Written by: B.Mathis

Approved by: J.McArthur

J) ASSEMBLY

NOTE₃: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order and orientation.

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

J-1.1) Screw mandrel assy (1) into top sub (6) (**NOTE₂:** Left-hand threads).

CAUTION₄: Do NOT wrench or clamp on seal surfaces.

J-1.2) Install slips (12) and slip springs (11) into J-body (7). Wedge slips outward.

J-1.2.1) Install J-body (7) onto mandrel assy (1). Rotate J-body assembly to move J-pin of mandrel assy (1) into lower landing of J-slot in J-body (7). Remove wedges.

J-1.3) Install drag springs (10) onto J-body (7).

J-1.4) Align holes in J-body (7) with threaded holes in mandrel assy (1). Screw button head cap screws (9) into mandrel assy (1).

J-1.5) Install cone (2) and element (3) onto mandrel assy (1).

J-1.6) Install shear sleeve assy (8) onto mandrel assy (1).

J-1.7) Install o-ring (14) into groove in bottom sub (4).

J-1.8) Screw bottom sub (4) onto mandrel assy (1).

J-1.9) Install shear pins (5) into shear sleeve assy (8) and bottom sub (4). Align plug hole in shear sleeve assy (8) with recessed hole in bottom sub (4) and install one shear pin (5) at a time.

J-1.10) Once desired quantity of shear pins (5) are in installed, screw pipe plug (13) into shear sleeve assy (8).

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



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL 2-7/8" X 1.315"

Manual No:
DL-412-2875-190

Revision: **B**

Revision Date:
11/08/2023

Written by: *B.Mathis*

Approved by: *J.McArthur*

K) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41225RM
1	1	MANDREL	1026	41225210
2	1	CONE	DLMS60	44525410
3	1	ELEMENT	80 DURO NITRILE	40525512
4	1	BOTTOM SUB	DLMS60	41225621
5	6	SHEAR PIN	BRASS	41025990
6	1	TOP SUB	DLMS60	CP1315E1315NLH
7	1	J-BODY	1026	4122531X
8	1	SHEAR SLEEVE	DLMS60	41225840
9	8	#10-24 UNC X 3/8 BUTTON HEAD SOCKET CAP SCREW	STEEL	BHSC1024C037
10	4	DRAG SPRING	DLMSSP301	40525910
11	4	SLIP SPRING		7125900
12	4	SLIP	DLMS35	41225110
13	1	1/8 NPT SOCKET PRESSURE PLUG	4140	SPP012
14	1	020 O-RING	90 DURO NITRILE	90020

REDRESS KIT (RDK)		41225050
ASSEMBLED WEIGHT		13 LBS

*Optional bottom sub (1.315 NUE) (P/N 41225620)

K-1) ELASTOMER TRIM OPTIONS

NOTE₄: For temperature range, refer to Elastomer Trim Temperature Guide.

K-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41225RMH
3	1	ELEMENT	80 DURO HSN	40525512H
14	1	020 O-RING	90 DURO HSN	90020H

REDRESS KIT (RDK)		41225050H
-------------------	--	-----------

K-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41225RMV
3	1	ELEMENT	80 DURO VITON	40525512V
14	1	020 O-RING	90 DURO VITON	90020V

REDRESS KIT (RDK)		41225050V
-------------------	--	-----------

K-2) CARBIDE OPTION

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41225RMC
12	4	CARBIDE SLIP	DLMS110	41225110C



DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL 2-7/8" X 1.315"

Manual No:
DL-412-2875-190

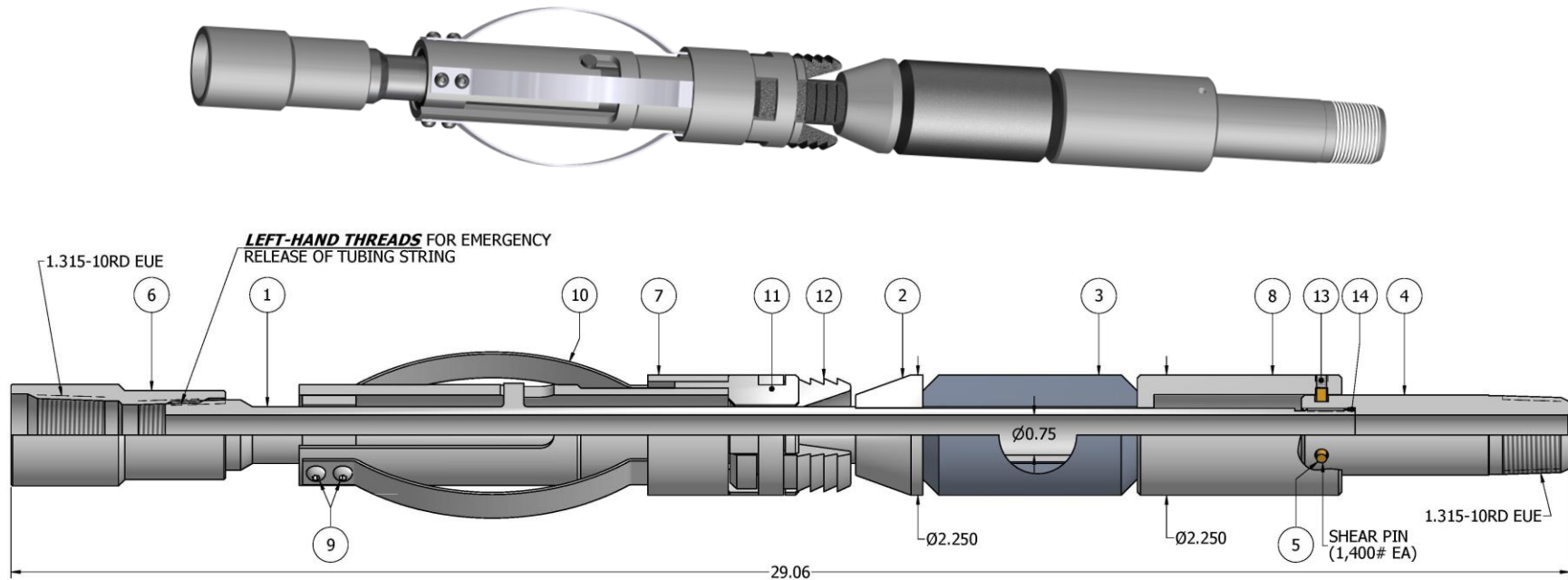
Revision: B

Revision Date:
11/08/2023

Written by: B.Mathis

Approved by: J.McArthur

L) TECHNICAL ILLUSTRATION



	DL SHEAR TENSION PACKER, RIGHT-HAND MANUAL 2-7/8" X 1.315"	Manual No: DL-412-2875-190
		Revision: B
		Revision Date: 11/08/2023
<i>Written by: B.Mathis</i>		<i>Approved by: J.McArthur</i>

M) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
11/08/2023	B	Revised entire manual	J.Anderson	E.Visaez
11/05/13	A	Created new manual	-	-