



ON/OFF TOOL AND PROFILE STINGER 4-1/2"

Manual No:
DL-515-4500-1095

Revision: **B**

Revision Date:
02/28/2024

Authored by: J.Anderson

Approved by: N.Banker

A) DESCRIPTION

The On/Off Tool is a tubing seal receptacle allowing isolation of a lower zone using a wireline blanking plug. The tubing string can then be removed from the well. When re-run, the tubing string automatically re-engages to the stinger, and the blanking plug can be retrieved by wireline.

The On/Off Tool is run above an ASI-X Packer, a VSI-X Packer or a Permapak Seal Bore Packer with a latch seal mandrel.

NOTE₁: Stinger must be purchased separately.

B) RELATED TOOLS (sold separately)

B-1) ASI-X, VSI-X and Permanent Packers (P/N varies)—refer to applicable technical manual.

C) SPECIFICATION GUIDE

CASING SIZE (INCHES)	TOOL OD (INCHES)	TOOL ID (INCHES)	THREAD CONNECTION BOX UP	PART NUMBER
8-5/8	7.500	4.00	4-1/2 EUE	51587 51587H ¹ 51587V ²
9-5/8	8.250	4.00	4-1/2 EUE	51597 51597H ¹ 51597V ²
10-3/4	9.310	4.00	4-1/2 EUE	51501 51501H ¹ 51501V ²
13-3/8	11.875	4.00	4-1/2 EUE	51513 51513H ¹ 51513V ²

Elastomer Trim Options: ¹HSN, ²Viton

NOTE₂: Additional sizes available—contact D&L Oil Tools for more information.

DIFFERENTIAL PRESSURE (MAX)	NUMBER OF LUGS ON STINGER	STINGER METALLURGY*	STINGER SAFE WORKING TENSILE LOAD	STINGER LUG SHEAR RATING
10,000 PSI	3	DLMS80 (80,000 PSI MIN.)	87,461 LBS	109,327 LBS

*Other metallurgy available. Contact D&L Engineering for more information.

D & L OIL TOOLS
P.O. BOX 52220 TULSA, OK 74152
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D) 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 (IN)	#6	#8	#10	1/4	5/16	3/8	7/16	1/2	5/8 and larger
TORQUE RANGE (IN-LBS)	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.

E) OPERATING PROCEDURES

CAUTION2: Do not run the tool without properly tightening connections. Running the tool with loose connections may damage the tool and cause malfunction.

E-1) WHEN USED WITH A MECHANICAL SET ASI-X PACKER

E-1.1) IN COMPRESSION

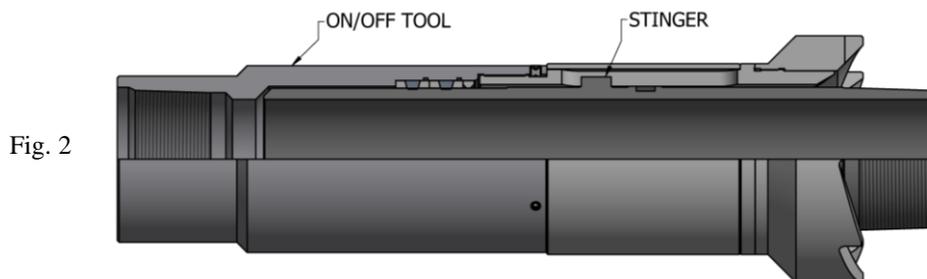


Fig. 2

Pin the overshoot to the stinger in the compression position (Fig. 2). Run the tool to the desired depth. Pick up and set down holding right-hand torque. Release the torque once the tool begins its setting procedure. Continue to set down to shear the pin and rotate to the left to release the overshoot from the stinger.



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E) OPERATING PROCEDURES (cont'd)

E-1.2) IN TENSION

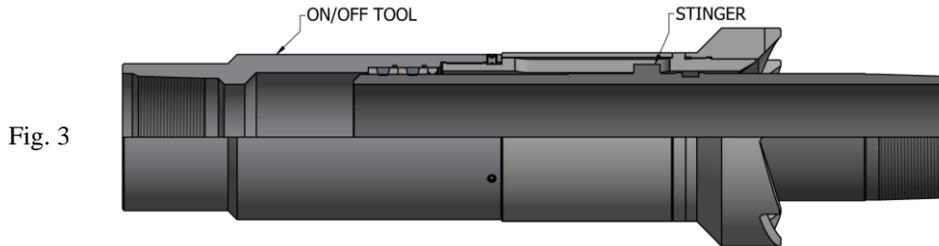


Fig. 3

Pin the overshot to the stinger in the tension position (Fig. 3). Run in the tool to the desired depth. Pick up and set down holding right-hand torque. Release the torque once the tool begins its setting procedure. Once the ASI-X is completely set, straight pull to shear the pin and rotate to the left to release the overshot from the stinger.

F) RETRIEVING AND RESETTING

Run in the tool to just above stinger depth. Then as the tool tags the stinger, the pins on the stinger will engage the J-slot. As the tool rotates, the pins will enter the running slot. Run the tool in until it is completely on the stinger. Continue to set down on the packer and when the tool takes weight, begin to create right-hand torque. The ASI-X Packer will disengage and can be reset at a different depth, or retrieved.

Use the setting procedure for the ASI-X Packer to reset it. After the ASI-X Packer is reset, the tool will release from the stinger by pulling with left-hand torque and releasing from the stinger.

G) PROFILE STINGER



Fig. 4

The 4-1/2" stinger is available in a variety of profiles that range from 1.87" to 3.81". The stinger is also available in a solid, and a full open that is available up to 4.00" (P/N 51045400 shown, Fig. 4).

H) 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. 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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I) ELASTOMER TRIM TEMPERATURE GUIDE

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

J) 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

K) DISASSEMBLY

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

K-1.1) Unscrew and remove milling shoe (4) from J-body (2).

K-1.2) Unscrew and remove set screws (7) from top sub (1).

K-1.3) Unscrew and remove J-body (2) from top sub (1).

K-1.3.1) Remove J-body cover (5) from J-body (2).

K-1.4) Remove seal guide ring (6) and bonded seals (3) from top sub (1).

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

K-2.1) Remove o-rings (8) from top sub (1).

L) ASSEMBLY

NOTE₃: Clean and inspect all parts. Replace all worn and damaged parts. Install parts in proper order, and orientation and tighten/torque all connections properly.

L-1) Install o-rings (8) in o-ring grooves in top sub (1).

L-2) Clamp top sub (1) in vise.

L-2.1) Install bonded seals (3) and seal guide ring (6) into top sub (1).

CAUTION₃: Do not rip or tear o-rings during installation.

L-2.2) Install J-body cover (5) onto J-body (2).

L-2.2.1)

L-2.3) Screw J-body (2) into top sub (1).

L-2.4) Screw set screws (7) into top sub (1).

L-2.5) Screw milling shoe (4) onto top sub (1).

L-3) Unclamp top sub (1) from vise and remove assembled tool.



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M) PARTS LIST

M-1) P/N 51587

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51587
1	1	TOP SUB	DLMS80	51277610
2	1	J-BODY	DLMS110	51577340A
3	2	BONDED SEAL	90 DURO NITRILE	60095520
4	1	MILLING SHOE	DLMS35	51587340C
5	1	J-BODY COVER	DLMS60	51577340B
6	1	SEAL GUIDE RING	DLMS60	51277510
7	3	3/8-16 UNC X 3/8 SOCKET SET SCREW	STEEL	SSS037C037
8	2	160 O-RING	90 DURO NITRILE	90160

REDRESS KIT (RDK)	51587050
ASSEMBLED WEIGHT	79 LBS

M-1.1) ELASTOMER TRIM OPTIONS

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

M-1.1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51587H
3	2	BONDED SEAL	90 DURO HSN	60095520H
8	2	160 O-RING	90 DURO HSN	90160H

REDRESS KIT (RDK)	51587050H
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M-1.1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51587V
3	2	BONDED SEAL	90 DURO VITON	60095520V
8	2	160 O-RING	90 DURO VITON	90160V

REDRESS KIT (RDK)	51587050V
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M) PARTS LIST (cont'd)

M-2) P/N 51597

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51597
1	1	TOP SUB	DLMS80	51277610
2	1	J-BODY	DLMS110	51577340A
3	2	BONDED SEAL	90 DURO NITRILE	60095520
4	1	MILLING SHOE	DLMS35	51597340C
5	1	J-BODY COVER	DLMS60	51577340B
6	1	SEAL GUIDE RING	DLMS60	51277510
7	3	3/8-16 UNC X 3/8 SOCKET SET SCREW	STEEL	SSS037C037
8	2	160 O-RING	90 DURO NITRILE	90160

REDRESS KIT (RDK)		51597050
ASSEMBLED WEIGHT		84 LBS

M-2.1) ELASTOMER TRIM OPTIONS

NOTE4: For temperature range, refer to Elastomer Trim Temperature Guide.

M-2.1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51597H
3	2	BONDED SEAL	90 DURO HSN	60095520H
8	2	160 O-RING	90 DURO HSN	90160H

REDRESS KIT (RDK)		51597050H
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M-2.1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51597V
3	2	BONDED SEAL	90 DURO VITON	60095520V
8	2	160 O-RING	90 DURO VITON	90160V

REDRESS KIT (RDK)		51597050V
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M) PARTS LIST (cont'd)

M-3) P/N 51501

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51501
1	1	TOP SUB	DLMS80	51277610
2	1	J-BODY	DLMS110	51577340A
3	2	BONDED SEAL	90 DURO NITRILE	60095520
4	1	MILLING SHOE	DLMS35	51501340C
5	1	J-BODY COVER	DLMS60	51577340B
6	1	SEAL GUIDE RING	DLMS60	51277510
7	3	3/8-16 UNC X 3/8 SOCKET SET SCREW	STEEL	SSS037C037
8	2	160 O-RING	90 DURO NITRILE	90160

REDRESS KIT (RDK)		51501050
ASSEMBLED WEIGHT		91 LBS

M-3.1) ELASTOMER TRIM OPTIONS

NOTE4: For temperature range, refer to Elastomer Trim Temperature Guide.

M-3.1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51501H
3	2	BONDED SEAL	90 DURO HSN	60095520H
8	2	160 O-RING	90 DURO HSN	90160H

REDRESS KIT (RDK)		51501050H
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M-3.1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51501V
3	2	BONDED SEAL	90 DURO VITON	60095520V
8	2	160 O-RING	90 DURO VITON	90160V

REDRESS KIT (RDK)		51501050V
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M) PARTS LIST (cont'd)

M-4) P/N 51513

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51513
1	1	TOP SUB	DLMS80	51277610
2	1	J-BODY	DLMS110	51577340A
3	2	BONDED SEAL	90 DURO NITRILE	60095520
4	1	MILLING SHOE	DLMS35	51513340C
5	1	J-BODY COVER	DLMS60	51577340B
6	1	SEAL GUIDE RING	DLMS60	51277510
7	3	3/8-16 UNC X 3/8 SOCKET SET SCREW	STEEL	SSS037C037
8	2	160 O-RING	90 DURO NITRILE	90160

REDRESS KIT (RDK)		51513050
ASSEMBLED WEIGHT		98 LBS

M-4.1) ELASTOMER TRIM OPTIONS

NOTE4: For temperature range, refer to Elastomer Trim Temperature Guide.

M-4.1.1) HSN

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51513H
3	2	BONDED SEAL	90 DURO HSN	60095520H
8	2	160 O-RING	90 DURO HSN	90160H

REDRESS KIT (RDK)		51513050H
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M-4.1.2) VITON

ITEM	QTY	DESCRIPTION	MATERIAL	P/N 51513V
3	2	BONDED SEAL	90 DURO VITON	60095520V
8	2	160 O-RING	90 DURO VITON	90160V

REDRESS KIT (RDK)		51513050V
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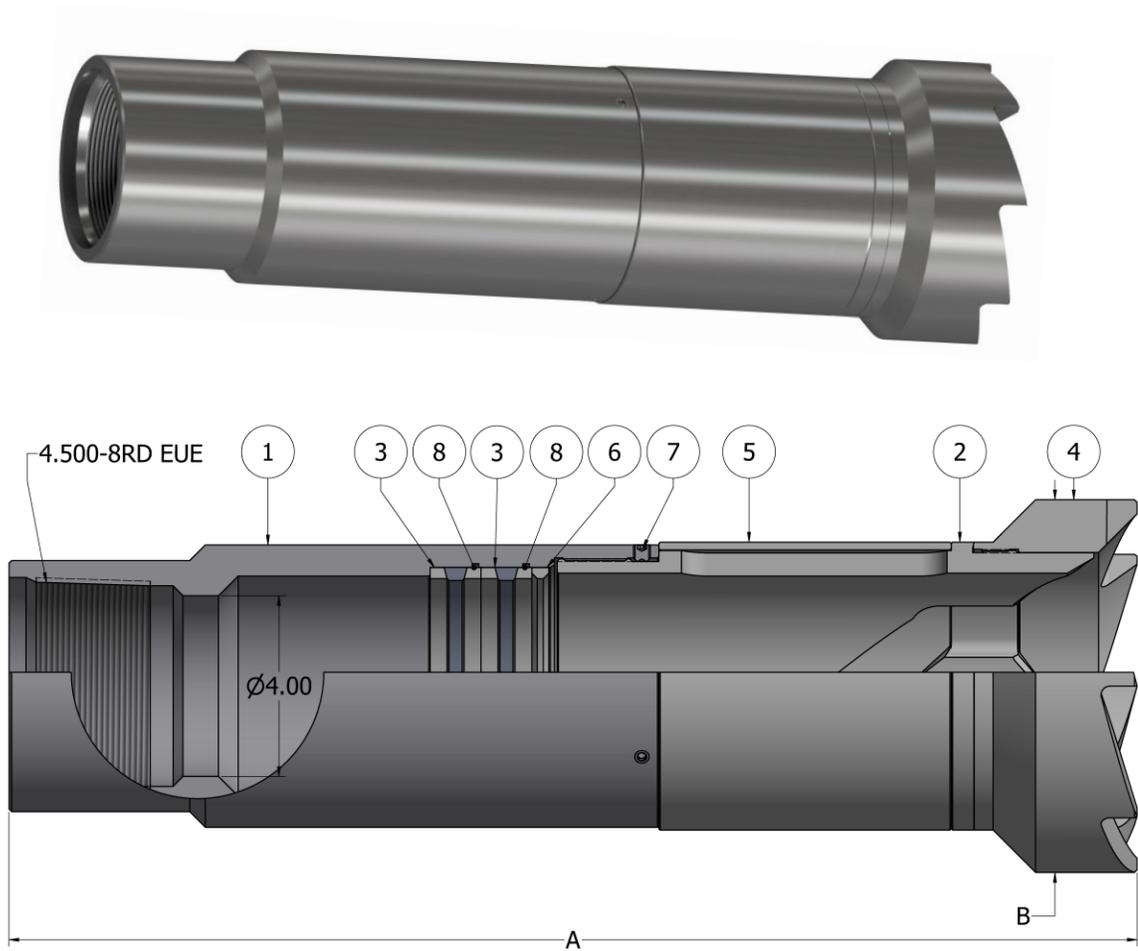
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N) TECHNICAL ILLUSTRATION



PART NUMBER	A	B
	TOOL LENGTH (INCHES)	MAX. TOOL OD (INCHES)
51587	24.96	7.500
51597	24.96	8.250
51501	24.96	9.310
51513	24.96	11.875



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O) REVISION HISTORY

DATE	REVISION	DESCRIPTION OF CHANGES	REVISED BY	APPROVED BY
02/28/2024	B	Added P/N 51587	J.Anderson	E.Visaez
12/27/2017	A	Created new manual	-	-