



GV CUP PACKER

4-1/2" X 2-7/8"

Manual No:
DL-439-4500-712

Revision: **B**

Revision Date:
04/30/2020

Authored by: J.Anderson

Approved by: R.Dyer

A) DESCRIPTION

The GV Cup Packer is an economical means of isolating casing leaks and depleted zones and is also a production or injection packer for low pressure applications. Depending on application, the GV Cup Packer can be run with cups opposed or in the same direction. The GV Cup Packer is also available in a full range of tubing and casing sizes in two-cup or four-cup models.

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)		
4-1/2	9.5 – 13.5	3.920 – 4.090	3.750	2.50	2-7/8 EUE	43946 43946H ¹ 43946V ²

¹HSN Option ²Viton Option

DIFFERENTIAL PRESSURE (MAX)	TENSILE LOAD THRU TOOL (MAX)	RECOMMENDED RUNNING DEPTH (MAX)	RECOMMENDED RUNNING SPEED (MAX)
5,000 PSI	80,000 LBS	7,000 FT	60 FT/MIN

C) PRE-INSTALLATION INSPECTION PROCEDURES

CAUTION₁: 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

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.

D & L OIL TOOLS
P.O. BOX 52220 TULSA, OK 74152
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C) PRE-INSTALLATION INSPECTION PROCEDURES (cont'd)

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) OPERATING PROCEDURES

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

D-1) SETTING PROCEDURES

Trip packer to desired depth.

D-2) RELEASING PROCEDURES

Pull tubing string to remove packer from well bore.

E) 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. Packing 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.

F) ELASTOMER TRIM TEMPERATURE GUIDE

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

G) 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



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H) DISASSEMBLY

H-1) Clamp mandrel (1) in vise.

H-1.1) Unscrew and remove coupling (2) from mandrel (1).

H-1.2) Remove upper spacer (4) from mandrel (1)

H-1.3) Remove upper upper cup assembly (3) and cup retainer (5) and from mandrel (1).

H-1.3.1) Remove o-ring (6) from cup assembly (5).

H-1.4) Remove lower spacer (4) from mandrel (1).

H-1.5) Remove lower cup assembly (3) and cup retainer (5) from mandrel (1).

H-1.5.1) Remove o-ring (6) from cup assembly (5).

H-2) Unclamp mandrel (1) and remove from vise.

I) ASSEMBLY

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

I-1) Clamp mandrel (1) in vise.

I-1.1) Install o-rings (6) in grooves in cup assemblies (3).

I-1.2) Install lower cup retainer (5) onto mandrel (1).

I-1.3) Install lower cup assembly (3) onto mandrel (1).

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

I-1.4) Install lower spacer (4) onto mandrel (1).

I-1.5) Install upper cup retainer (5) onto mandrel (1).

I-1.6) Install lower cup assembly (3) onto mandrel (1).

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

I-1.7) Install upper spacer (4) onto mandrel (1).

I-1.8) Screw coupling (2) onto mandrel (1).

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



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J) PARTS LIST

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 43946
1	1	MANDREL	DLMS60	43946210
2	1	COUPLING	DLMS80	CP-BAC-BBC-B
3	2	CUP ASSEMBLY	80 DURO NITRILE	42045512
4	2	SPACER	DLMS60	43946821
5	2	CUP RETAINER	DLMS35	43946831
6	2	337 O-RING	90 DURO NITRILE	90337

REDRESS KIT (RDK)	43946050
ASSEMBLED WEIGHT	19 LBS

J-1) ELASTOMER TRIM OPTIONS

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

J-1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 43946H
3	2	CUP ASSEMBLY	80 DURO HSN	42045512H
6	2	337 O-RING	90 DURO HSN	90337H

REDRESS KIT (RDK)	43946050H
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J-1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 43946V
3	2	CUP ASSEMBLY	80 DURO VITON	42045512V
6	2	337 O-RING	90 DURO VITON	90337V

REDRESS KIT (RDK)	43946050V
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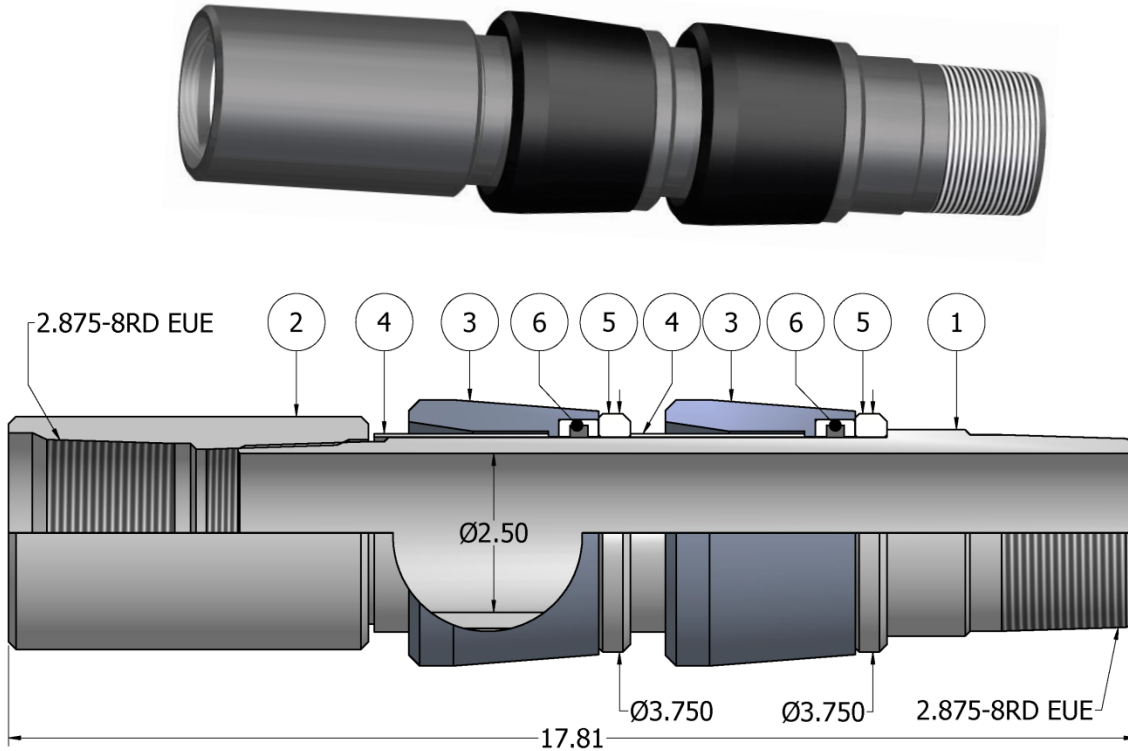
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K) TECHNICAL ILLUSTRATION



L) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
04/30/2020	B	Removed tool drift ID; Added General Screw Torque Recommendations; Revised Elastomer Trim Temp. Guide, CP-BAC-BBC-B was CP2875E2875N	J.Anderson	E.Visaez
06/13/14	A	Created new tech manual	-	-