

**Purpose:**

The Dual Flapper is used as a one double barrier check valve when there is a desire to retain pressure from below the valve and still have the ability to pump, or inject down through the tool.

**Application:**

The Dual Flapper is generally used in conjunction with the BT Otis X or R Locks.

**Disassembly:**

## Dual Flapper Assembly:

- a. Clamp the assembly on the vice.
- b. Unscrew the bottom sub.
- c. Use a rod bigger than the ID of the flapper cartridge to push or tap out the flapper cartridges.

## Flapper Cartridge:

- a. Remove the sealing cap from the body.
- b. Remove the O-Ring from the sealing cap.
- c. Remove the teflon seat from the inside of the body.
- d. Using a punch remove the rubberize hinge pin from the body.
- e. Remove the spring from body.
- f. Remove the flapper from the body.
- g. Clean and inspect all parts for wear or damage.

**Assembly:**

## Flapper Cartridge

- a. Install the seat into the body.
- b. Install the O-Ring onto the sealing cap.
- c. Align the spring and flapper with the hinge pin holes in the body and insert the hinge pin.
- d. Install the sealing cap into the body. (Care should be taken not to damage the teflon seat)
- e. Inspect flapper functionality to insure proper actuation of the flapper.

## Dual Flapper Assembly

- a. Clamp the Housing on the vice.
- b. Press the Flapper Cartridges into the Housing.
- c. Screw the Bottom Sub onto the bottom of the Housing to avoid the Cartridges from dropping out.
- d. Snag the Bottom Sub with a wrench with a 6" or 12" wrench or spanner.

**Precautions:**

The pressure rating (7,500 psi) stated on the Dual Flapper assembly drawing that was third party tested under the supervision of Brace Tool Inc.

Any pressure that exceeds the pressure (7,500 psi) stated on the assembly drawing has not been tested therefore, the integrity of the tool, and more importantly safety cannot be guaranteed.

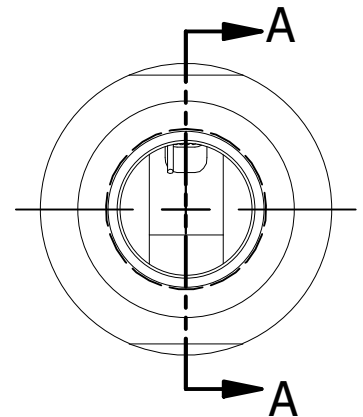
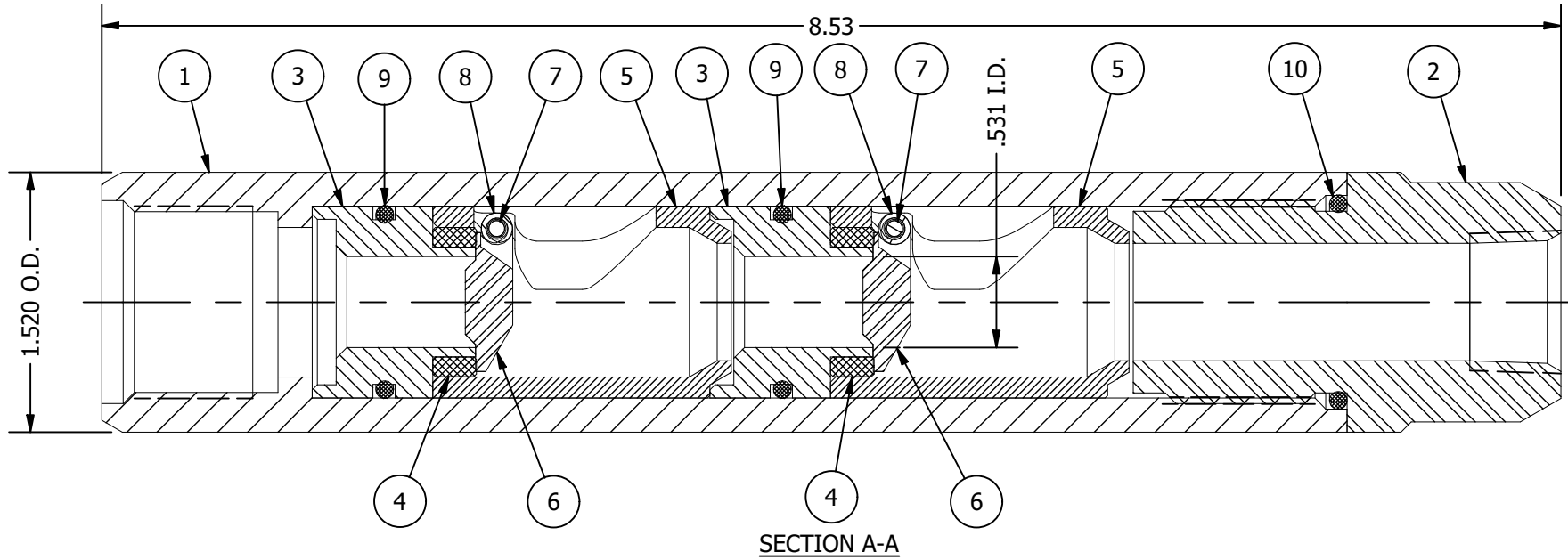
Furthermore, the tool tested was brand new at the time of testing and had not been subjected to any sources of stress or wear.

It is important to note that repeated or prolonged use of the tool may cause material fatigue and or failure at pressures lower than the pressure stated on the assembly drawing.

The pressure test charts are available when needed for reference.

APPLICABLE CRITICAL DATA	
DESCRIPTION	DATA
O.D. MIN.	Ø1.520
I.D. MIN.	Ø.531
OVERALL LENGTH	8.53
TOP THREAD CONNECTION	1.125-16 UN-2B
BOTTOM THREAD CONNECTION	1/2-14 NPT
WORKING PRESSURE	7,500 PSI
WEIGHT (lb)	2.68 lb

ITEM	QTY	DESCRIPTION	PART NUMBER	MATERIAL
1	1	HOUSING	09-01-DF-162-01	9 CHROME
2	1	BOTTOM SUB	09-01-DF-162-08	9 CHROME
3	2	SEALING CAP	18-01-DF-162-01	9 CHROME
4	2	SEAT	18-01-DF-162-02	TEFLON
5	2	BODY	18-01-DF-162-03	9 CHROME
6	2	FLAPPER	18-01-DF-162-04	9 CHROME
7	2	HINGE PIN	18-01-DF-168-05	INCONEL X-750
8	2	SPRING	18-01-DF-168-06	INCONEL X-750
9	2	O-RING	2-119	HSN OR AS REQUIRED
10	1	O-RING	2-121	HSN OR AS REQUIRED



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<b>TOLERANCES</b> .X = +/- 0.030 .XX = +/- 0.015 .XXX = +/- 0.005 <math>\angle</math> = +/- 0.5° Ⓞ = .005 TIR SURFACE FINISH $\sqrt{125}$	THIRD ANGLE PROJECTION ALL DIMENSIONS IN INCHES BREAK SHARP EDGES AND CORNERS 1/64 X 45° UNLESS OTHERWISE NOTED	<b>WEIGHT</b> 2.8 lbmass	<b>MATERIAL</b> AS REQ		<b>TITLE</b> DUAL FLAPPER 1.625" ASSEMBLY DWG # 09-01-DF-162-A0 REV 0	
		SCALE NTS	SHEET 1 of 1			
		DWN HSA	DATE 9/12/2019			
		CHK C.B.	DATE 9/12/2019			

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