A) DESCRIPTION

The Snapset I Packer is a compression set packer requiring only straight set down weight to pack-off. This packer is run above other packers (such as the ASI-X Packer, AS-II Packer or AS-III Packer) for selective production to isolate casing holes and perforations.

This packer has no upper or lower slips and should be used only where intermediate differential pressures from below are expected. This packer has an internal latch to prevent the packer from setting prematurely when running down the hole. When releasing, the latch re-engages to allow movement downhole and re-setting.

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)		
7	17.0 – 26.0	6.276 – 6.538	6.000	3.00	3-1/2 EUE	63574 63574H[1] 63574V[2]

Elastomer Trim Options: [1]HSN, [2]Viton

DIFFERENTIAL PRESSURE (MAX)	**TENSILE LOAD THRU TOOL** (MAX)
7,000 PSI	130,000 LBS

C) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION[1]: 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.

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

C) PRE-INSTALLATION INSPECTION PROCEDURES (cont’d)

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

CAUTION[2]: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

Run the packer to setting depth with an ASI-X Packer or other comparable packer below the Snapset II Packer. Set the lower tool to provide resistance to set the Snapset II Packer. Apply sufficient set down weight to release the internal latch (5,000-10,000 lbs). Then apply a minimum weight of 14,000 lbs at the packer to pack off the elements.

E) RELEASING PROCEDURES

Pick up on the work string, pulling with enough tension to relax the elements and re-set the internal latch. The packer can now be retrieved or reset.

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

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**
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 (1) in vise.

I-1.1) From lower end of tool, unscrew and remove set screws (17) from torque sleeve (8).

I-1.2) Unscrew and remove bottom sub (10) from torque sleeve (8).

I-1.2.1) Remove o-ring (19) from bottom sub (10).

I-1.3) Unscrew and remove torque pins (9) from torque ring (7).

I-1.4) Unscrew and remove torque sleeve (8) from rubber retainer (15).

I-1.5) Remove torque ring (7) from lower mandrel (6).

I-1.6) Unscrew and remove collet (16) from rubber retainer (15).

I-1.7) Unscrew and remove lower mandrel (6) from inner mandrel (2).

I-1.8) Unscrew rubber mandrel (11) from valve body (5). Remove rubber mandrel assembly and disassemble:

I-1.8.1) Unscrew and remove valve body (5) from rubber mandrel (11).

I-1.8.1.1) Remove o-ring (18) from valve body (5).

I-1.8.2) Remove elements (13, 14), rubber spacers (12), and rubber retainer (15) from rubber mandrel (11).

I-1.9) Unscrew and remove inner mandrel (2) from top sub (1).

I-1.10) Unscrew and remove seal (4) from top sub (1).

I-2) Unclamp and remove top sub (1) from vise.

J) ASSEMBLY

NOTE$_1$: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

CAUTION$_3$: To ensure tool operates properly, install o-rings in o-ring grooves **NOT** thread reliefs (Fig. 2).

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

J-1.1) Screw seal (4) onto valve plunger (3).

J-1.2) Screw inner mandrel (2) into top sub (1).

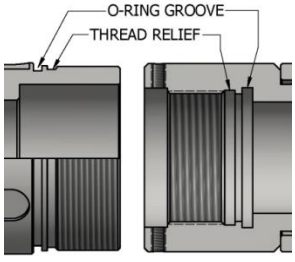


Fig. 2

J) ASSEMBLY (cont’d)

J-1.3) Assemble rubber mandrel assembly and install:

J-1.3.1) Install elements (13, 14), rubber spacers (12), and rubber retainer (15) onto rubber mandrel (11).

J-1.3.2) Install o-ring (18) in o-ring groove in valve body (5).

J-1.3.3) Screw valve body (5) onto rubber mandrel (11).

CAUTION$_4$: Do NOT rip or tear o-rings while installing.

J-1.3.4) Install rubber mandrel assembly onto inner mandrel (2).

J-1.4) Screw lower mandrel (6) onto inner mandrel (2).

J-1.5) Screw collet (16) into rubber retainer (15).

J-1.6) Install torque ring (7) onto lower mandrel (6).

J-1.7) Screw torque sleeve (8) onto rubber retainer (15). Align slots in torque sleeve (8) with threaded holes in torque ring (7) and pocket holes in lower mandrel (6).

J-1.8) Screw torque pins (9) into torque ring (7).

J-1.9) Install o-ring (19) in o-ring groove in bottom sub (10).

J-1.10) Screw bottom sub (10) into torque sleeve (8).

CAUTION$_4$: Do NOT rip or tear o-ring while installing.

J-1.11) Screw set screws (17) into torque sleeve (8).

J-2) Unclamp top sub (1) from vise and remove assembled tool.

K) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 63574
1	1	TOP SUB	P-110	65573610
2	1	INNER MANDREL	L-80	63573210
3	2	GAGE RING	DLMS60	60274830
4	1	SEAL	90 DURO NITRILE	61073520
5	1	VALVE BODY	P-110	65573350
6	1	LOWER MANDREL	DLMS110	63573230
7	1	TORQUE RING	DLMS35	63573725
8	1	TORQUE SLEEVE	DLMS60	63574380
9	2	TORQUE PIN	.50-13 X .50 HSCS	63570377
10	1	BOTTOM SUB	DLMS80	63573630
11	1	RUBBER MANDREL	DLMS60	63573220
12	2	RUBBER SPACER	DLMS35	60274840
13	1	ELEMENT	70 DURO NITRILE	60274511
14	2	ELEMENT	90 DURO NITRILE	60274513
15	1	RUBBER RETAINER	DLMS60	63573850
16	1	COLLET	DLMS110	63573660

K) PARTS LIST (cont’d)

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 63574
17	3	SET SCREW 3/8-16 UNC X 1/2	STEEL	SSS037C050
18	1	243 O-RING	NITRILE	90243
19	1	342 O-RING	NITRILE	90342

REDRESS KIT (RDK)		63574050
ASSEMBLED WEIGHT		182 LBS

K-1) ELASTOMER TRIM OPTIONS

NOTE2: For temperature range, refer to Elastomer Trim Temperature Guide.

K-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 63574H
13	1	ELEMENT	70 DURO HSN	60274511H
14	2	ELEMENT	90 DURO HSN	60274513H
18	1	243 O-RING	90 DURO HSN	90243H
19	1	342 O-RING	90 DURO HSN	90342H

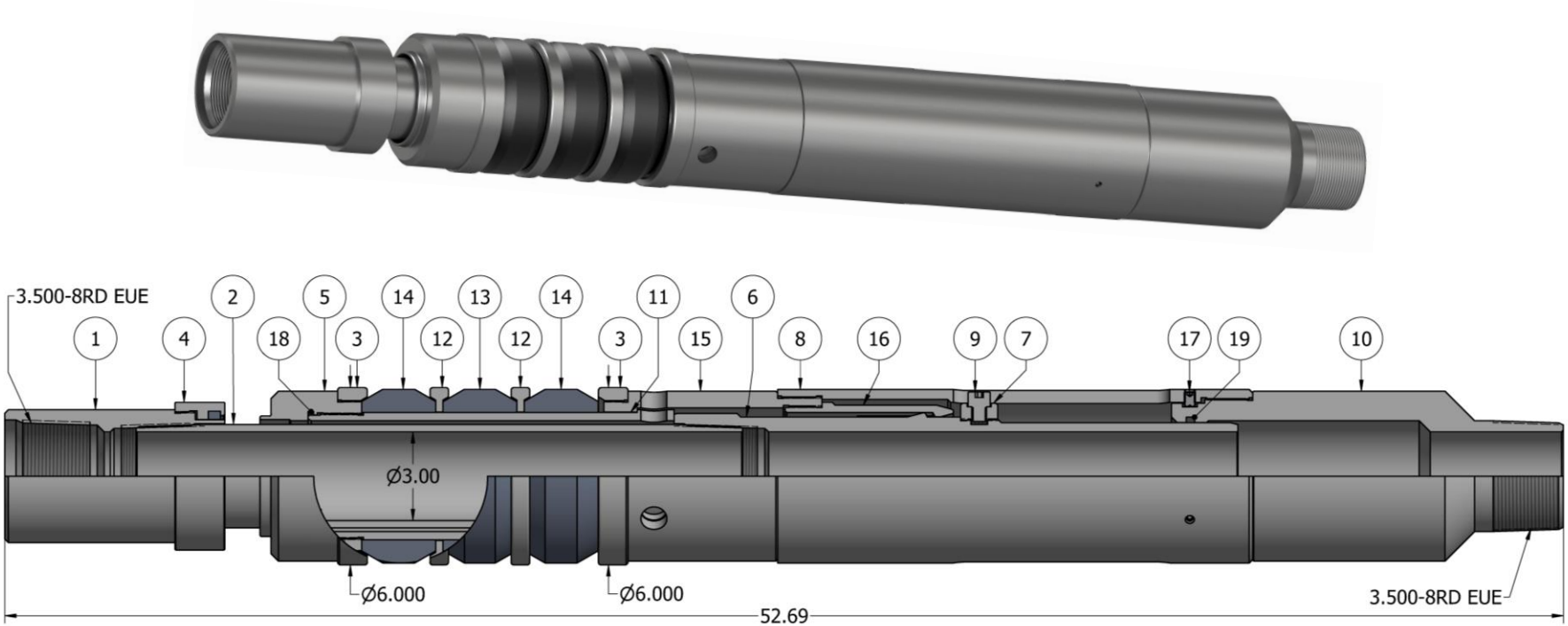
REDRESS KIT (RDK)		63574050H

K-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 63574V
13	1	ELEMENT	70 DURO VITON	60274511V
14	2	ELEMENT	90 DURO VITON	60274513V
18	1	243 O-RING	90 DURO VITON	90243V
19	1	342 O-RING	90 DURO VITON	90342V

REDRESS KIT (RDK)		63574050V

L) TECHNICAL ILLUSTRATION



M) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
04/16/2019	A	Created new manual	-	-