



DL SHEAR TENSION PACKER

9-5/8" X 3-1/2"

Manual No:
DL-412-9625-179

Revision: **B**

Revision Date:
12/04/2013

Written by: Bruce Mathis

Approved by: Heath Bringham

A) DESCRIPTION

The D&L DL Shear Tension Packer is an economical, compact tool for injection, pumping, medium range treating and production applications. The DL Shear Tension Packer is set by 1/4 right-hand rotation of the tubing and then pulling tension. To release the DL Shear Tension Packer slack off the tubing and the packer automatically re-jays into the release position.

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

B) SPECIFICATION GUIDE

CASING		RECOMMENDED HOLE SIZE	TOOL OD (INCHES)	TOOL ID (INCHES)	THREAD CONNECTION BOX UP / PIN DOWN	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)					
9-5/8	43.5 – 53.5	8.535 – 8.755	8.250	3.00	3-1/2 EUE	41298-XBAE 41298H-XBAE ¹ 41298V-XBAE ²
	29.3 – 43.5	8.755 – 9.063	8.500	3.00	3-1/2 EUE	41299-XBAE 41299H-XBAE ¹ 41299V-XBAE ²

¹HSN Option ²Viton Option

DIFFERENTIAL PRESSURE (MAX)
4,000 PSI

C) SETTING PROCEDURES

Before running the packer, check the safety shear release to see that the proper quantity of shear pins is installed. Each pin shears at 4,000#

NOTE₁: Optional shear pins that shear at 6,000# are also available.

Run to setting depth. Set down the tubing 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 20,000 lbs at the packer is required to pack off the elements.

NOTE₂: Take care not to pull more than two-thirds (2/3) of the safety shear setting.

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



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D) RELEASING PROCEDURES

Set down the tubing to unset the slips, relax the packing elements and 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, set down 1-2 feet and pick up to ensure the packer is released. Trip out with the packer. 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.

E) ELEMENT SELECTION GUIDE

RUBBER TYPE	TEMPERATURE RANGE
NITRILE	70° - 300°F
HSN (HNBR)	70° - 325°F
VITON	100° - 350°F

F) 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

G) DISASSEMBLY

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

G-1.1) Unscrew and remove pipe plug (15) from shear sleeve assy (8).

G-1.2) Remove shear pins (5) from bottom sub (4) and shear sleeve assy (8). Rotate shear sleeve assy (8) as needed to access shear pins (5).

G-1.3) Unscrew and remove bottom sub (4) from mandrel assy (1).

G-1.3.1) Remove o-ring (20) from bottom sub (4).

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

G-1.5) Remove element (3) and cone (2) from rubber mandrel (19).

G-1.6) Remove rubber mandrel (19) from mandrel assy (1).

G-1.6.1) Remove o-ring (21) from rubber mandrel (19).

G-1.7) Unscrew and remove button head cap screws (17) from J-body (7).

G-1.8) Unscrew and remove button head cap screws (16) from spring ring (13); remove drag springs (10).

G-1.9) Unscrew and remove button head cap screws (16) from cage ring (9).

G-1.10) Remove J-body assembly from mandrel assy (1) and disassemble:

G-1.10.1) Unscrew and remove low head cap screw (18) from J-body (7).

G-1.10.2) Wedge slips (12) outward (if needed). Remove slip support (14) from J-body (7).

G-1.10.3) Remove wedges (if needed). Remove slips (12) and slip springs (11) from J-body (7).



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G) DISASSEMBLY (cont'd)

- G-1.10.4) Remove spring ring (13) from J-body (7).
- G-1.11) Unscrew and remove mandrel assy (1) from top sub (6) (**NOTE:** Left-hand threads).
NOTE₃: Do **NOT** wrench or clamp on seal surfaces.
- G-1.12) Remove cage ring (9) from mandrel assy (1).
- G-2) Unclamp and remove top sub (6) from vise.

H) ASSEMBLY

NOTE₄: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order and orientation.

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

- H-1.1) Install cage ring (9) onto mandrel assy (1).
- H-1.2) Screw mandrel assy (1) into top sub (6) (**NOTE:** Left-hand threads).
NOTE: Do **NOT** wrench or clamp on seal surfaces.
- H-1.3) Assemble J-body assembly and install:
 - H-1.3.1) Install slips (12) and slip springs (11) into J-body (7). Wedge slips outward.
 - H-1.3.2) Install slip support (14) into J-body (7). Align threaded hole in slip support (14) with hole in J-body (7).
 - H-1.3.3) Screw low head cap screw (18) into slip support (14). Remove wedges.
 - H-1.3.4) Install spring ring (13) onto J-body (7).
 - H-1.3.5) Install J-body assembly onto mandrel assy (1).
- H-1.4) Align holes in J-body (7) with threaded holes in cage ring (9). Screw button head cap screws (16) into cage ring (9).
- H-1.5) Set drag springs (10) in place on J-body (7). Align holes in drag springs with threaded holes in J-body (7) and spring ring (13). Screw button head cap screws (17) into J-body (7) and button head cap screws (16) into spring ring (13).
- H-1.6) Install o-ring (21) into groove in rubber mandrel (19).
- H-1.7) Install rubber mandrel (19) onto mandrel assy (1).
CAUTION₁: Do not rip or tear o-ring during installation.
- H-1.8) Install cone (2) and element (3) onto rubber mandrel (19).
- H-1.9) Install shear sleeve assy (8) onto mandrel assy (1).
- H-1.10) Install o-ring (20) into groove in bottom sub (4).
- H-1.11) Screw bottom sub (4) onto mandrel assy (1).
CAUTION₁: Do not rip or tear o-ring during installation.
- H-1.12) One at a time, align plug hole in shear sleeve assy (8) with pocket hole in bottom sub (4) and insert a shear pin (5).
- H-1.13) When desired quantity of shear pins (5) are in place, screw pipe plug (15) into shear sleeve assy (8).
- H-2) Unclamp top sub (6) from vise and remove assembled tool.



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I) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41298-XBAE (43.5 – 53.5#)	P/N 41299-XBAE (29.3 - 43.5#)
1	1	MANDREL ASSY	1026	41299210	
2	1	CONE	1026	40094410	40095410
3	1	ELEMENT	70 DURO NITRILE	40594511	40595511
4	1	BOTTOM SUB	1026	41298615-VBAE	
5	15	SHEAR PIN (4000#)	BRASS	41000990	
		OPTIONAL SHEAR PIN (6000#) (Contact D&L Oil Tools for recommendation on maximum shear value allowed for tool.)	STEEL, MILD	41000991	
6	1	TOP SUB	1026	41299610-VBAE	
7	1	J-BODY	1026	41095310	
8	1	SHEAR SLEEVE ASSY	1026	41098850	41099850
9	1	CAGE RING	1026	41099325	
10	18	DRAG SPRING	STAINLESS STEEL	40570920	
11	8	SLIP SPRING	ELGILOY	7170901	
12	4	SLIP	1026	71095110	
13	1	SPRING RING	1026	40095820	
14	1	SLIP SLEEVE	1026	40095810	
15	1	PIPE PLUG 1/4	Steel	SPP025	
16	17	BUTTON HEAD SOCKET CAP SCREW 5/16-18 UNC X 5/8	STEEL	BHSC031C062	
17	12	BUTTON HEAD SOCKET CAP SCREW 5/16-18 UNC X 3/8	STEEL	BHSC031C037	
18	2	LOW HEAD SOCKET CAP SCREW 5/16-18 UNC X 5/8	STEEL	LHSC031C062	
19	1	RUBBER MANDREL	1026	40099220	
20	1	246 O-RING	90 DURO NITRILE	90246	
21	1	350 O-RING	90 DURO NITRILE	90350	

REDRESS KIT (RDK)		41298050	41299050
ASSEMBLED WEIGHT		200 LBS	202 LBS



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J) OPTIONS PARTS LIST

J-1) HSN

NOTE₅: For temperature range, refer to Element Selection Guide.

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41298H-XBAE (43.5 – 53.5#)	P/N 41299H-XBAE (29.3 - 43.5#)
3	1	ELEMENT	70 DURO HSN	40594511H	40595511H
20	1	246 O-RING	90 DURO HSN	90246H	
21	1	350 O-RING	90 DURO HSN	90350H	

REDRESS KIT (RDK)		41298050H	41299050H
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J-2) VITON

NOTE₅: For temperature range, refer to Element Selection Guide.

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 41298V-XBAE (43.5 – 53.5#)	P/N 41299V-XBAE (29.3 - 43.5#)
3	1	ELEMENT	70 DURO VITON	40594511V	40595511V
20	1	246 O-RING	90 DURO VITON	90246V	
21	1	350 O-RING	90 DURO VITON	90350V	

REDRESS KIT (RDK)		41298050V	41299050V
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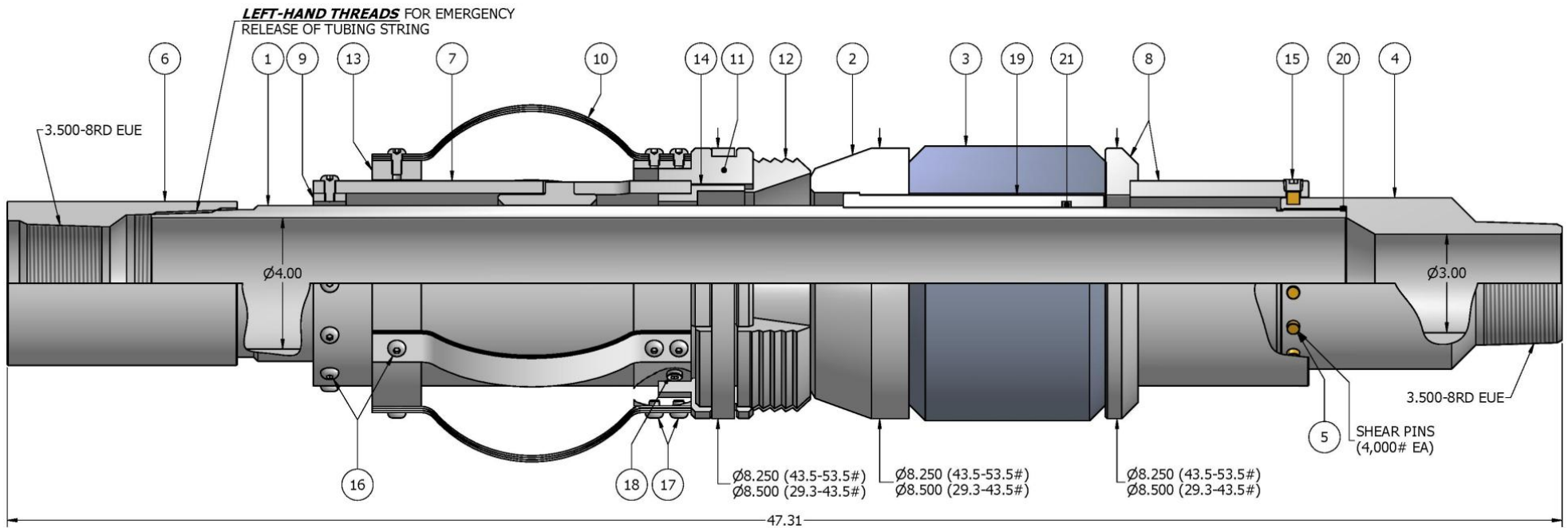
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K) TECHNICAL ILLUSTRATION



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L) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
12/04/13	B	Revised P/N 41298-XBAE assembled weight was 198 lbs, P/N 41299-XBAE assembled weigh was 200 lbs, P/N 40594511 was 40595511, P/N 41095310 was 41098310, P/N 7170901 was 7170900, P/N LHSC031C062 was LHSCS031C063; Added HSN and Viton options, optional shear pin P/N 41000991, revision history	J.Anderson	J.McArthur