



HYDROSET IV PACKER

6-5/8" X 3-1/2"

Manual No:
DL-654-6625-111

Revision: **A**

Revision Date:
11/30/2011

Authored by: *B.Mathis*

Approved by: *H.Bringham*

A) DESCRIPTION

The D&L Hydroset IV is a hydraulic set single string retrievable packer. Tubing pump pressure is used to set the packer and the setting force is locked into the packer by a body lock ring. It is ideal to run as a tandem packer with double grip packers that will lock the tubing in place. The Hydroset IV is released with a straight pull that shears pins.

SPECIAL FEATURES:

- Three element packing arrangement
- Locked in setting force
- Field adjustable releasing force

B) SPECIFICATION GUIDE

CASING		RECOMMENDED HOLE SIZE (INCHES)	TOOL OD (INCHES)	TOOL ID (INCHES)	THREAD CONNECTION BOX UP / PIN DOWN	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)					
6-5/8	17.0 – 24.0#	5.921 – 6.135	5.750	3.00	3-1/2 EUE	65468
	24.0 – 32.0#	5.675 – 5.921	5.500	3.00	3-1/2 EUE	65466

C) SETTING PROCEDURES

C-1) RUNNING SEQUENCE

Running speed is critical, especially in heavy or viscous fluid where excess speed can result in swabbing off the packing element or in creating pressure waves which could lead to creating a preset condition. As a guide it is recommended that running speed should not be more than 30 seconds per joint (range II or 30 feet). **Do not exceed this speed**, particularly when running the packer in the heaviest weight casing for the range for which the packer is dressed.

A run in the well with a junk basket and suitable sized gauge ring or a bit and scraper is strongly recommended prior to running. The location of any tight spots should be noted and the running speed for the packer through these spots should be reduced.

Being a hydraulically set packer, it can be subject to preset conditions by pressure waves through the fluid. A slow steady running speed should be used and sudden stops and starts, such as when setting or pulling slips, should be avoided.

Make up the packer to the tubing string in the desired position and to the required torque-transmission of makeup torque through the packer should be avoided. Run the packer to the desired setting depth at the recommended speed and taking precautions listed above.

Establish a plug in the tubing below the packer using a drop ball, wireline plug or other device. Apply pressure to the tubing to the recommended pressure for the given size of packer and hold for 5 minutes. If the well completion allows, apply annulus pressure to test the packer.

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



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D) RELEASING PROCEDURES

To release, pull 45,000 lbs at the packer to shear the shear screws (3,000# per screw) to allow the elements to relax.

E) AREA GUIDE

PACKER SIZE	SETTING AREA (SQ INCHES)	SETTING INITIATION (PSI / SCREW)
6-5/8" X 3-1/2"	7.400	320

F) DISASSEMBLY

F-1) Clamp inner mandrel (1) in vise.

F-1.1) Unscrew and remove shear screws (12) from lock ring housing (9).

F-1.2) Unscrew and remove lock ring housing (9) from lock ring (8) (**NOTE₁**: Left-hand threads).

F-1.3) Unscrew and remove bottom sub (6) from inner mandrel (1).

F-1.3.1) Remove o-ring (15) from bottom sub (6).

F-1.4) Unscrew and remove setting piston seal (11) from setting piston (10).

F-1.4.1) Remove o-rings (14, 15) from setting piston seal (11).

F-1.5) Unscrew and remove lock ring (8) from setting piston (10).

F-1.6) Unscrew and remove shear screws (13) from setting piston (10).

F-1.7) Unscrew and remove setting piston (10) from rubber retainer (5).

F-1.8) Remove rubber retainer (5), elements (3, 4) and rubber spacers (2) from inner mandrel (1).

F-1.9) Unscrew and remove gage ring (7) from inner mandrel (1).

F-2) Remove inner mandrel (1) from vise.

G) ASSEMBLY

NOTE₂: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order & orientation.

G-1) Clamp inner mandrel (1) in vise.

G-1.1) Screw gage ring (7) onto inner mandrel (1).

G-1.2) Install elements (3, 4), rubber spacers (2), and rubber retainer (5) onto inner mandrel (1).

G-1.3) Screw setting piston (10) into rubber retainer (5).

G-1.4) Align threaded holes in setting piston (10) with grooves in inner mandrel (1). Screw shear screws (13) into setting piston (10). Tighten and back out 1/4 turn.

G-1.5) Screw lock ring (8) onto setting piston (10).

G-1.6) Install o-rings (14, 15) into grooves on setting piston seal (11).

G-1.7) Screw setting piston seal (11) into setting piston (10).

CAUTION₁: Do not rip or tear o-ring during installation.

G-1.8) Install o-ring (15) into groove in bottom sub (6).

G-1.9) Screw bottom sub (6) onto inner mandrel (1).

G-1.10) Screw lock ring housing (9) onto lock ring (8) (**NOTE₁**: Left-hand threads).

CAUTION₁: Do not rip or tear o-rings during installation.



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G) ASSEMBLY (cont'd)

G-1.11) Align threaded holes in lock ring housing (9) with groove in bottom sub (6). Screw shear screws (12) into lock ring housing (9). Tighten and back out 1/4 turn.

G-2) Unclamp inner mandrel (1) and remove assembled tool from vise.

H) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 65466 (24.0 – 32.0#)	P/N 65468 (17.0 – 24.0#)
1	1	INNER MANDREL	L-80	65466210	
2	2	RUBBER SPACER	1026	60265840	60267840
3	1	ELEMENT	70 DURO NITRILE	60265511	60267511
4	2	ELEMENT	90 DURO NITRILE	60265513	60267513
5	1	RUBBER RETAINER	1026	65465850	65467850
6	1	BOTTOM SUB	L-80	65466630	
7	1	GAGE RING	1026	65465830	65467830
8	1	LOCK RING	L-80	65465720	
9	1	LOCK RING HOUSING	L-80	65465725	
10	1	SETTING PISTON	L-80	65465750	
11	1	SETTING PISTON SEAL	L-80	65465751	
12	15	SHEAR SCREW (3000# EA) 3/8-16 UNC X 1/2	BRASS	BSSSLT037C050	
13	12	SHEAR SCREW (320 PSI/SCREW)	BRASS	60100990	
14	1	342-90 O-RING	NITRILE	90342	
15	2	348-90 O-RING	NITRILE	90348	

REDRESS KIT		65466050	65468050
ASSEMBLED WEIGHT		106 LBS	107 LBS



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I) TECHNICAL ILLUSTRATION

