



ROTATIONAL SAFETY JOINT

LEFT-HAND RELEASE

1.660” – 4.500”

Manual No:
DL-568-0000-916

Revision: **A**

Revision Date:
03/22/2016

Authored by: *J.Anderson*

Approved by: *K.Plunkett*

A) DESCRIPTION

The Safety Joint allows positive release of the tubing string in completions where retrieval problems are anticipated. These safety joints are available in straight pull shear release, rotational release, and swivel shear release versions.

B) SPECIFICATION GUIDE

SIZE (INCHES)	TOOL OD (INCHES)	THREAD CONNECTION BOX UP / PIN DOWN	PART NUMBER
1.660	2.25	1.660 NUE	56816N 56816NH ¹ 56816NV ²
1.900	2.50	1.900 EUE	56819-LH 56819H-LH ¹ 56819V-LH ²
2-3/8	3.06	2-3/8 EUE	56820-LH 56820H-LH ¹ 56820V-LH ²
2-7/8	3.69	2-7/8 EUE	56827E-LH 56827EH-LH ¹ 56827EV-LH ²
3-1/2	4.50	3-1/2 EUE	56835E-LH 56835EH-LH ¹ 56835EV-LH ²
4-1/2	5.20	4-1/2 EUE	56845LH-BAG 56845LHH-BAG ¹ 56845LHV-BAG ²

Elastomer Trim Options: ¹HSN, ²Viton

NOTE₁: Left-hand release options listed. Right-hand release options available upon request.

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.

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.

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)

When redressing the tool, D&L recommends replacement of the o-ring. Contact D&L sales for redress kit and/or other replacement part information.

D) RELEASING PROCEDURES

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

Pick up or Slack off to ensure that no more than 1000-2000 lbs of weight or tension is on the Rotational Safety Joint. Rotate Rotational Safety Joint to the left approximately five to eight (5-8) turns at the tool to release the top sub and work string above it. Additional turns may be necessary at the surface to ensure the proper number of turns at the Rotational Safety Joint.

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.

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	70° - 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

H) DISASSEMBLY

- H-1) Clamp top sub (1) in vise.
- H-1.1) Unscrew and remove bottom sub (2) from top sub (1).
- H-1.1.1) Remove o-ring (3) from bottom sub (2).
- H-2) Remove top sub (1) from vise.



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D) ASSEMBLY

NOTE₂: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

CAUTION₃: To ensure tool operates properly, install o-rings in o-ring grooves **NOT** thread reliefs (Fig.2).

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

I-1.1) Install o-ring (3) in groove in bottom sub (2).

I-1.2) Screw bottom sub (2) onto top sub (1).

CAUTION₄: Do not rip or tear o-ring during installation.

I-2) Remove assembled tool from vise.

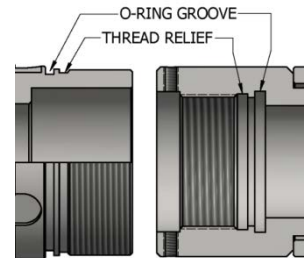


Fig. 2

J) PARTS LIST

J-1) 1.660”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56816N
1	1	TOP SUB	DLMS80	56816610N
2	1	BOTTOM SUB	DLMS80	56816630N
3	1	223 O-RING	90 DURO NITRILE	90223

REDRESS KIT (RDK)	56816050
ASSEMBLED WEIGHT	5 LBS

J-2) 1.900”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56819-LH
1	1	TOP SUB	L-80	56819610
2	1	BOTTOM SUB	L-80	56819630
3	1	225 O-RING	90 DURO NITRILE	90225

REDRESS KIT (RDK)	56819050
ASSEMBLED WEIGHT	7 LBS

J-3) 2-3/8”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56820-LH
1	1	TOP SUB	DLMS80	56820611
2	1	BOTTOM SUB	DLMS80	56820631
3	1	332 O-RING	90 DURO NITRILE	90332

REDRESS KIT (RDK)	56820050
ASSEMBLED WEIGHT	9 LBS



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J) PARTS LIST (cont'd)

J-4) 2-7/8”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56827E-LH
1	1	TOP SUB	L-80	56827611
2	1	BOTTOM SUB	L-80	56827631
3	1	336 O-RING	90 DURO NITRILE	90336

REDRESS KIT (RDK)	56827050
ASSEMBLED WEIGHT	15 LBS

J-5) 3-1/2”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56835E-LH
1	1	TOP SUB	L-80	56835E611
2	1	BOTTOM SUB	L-80	56835E631
3	1	238 O-RING	90 DURO NITRILE	90238

REDRESS KIT (RDK)	56835050
ASSEMBLED WEIGHT	23 LBS

J-6) 4-1/2”

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 56845LH-BAG
1	1	TOP SUB	L-80	56845612
2	1	BOTTOM SUB	L-80	56845632
3	1	245 O-RING	90 DURO NITRILE	90245

REDRESS KIT (RDK)	56845050
ASSEMBLED WEIGHT	22 LBS



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J) PARTS LIST (cont'd)

J-7) ELASTOMER TRIM OPTIONS

NOTE₃: For temperature range, refer to Elastomer Trim Temperature Guide.

J-7.1) HSN

PART NUMBER	ITEM 3			REDRESS KIT (RDK)
	QTY	O-RING (P/N)	MATERIAL	
56816NH	1	90223H	90 DURO HSN	56816050H
56819H-LH		90225H		56819050H
56820H-LH		90332H		56820050H
56827EH-LH		90336H		56827050H
56835EH-LH		90238H		56835050H
56845LHH-BAG		90245H		56845050H

J-7.2) VITON

PART NUMBER	ITEM 3			REDRESS KIT (RDK)
	QTY	O-RING (P/N)	MATERIAL	
56816NV	1	90223V	90 DURO VITON	56816050V
56819V-LH		90225V		56819050V
56820V-LH		90332V		56820050V
56827EV-LH		90336V		56827050V
56835EV-LH		90238V		56835050V
56845LHV-BAG		90245V		56845050V



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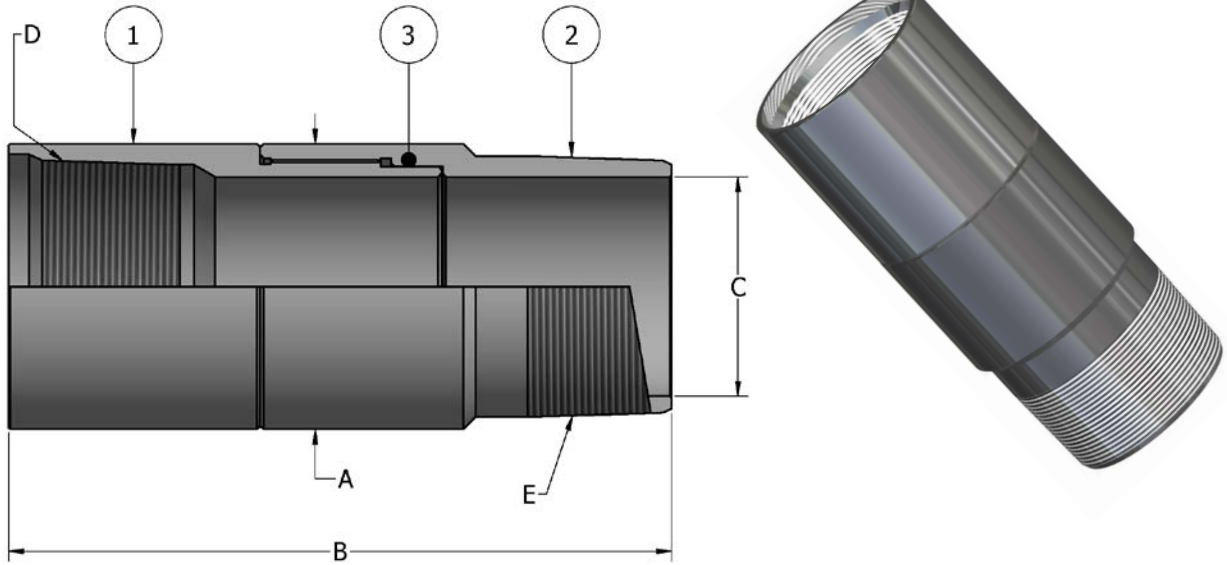
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K) TECHNICAL ILLUSTRATION



K-1) DIMENSIONS

PART NUMBER	A (INCHES)	B (INCHES)	C (INCHES)	D (BOX UP)	E (PIN DOWN)
56816N	2.25	9.13	1.38	1.660 NUE	
56819-LH	2.50	10.13	1.61	1.900 EUE	
56820-LH	3.06	10.13	2.00	2-3/8 EUE	
56827E-LH	3.69	11.25	2.50	2-7/8 EUE	
56835E-LH	4.50	11.75	3.00	3-1/2 EUE	
56845LH-BAG	5.20	12.07	4.00	4-1/2 EUE	

L) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
03/22/2016	A	Created new manual	-	-