	HD RETRIEVABLE PACKER RIGHT-HAND AUTO 5-3/4” X 2-3/8”	Manual No: DL-613-5750-582
		Revision: F
		Revision Date: 04/01/2021
Authored by: J.Anderson		Approved by: D.Hushbeck

A) DESCRIPTION

The HD Retrievable Packer is a heavy duty service packer ideally suited for all types of squeeze cementing, formation fracturing, high pressure acidizing, etc. It is a large opening compression set packer with hydraulic button-type hold down. This packer withstands high pressure from above or below and uses a 3-element packing system, J-slot, and a drag block mechanism for easy setting. This packer has a built-in unloader which circulates across the hold down buttons to improve retrievability and run in performance.

B) SPECIFICATION GUIDE

CASING			TOOL		THREAD CONNECTIONS BOX UP / PIN DOWN	PART NUMBER
SIZE (INCHES)	WEIGHT (LBS/FT)	RECOMMENDED HOLE SIZE (INCHES)	GAGE OD (INCHES)	NOMINAL ID (INCHES)		
5-3/4	17.6 – 19.4	5.083 – 5.146	4.875	2.00	2-3/8 EUE	61357YRS 61357YRSH ¹ 61357YRSV ²
	21.5 – 24.0	4.909 – 5.004	4.720	2.00	2-3/8 EUE	61357ZRS 61357ZRS ¹ 61357ZRSV ²

Elastomer Trim Options: ¹HSN, ²Viton

NOTE₁: Tool listed is right-hand auto set / straight pick-up.

DIFFERENTIAL PRESSURE (MAX)	TENSILE LOAD THRU UNSET TOOL (MAX)	HANGING WEIGHT ON SET TOOL (MAX)*	TORQUE THRU TOOL (MAX)
10,000 PSI	73,500 LBS	73,500 LBS *	1,500 FT-LBS

*Casing must be cemented for this load rating.

CAUTION₁: Before running the tool, check the pressure affected areas chart and consider other effects to be certain that the unloader will remain closed during operation.

CAUTION₂: If the HD Packer is run with a retrievable bridge plug, make sure the bridge plug J-slot is compatible with the J-slot on the packer. Whichever direction you set the plug, the packer should set in the **opposite** direction.

C) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION₃: D&L ships tool connections made-up hand-tight—labeled with hand-tight tape on the tool—unless stated otherwise. Properly tighten connections before operating tool (Fig. 1).



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

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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

CAUTION4: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

Run to setting depth. The unloader remains open while running in. Pick up the work string and rotate 1/4 turn at the packer. Slack off weight and set down on the packer to set the slips, close the unloader and compress the packing elements. A minimum weight of 12,000 lbs. at the packer is required to pack off the elements.

CAUTION5: Run the tool slowly, as with any hold down type packer, to help prevent dulling of the hydraulic buttons.

E) RELEASING PROCEDURES

Pick up on the work string to open the unloader, allowing time for the tubing and casing pressure to equalize. Refer to Pressure Affected Area Guide to determine weight in addition to pipe weight required to pick up on packer. Continued upward movement of the work string unsets the slips, relaxes the packing elements and re-jays the packer. The tool may now be moved and reset, or pulled from the well.

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. Elastomers 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.



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G) PRESSURE AFFECTED AREA GUIDE

When set downhole, the packer mandrel is subjected to a force created by differential pressure above or below the packer that acts on the pressure affected area (i.e., the piston effect). Depending on the tubing size and weight and the seal area of the packer the force created by differential pressure acts upwards or downwards on the packer mandrel. An upward force, designated as a negative (-) value, acts to push the packer mandrel up hole and must be accounted for to ensure that the packer remains set. A downward force, designated as a positive value, acts to push the packer mandrel down hole and must be accounted for when releasing the packer. Other factors (e.g., tubing movement due to temperature change) must be considered separately to determine all the forces acting on the packer.

PACKER SIZE (IN)	TUBING TO PACKER			PRESSURE AFFECTED AREA (IN ²)	
	SIZE (IN)	WEIGHT (LBS/FT)	ID (IN)	ABOVE	BELOW
5-3/4	1.900	2.40	1.650	1.150 (DOWN)	2.424 (DOWN)
		2.90	1.610	1.150 (DOWN)	2.322 (DOWN)
	2.375	4.00	2.041	-0.445 (UP)	3.557 (DOWN)
		4.70	1.995	-0.445 (UP)	3.412 (DOWN)
		5.95	1.867	-0.445 (UP)	3.023 (DOWN)
	2.875	6.50	2.441	-2.507 (UP)	4.965 (DOWN)
		7.90	2.323	-2.507 (UP)	4.524 (DOWN)
		8.70	2.259	-2.507 (UP)	4.294 (DOWN)
	3.500	7.70	3.068	-5.636 (UP)	7.678 (DOWN)
		9.30	2.992	-5.636 (UP)	7.317 (DOWN)
		10.20	2.922	-5.636 (UP)	6.991 (DOWN)
		12.95	2.750	-5.636 (UP)	6.225 (DOWN)
	4.000	9.50	3.548	-8.581 (UP)	10.173 (DOWN)
		11.00	3.476	-8.581 (UP)	9.775 (DOWN)
	4.500	12.75	3.958	-11.919 (UP)	12.590 (DOWN)

Example: Consider a 5-3/4" X 2-3/8" HD Packer set on 2.375" (4.70 lbs/ft) tubing with a differential pressure of 3,000 PSI in the annulus around the tubing above the packer. What is the force acting on the seal area of the mandrel?

To calculate the force (lbs) acting on the seal area of the mandrel, refer to the Pressure Affected Area Guide for a 5-3/4" X 2-3/8" HD Packer run on 2.375" (4.70 lbs/ft) tubing. In this example, the differential pressure from above the packer acts on the seal area of the packer mandrel across a pressure affected area of -0.445 in². Multiplying the differential pressure (3,000 PSI) by the pressure affected area (-0.445 in²) results in a force of -1,335 lbs. The piston effect on the packer mandrel is an upward force of 1,335 lbs.

H) ELASTOMER TRIM TEMPERATURE GUIDE

NITRILE (STD)			
TEMPERATURE RANGE (F°)	DUROMETER		
	END	MIDDLE	END
40° - 125°	80	70	80
125° - 250°	90	70	90
150° - 250°	90	80	90
250° +	Contact D&L Sales		

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



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I) RECOMMENDED TOOLS

I-1) 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-2) OPTIONAL SPECIAL TOOLS

ITEM	QTY	DESCRIPTION	PART NUMBER
T1	1	DRAG BLOCK ASSEMBLY TOOL	AT055110
T2	1	BUTTON REMOVAL TOOL	AT-BRT000
T3	1 GAL	KOPR-KOTE® ANTI-SEIZE LUBRICANT	DL-KOPR-KOTE-1G

J) DISASSEMBLY

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

J-1.1) Unscrew and remove set screws (35) from J-pin bottom sub (23). Move J-body (20) as needed to access set screws (35).

J-1.2) Unscrew and remove J-pin bottom sub (23) from inner mandrel (2).

NOTE₂: Drag block body assembly must be free to rotate.

J-1.2.1) Remove o-ring (38) from J-pin bottom sub (23).

J-1.3) Compress drag blocks (22) with drag block assembly tool (T1).

J-1.4) Unscrew and remove set screws (36) from drag block body (18).

J-1.5) Unscrew and remove J-body (20) from drag block body (18) (**NOTE₃:** Left-hand threads).

J-1.6) Remove drag block retainer (21) from drag block body (18).

J-1.7) Release drag blocks (22). Remove drag blocks (22) and drag block springs (3) from drag block body (18).

J-1.8) Unscrew and remove rubber mandrel cap (19) from rubber mandrel (11).

NOTE₄: For added leverage, insert a rod through rubber retainer (15) and rubber mandrel (11) as needed.

J-1.9) Remove drag block body assembly and disassemble:

J-1.9.1) Remove wedges (if needed). Remove lower slips (17) and lower slip springs (25) from drag block body (18).

J-1.10) Unscrew and remove lower cone (16) from rubber retainer (11).

J-1.11) Unscrew rubber mandrel (11) from valve body (28).

J-1.12) Remove rubber mandrel assembly and disassemble:

J-1.12.1) Remove elements (13, 14), rubber spacers (12) and rubber retainer (15) from rubber mandrel (11).

J-1.13) Unscrew and remove valve body (28) from central body (10).

J-1.13.1) Remove o-ring (40) from valve body (28).

J-1.14) Unscrew and remove central body (10) from hold down body (6).

J-2) Unclamp and remove top sub (1) from vise. Clamp lower end of inner mandrel (2) in vise.

CAUTION₆: Do NOT wrench or clamp on seal surface.

J-2.1) Unscrew and remove set screws (34) from top sub (1).



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J) DISASSEMBLY (cont'd)

- J-2.2) Unscrew and remove top sub (1) from inner mandrel (2).
 - J-2.2.1) Remove o-ring (39) from top sub (1).
- J-2.3) Unscrew and remove hold down extension (4) from hold down body (6).
 - J-2.3.1) Remove o-ring (43) from hold down extension (4).
- J-2.4) Unscrew and remove hold down cap (32) from hold down body (6).
- J-2.5) For P/N 61357YRS, unscrew and remove socket cap screws (29) from hold down body (6).
- J-2.6) Move strap retainer (33) downwards temporarily out of way.
- J-2.7) Unscrew and remove flat head cap screws (7) from hold down body (6).
- J-2.8) Remove hold down straps (31) from hold down body (6).
- J-2.9) Remove hold down button springs (26) from hold down buttons (30).
- J-2.10) Remove hold down buttons (30) from hold down body (6) with button removal tool (T2).
 - J-2.10.1) Remove o-rings (37) from hold down buttons (30).
- J-2.11) Remove hold down body (6) from inner mandrel (2).
 - J-2.11.1) Remove o-rings (41, 42) from hold down body (6).
- J-2.12) Remove strap retainer (33) from inner mandrel (2).
- J-2.13) Unscrew and remove compensating mandrel (8) from seal receptacle (5).

CAUTION₇: Do NOT wrench or clamp on seal surface.
- J-2.14) Remove compensating piston (9) from compensating mandrel (8).
 - J-2.14.1) Remove o-rings (44, 45) from compensating piston (9).
- J-3) Unclamp and remove inner mandrel (2) from vise.
 - J-3.1) Remove seal receptacle (5) from inner mandrel (2).
 - J-3.1.1) Unscrew and remove seal retainer (27) from seal receptacle (5).
 - J-3.1.2) Remove o-rings (40, 41) and quad seal (24) from seal receptacle (5).

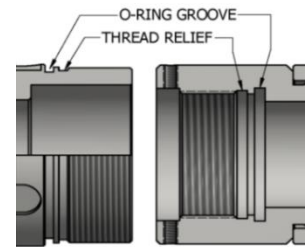


Fig. 2

K) ASSEMBLY

NOTE₅: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, orientation and tighten/torque all connections properly.

CAUTION₈: To ensure tool operates properly, install o-rings in o-ring grooves NOT thread reliefs (Fig. 2).

NOTE₆: Apply KOPR-KOTE® anti-seize lubricant (T3) on STUB ACME and drill pipe connections when making up connections.

K-1) Assemble seal receptacle assembly and install:

- K-1.1) Install o-rings (40, 41) into o-ring grooves in seal receptacle (5).
- K-1.2) Set quad seal (24) in place on seal receptacle (5).
- K-1.3) Screw seal retainer (27) onto seal receptacle (5).

CAUTION₉: Do not rip or tear seal ring during installation.

- K-1.4) Install seal receptacle (5) and assembly onto inner mandrel (2).

K-2) Clamp lower end of inner mandrel (2) in vise.

CAUTION₆: Do NOT wrench or clamp on seal surface.

K-2.1) Assemble compensating mandrel assembly and install:

- K-2.1.1) Install o-rings (44, 45) into o-ring grooves in compensating piston (9).

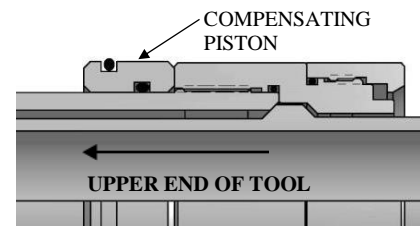


Fig. 3



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K) ASSEMBLY (cont'd)

K-2.1.2) Install compensating piston (9) onto compensating mandrel (8).

NOTE₇: Compensating piston **MUST** be installed in correct direction (Fig. 3).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-2.1.3) Screw compensating mandrel (8) into seal receptacle (5).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-2.2) Place strap retainer (33) onto inner mandrel (2) – will be installed onto hold down body (6) in later step.

K-2.3) Assemble hold down body assembly and install:

K-2.3.1) Install o-rings (41, 42) into o-ring grooves in hold down body (6).

K-2.3.2) Install o-rings (43) into o-ring groove in hold down extension (4).

K-2.3.3) Screw hold down extension (4) into hold down body (6).

K-2.3.4) Install hold down body assembly onto inner mandrel (2).

K-2.4) Assemble hold down buttons (30) and install:

K-2.4.1) Install o-rings (37) into o-ring grooves in hold down buttons (30).

K-2.4.2) Install hold down buttons (30) into hold down body (6) (Fig. 4).

CAUTION₁₀: Do not rip or tear o-rings during installation.

K-2.4.3) Align slots in hold down buttons (30) with slot in hold down body (6). Install hold down button springs (26) into hold down buttons (30).

NOTE₈: Uses two (2ea) hold down button springs per hold down button (Fig. 5).

K-2.4.4) Set hold down straps (31) in slots in hold down buttons (30) and hold down body (6) (Fig. 5).

K-2.4.5) Screw flat head cap screws (7) into hold down body (6) securing hold down straps (31) (Fig. 5).

K-2.5) Install strap retainer (33) onto hold down body (6) capturing lower ends of hold down straps (31).

K-2.6) For P/N 6357YRS, align holes in strap retainer (33) with threaded holes in hold down body (6). Screw socket cap screws (29) into hold down body (6).

K-2.7) Screw hold down cap (32) onto hold down body (6) capturing upper ends of hold down straps (31).

K-2.8) Install o-ring (39) into o-ring groove in top sub (1).

K-2.9) Screw top sub (1) onto inner mandrel (2).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-2.10) Screw set screws (34) into top sub (1).

K-3) Unclamp and remove inner mandrel (2) from vise. Clamp top sub (1) in vise.

K-3.1) Screw central body (10) onto hold down body (6).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-3.2) Install o-ring (40) into o-ring groove in valve body (28).

K-3.3) Screw valve body (28) into central body (10).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-3.4) Assemble rubber mandrel assembly:

K-3.4.1) Install rubber retainer (15), rubber spacers (12), and elements (13, 14) onto rubber mandrel (11).

K-3.4.2) Install rubber mandrel assembly onto inner mandrel (2).



Fig. 4

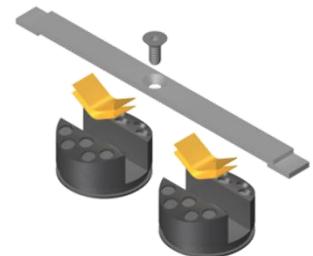


Fig. 5



Fig. 6



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K) ASSEMBLY (cont'd)

K-3.4.3) Screw rubber mandrel (11) into valve body (28).

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-3.5) Screw lower cone (16) into rubber retainer (11).

K-3.6) Assemble drag block body assembly and install:

K-3.6.1) Install lower slips (17) and lower slip springs (25) into drag block body (18). Wedge slips outward.

NOTE₉: Uses two (2ea) slip springs per slip (Fig. 6).

K-3.6.2) Install drag block body (18) and assembly onto rubber mandrel (11).

K-3.7) Screw rubber mandrel cap (19) onto rubber mandrel (11).

K-3.8) Install drag blocks (22) and drag block springs (3) in drag block body (18).

NOTE₁₀: P/N 61357YRS, uses four (4ea) drag block springs per drag block. P/N 61357ZRS, uses five (5 ea) springs per block. (Fig. 7, to illustrate orientation of springs only).

K-3.9) Compress drag blocks (22) with drag block assembly tool (T1). Install drag block retainer (21) capturing ends of drag blocks.

K-3.10) Screw J-body (20) into drag block body (18) (**NOTE₃:** Left-hand threads).

K-3.11) Screw set screws (36) into J-body (20). Release drag blocks (22).

K-3.12) Install o-ring (38) into o-ring groove in J-pin bottom sub (23).

K-3.13) Screw J-pin bottom sub (23) onto inner mandrel (2).

NOTE₂: Drag block body assembly must be free to rotate.

CAUTION₁₀: Do not rip or tear o-ring during installation.

K-3.14) Screw set screws (35) into J-pin bottom sub (23). Move J-body (20) as needed to access threaded holes in J-pin bottom sub (23).

K-4) Unclamp top sub (1) from vise and remove assembled tool.

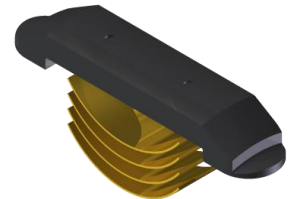


Fig. 7

L) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 61357YRS	P/N 61357ZRS
1	1	TOP SUB	DLMS110	61355615	
2	1	INNER MANDREL	DLMS110	61355215	
3	24/30	DRAG BLOCK SPRING	-	9100900	
4	1	HOLD DOWN EXTENSION	DLMS110	61355310	
5	1	SEAL RECEPTACLE	DLMS110	61355730	
6	1	HOLD DOWN BODY	DLMS110	61357Y321	61357321
7	3	FLAT HEAD CAP SCREW 5/16-18 UNC X 1/2	STEEL	FHSC031C050	
8	1	COMPENSATING MANDREL	DLMS110	61355240	
9	1	COMPENSATING PISTON	DLMS110	61355710	
10	1	CENTRAL BODY	DLMS110	61355381	
11	1	RUBBER MANDREL	DLMS110	61355220	
12	2	RUBBER SPACER	DLMS60	60257Y840	60257Z840
13	1	ELEMENT	80 DURO NITRILE	60257Y512	60257Z512
14	2	ELEMENT	90 DURO NITRILE	60257Y513	60257Z513
15	1	RUBBER RETAINER	DLMS110	61357Y850	61157Z850HT



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L) PARTS LIST (cont'd)

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 61357YRS	P/N 61357ZRS
16	1	LOWER CONE	DLMS110	61357Y420	60055420HT
17	4	LOWER SLIP W/ CARBIDE	DLMS110	61357Y135	60055135C
18	1	DRAG BLOCK BODY	DLMS110	61357Y335	61357335
19	1	RUBBER MANDREL CAP	DLMS60	60055230	
20	1	J-BODY	DLMS110	61355340	
21	1	DRAG BLOCK RETAINER	DLMS110	61357Y910	60057Z910
22	6	DRAG BLOCK W/ CARBIDE	DLMSDB4	9056900C	9055900C
23	1	J-PIN BOTTOM SUB	DLMS110	61355635	
24	1	QUAD SEAL	90 DURO NITRILE	61355520	
25	8	LOWER SLIP SPRING	-	7155901	
26	12	HOLD DOWN BUTTON SPRINGS	-	61355975	
27	1	SEAL RETAINER	DLMS80	61355530	
28	1	VALVE BODY	DLMS110	61357Y350	61357Z350
29	3	SOCKET CAP SCREW 1/4-20 UNC X 1/4	STEEL	SCS025C025	-
30	6	HOLD DOWN BUTTON W/ CARBIDE	DLMS110	61357140C	61357Z140C
31	3	HOLD DOWN STRAP	DLMSFB4	61355360	
32	1	HOLD DOWN CAP	DLMS110	61357Y370	61357Z370
33	1	STRAP RETAINER	DLMS110	61357Y650	61355650
34	3	SET SCREW 3/8-16 UNC X 3/8	STEEL	SSS037C037	
35	4	SET SCREW 3/8-16 UNC X 1/2	STEEL	SSS037C050	
36	4	SET SCREW 5/16-18 UNC X 1/2	STEEL	SSS031C050	
37	6	224 O-RING	90 DURO NITRILE	90224	
38	1	229 O-RING	90 DURO NITRILE	90229	
39	1	231 O-RING	90 DURO NITRILE	90231	
40	2	235 O-RING	90 DURO NITRILE	90235	
41	2	236 O-RING	90 DURO NITRILE	90236	
42	1	241 O-RING	90 DURO NITRILE	90241	
43	1	334 O-RING	90 DURO NITRILE	90334	
44	1	339 O-RING	90 DURO NITRILE	90339	
45	1	342 O-RING	90 DURO NITRILE	90342	

REDRESS KIT (RDK)		61357Y050	61357Z050
ASSEMBLED WEIGHT		177 LBS	172 LBS



HD RETRIEVABLE PACKER RIGHT-HAND AUTO 5-3/4" X 2-3/8"

Manual No:
DL-613-5750-582

Revision: **F**

Revision Date:
04/01/2021

Authored by: J.Anderson

Approved by: D.Hushbeck

L) PARTS LIST (cont'd)

L-1) ELASTOMER TRIM OPTIONS

NOTE11: For temperature range, refer to Elastomer Trim Temperature Guide.

L-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 61357YRSH	P/N 61357ZRSRSH
13	1	ELEMENT	80 DURO HSN	60257Y512H	60257Z512H
14	2	ELEMENT	90 DURO HSN	60257Y513H	60257Z513H
24	1	QUAD SEAL	90 DURO HSN	61355520H	
37	6	224 O-RING	90 DURO HSN	90224H	
38	1	229 O-RING	90 DURO HSN	90229H	
39	1	231 O-RING	90 DURO HSN	90231H	
40	2	235 O-RING	90 DURO HSN	90235H	
41	2	236 O-RING	90 DURO HSN	90236H	
42	1	241 O-RING	90 DURO HSN	90241H	
43	1	334 O-RING	90 DURO HSN	90334H	
44	1	339 O-RING	90 DURO HSN	90339H	
45	1	342 O-RING	90 DURO HSN	90342H	

REDRESS KIT (RDK)		61357Y050H	61357Z050H
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L-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 61357YRSV	P/N 61357ZRSV
13	1	ELEMENT	80 DURO VITON	60257Y512V	60257Z512V
14	2	ELEMENT	90 DURO VITON	60257Y513V	60257Z513V
24	1	QUAD SEAL	90 DURO VITON	61355520V	
37	6	224 O-RING	90 DURO VITON	90224V	
38	1	229 O-RING	90 DURO VITON	90229V	
39	1	231 O-RING	90 DURO VITON	90231V	
40	2	235 O-RING	90 DURO VITON	90235V	
41	2	236 O-RING	90 DURO VITON	90236V	
42	1	241 O-RING	90 DURO VITON	90241V	
43	1	334 O-RING	90 DURO VITON	90334V	
44	1	339 O-RING	90 DURO VITON	90339V	
45	1	342 O-RING	90 DURO VITON	90342V	

REDRESS KIT (RDK)		61357Y050V	61357Z050V
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HD RETRIEVABLE PACKER

RIGHT-HAND AUTO

5-3/4" X 2-3/8"

Manual No:
DL-613-5750-582

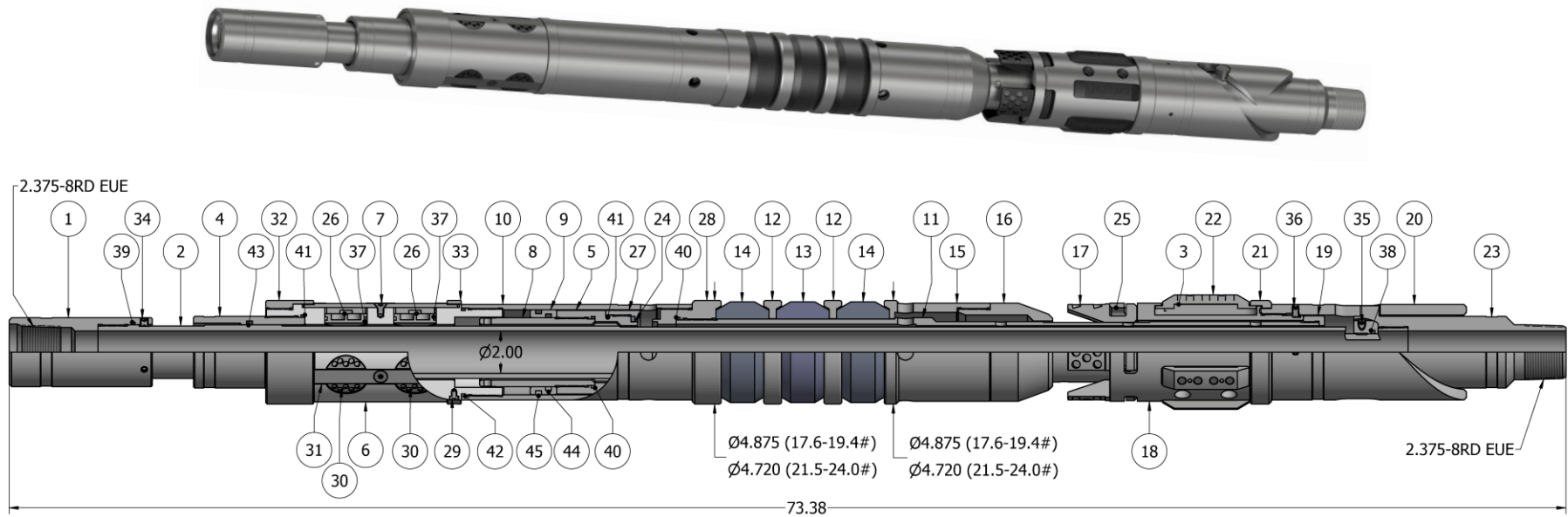
Revision: **F**


Revision Date:
04/01/2021

Authored by: J.Anderson

Approved by: D.Hushbeck

M) TECHNICAL ILLUSTRATION



	<div><div>HD RETRIEVABLE PACKER</div><div>RIGHT-HAND AUTO</div><div>5-3/4" X 2-3/8"</div></div>	Manual No:
		DL-613-5750-582
		Revision: F
		Revision Date:
		04/01/2021
Authored by: J.Anderson		Approved by: D.Hushbeck

N) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
04/01/2021	F	Added P/N 61357ZRS	J.Anderson	E.Visaez
05/28/2020	E	Added HSN and Viton options, General Screw Torque Recommendations; Revised Elastomer Trim Temp Guide, 9056900C was 9056900	J.Anderson	Z.Speer
12/07/2015	D	Revised: Elastomer Durometer Temperatures – Nitrile (90/80/90 Duro) was 250° - 300°F, Nitrile (Contact D&L Sales) was 300°F +, Rubber Type Temp. Ranges – Nitrile was 70° - 300°F, HSN was 70° - 325°F;	B.Mathis	B.Oligschlaeger
10/21/2015	C	Added: HANGING WEIGHT ON SET TOOL, *Casing must be cemented for this load rating., STORAGE RECOMMENDATIONS, SPECIAL TOOLS – T3, Note6, Fig. 3; Revised: ELASTOMER TRIM TEMPERATURE was ELEMENT SELECTION, PRESSURE AFFECTED AREA GUIDE, DISASSEMBLY Instructions, ASSEMBLY Instructions, Caution8, Note9 – was one spring per slip, Fig. 6;	B.Mathis	K.Riggs
06/05/14	B	Added: pre-installation inspection and storage procedures; Revised: PN 61357YRS was 61359RS, casing weight range and recommended hole size, redress kit PN was 61359050;, PN 61357Y321 was 61359321, PN 60257Y840 was 602575X20-840, PN 60257Y512 was 602575X20-512, PN 60257Y513 was 602575X20-513, PN 61357Y850 was 61359850, PN 61357Y420 was 61359420, PN 61357Y135 was 61359135, PN 61357Y335 was 61359335, PN 61357Y910 was 61359910, PN 61357Y350 was 61359350, PN 61357Y370 was 61359370, PN 61357Y650 was 61359650;	J.Anderson	H.Bringham