



Bar Activated Vent

TC-070-2375-000

TC-070-2375-400

TC-070-2875-000

MAN-TC-070 (R02)

Owen Oil Tools

12001 CR 1000

Godley, Texas, 76044, USA

Phone: +1 (817) 551-0540

Fax: +1 (817) 551-1674

www.corelab.com/owen

Warning: Use of Owen equipment contrary to manufacturer's specifications or operating instructions may result in property damage, serious injury or fatality. If you are not trained in the handling and use of explosive devices, do not attempt to use or assemble any Owen perforating systems or Owen firing devices.

Owen Oil Tools pre-assembles its tools as per the field operating manual. It is the responsibility of the purchaser to insure that this tool is assembled as required, prior to use.

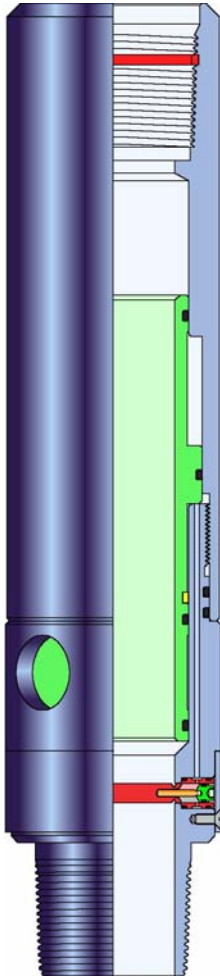
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Bar Activated Vent



Description

The Owen Bar Activated Vent was developed to be the primary underbalance valve in drop bar TCP operations. The tool is designed to operate off annulus hydrostatic pressure and requires a minimum of 500 psi for activation. It operates independently from tubing hydrostatic pressure. The tubing can be completely dry.

Features and Benefits

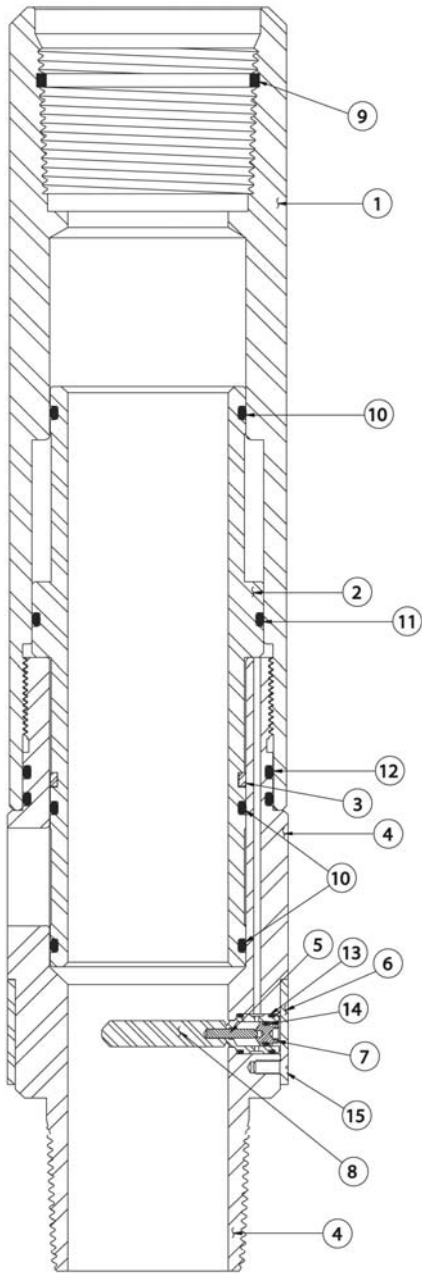
- Underbalance perforating in horizontal wells without a packer
- Pressure balanced when run in hole for improved safety and reliability
- Can be adapted to run as a annulus pressure operated firing head using Owen's Packer By-Pass System.
- Can be run with Owen Bar Activated Vent to open vent when firing.
- Can be utilized with Time Delay fuses to provide time to reduce applied pressures.

Specifications

Item	TC-070-2375-400		TC-070-2375-000	
	O.D.	3.13 in	79 mm	3.68 in
I.D.	1.50 in	38 mm	2.00 in	51 mm
Thread Connection	2-3/8 in EUE		2-3/8 in EUE	
Made-up Length	16.0 in	406 mm	16.0 in	406 mm
Max. Hydrostatic	20,000 psi	137.9 MPa	20,000 psi	137.9 MPa
Max Differential	10,000 psi	68.9 MPa	10,000 psi	68.9 MPa
Min. Hydrostatic	500 psi	3.5 MPa	500 psi	3.5 MPa
Tensile	>P-110			

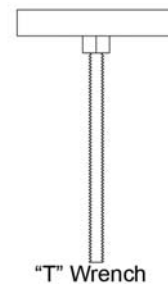
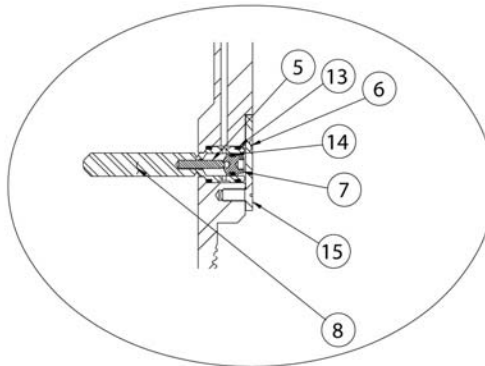
Item	TC-070-2875-000	
O.D.	3.93 in	100 mm
I.D.	2.25 in	57 mm
Thread Connection	2-7/8 in EUE	
Made-up Length	16.0 in	406 mm
Max. Hydrostatic	20,000 psi	137.9 MPa
Max Differential	10,000 psi	68.9 MPa
Min. Hydrostatic	500 psi	3.5 MPa
Tensile	>P-110	

TC-070-2375-000 BOM and Schematic



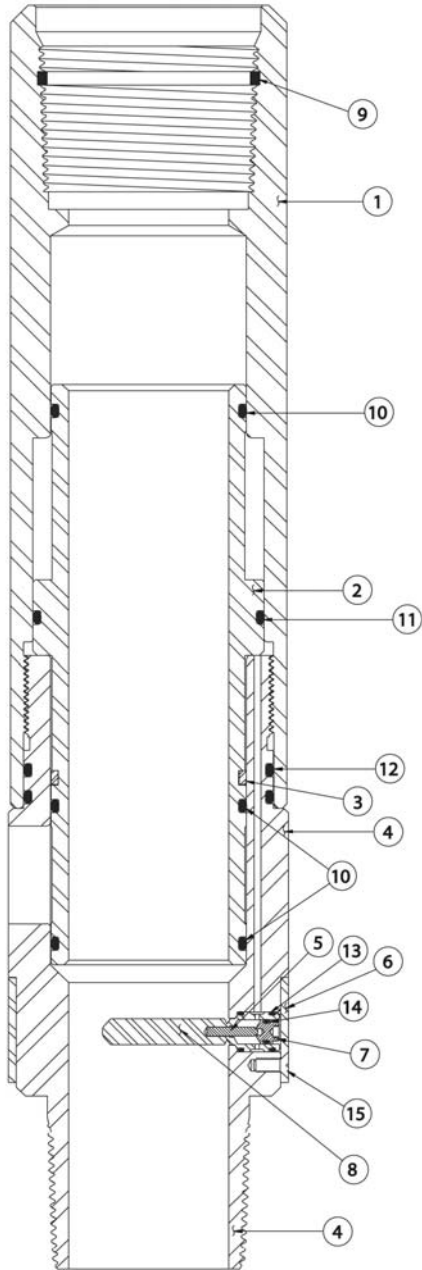
Item	Part No.	Qty	Description
--	TC-070-2375-000	--	Bar Activated Vent Assy. 2.00" I.D.
1	TC-070-0001-000	1	Housing, 2-3/8" Bar Vent
2	TC-070-0002-000	1	Sleeve, 2-3/8" Bar Vent
3	TC-070-0003-000	1	C-Ring, 2-3/8" Bar Vent
4	TC-070-0000-000	1	Coupling, 2-3/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
6	TC-070-0004-000	1	Sleeve Retainer, 2-3/8" Bar
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-000	1	Break Plug
9	MI-305-2375-000	1	ABC Seal Ring - 2-3/8"
10	OOO-N569-228	3	O-Ring, Nitrile - 2.00" I.D.
11	OOO-N569-232	1	O-Ring, Nitrile - 2.00" I.D.
12	OOO-N569-234	2	O-Ring, Nitrile - 2.00" I.D.
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32
--	TC-070-2375-099	--	Redress Kit, 2-3/8" Bar Vent
--	TC-070-2375-199	--	Redress Kit High Temp 2-3/8" Bar Vent
--	MAN-TC-070	--	Operating Manual, Bar Vent

Item	Part No.	Qty	Description
--	TC-070-2375-099	--	Redress Kit, 2-3/8" Bar Vent
3	TC-070-0003-000	1	C-Ring, 2-3/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-000	1	Break Plug
9	MI-305-2375-000	1	ABC Seal Ring - 2-3/8"
10	OOO-N569-228	3	O-Ring, Nitrile - 2.00" I.D.
11	OOO-N569-232	1	O-Ring, Nitrile - 2.00" I.D.
12	OOO-N569-234	2	O-Ring, Nitrile - 2.00" I.D.
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32



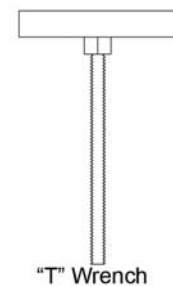
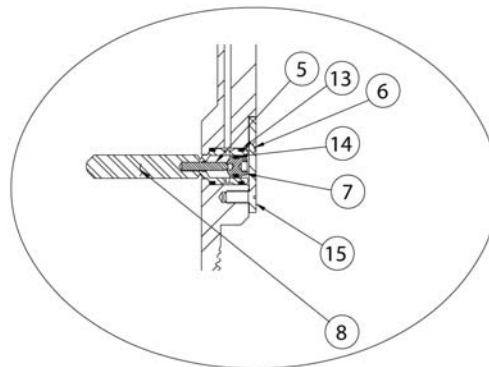
Bar Activated Vent

TC-070-2375-400 BOM and Schematic

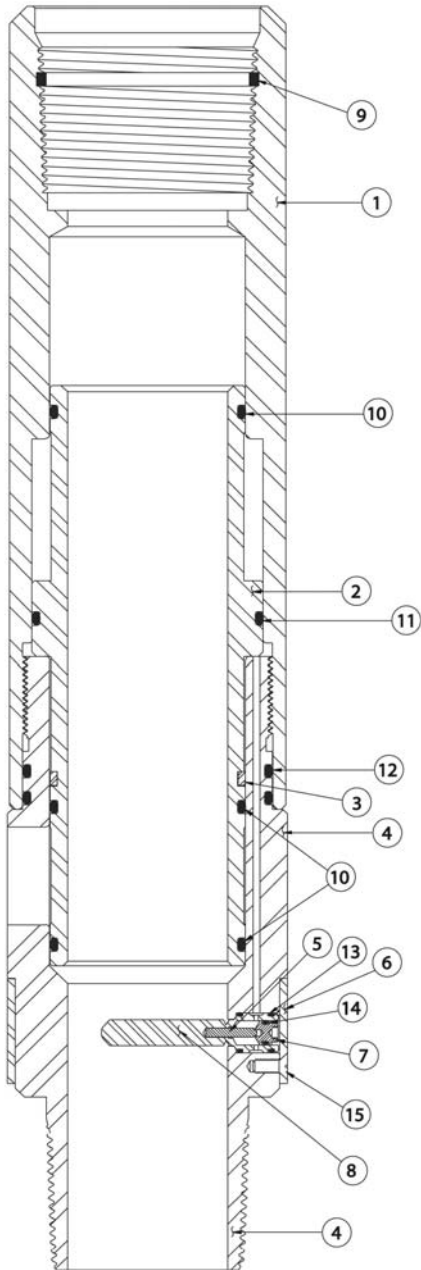


Item	Part No.	Qty	Description
--	TC-070-2375-400	--	Bar Activated Vent Assy;1-1/2 I.D.
1	TC-070-0001-200	1	Housing, 2-3/8" Bar Vent
2	TC-070-0002-200	1	Sleeve, 2-3/8" Bar Vent
3	TC-070-0003-200	1	C-Ring, 2-3/8" Bar Vent
4	TC-070-0000-200	1	Coupling, 2-3/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
6	TC-070-0004-200	1	Sleeve Retainer, 2-3/8" Bar
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-200	1	Break Plug
9	MI-305-2375-000	1	ABC Seal Ring - 2-3/8"
10	OOO-N569-224	3	O-Ring, Nitrile
11	OOO-N569-228	1	O-Ring, Nitrile
12	OOO-N569-230	2	O-Ring, Nitrile
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32
--	TC-070-2375-499	--	Redress Kit, 2-3/8" Bar Vent
--	TC-070-2375-599	--	Redress Kit High Temp - 2-3/8" Bar Vent
	MAN-TC-070		Operating Manual, Bar Vent

Item	Part No.	Qty	Description
--	TC-070-2375-499	--	Redress Kit, 2-3/8" Bar Vent
3	TC-070-0003-200	1	C-Ring, 2-3/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-200	1	Break Plug
9	MI-305-2375-000	1	ABC Seal Ring - 2-3/8"
10	OOO-N569-224	3	O-Ring, Nitrile
11	OOO-N569-228	1	O-Ring, Nitrile
12	OOO-N569-230	2	O-Ring, Nitrile
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32

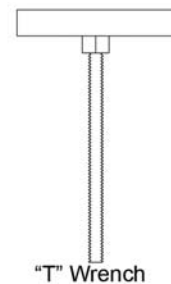
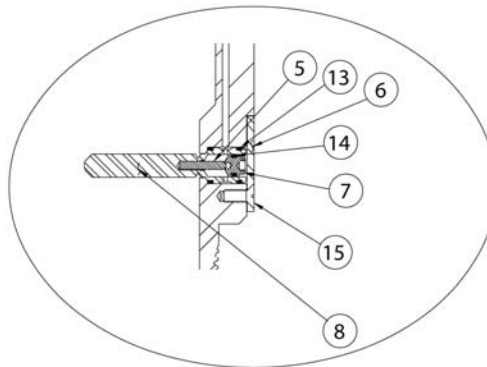


TC-070-2875-000 BOM and Schematic



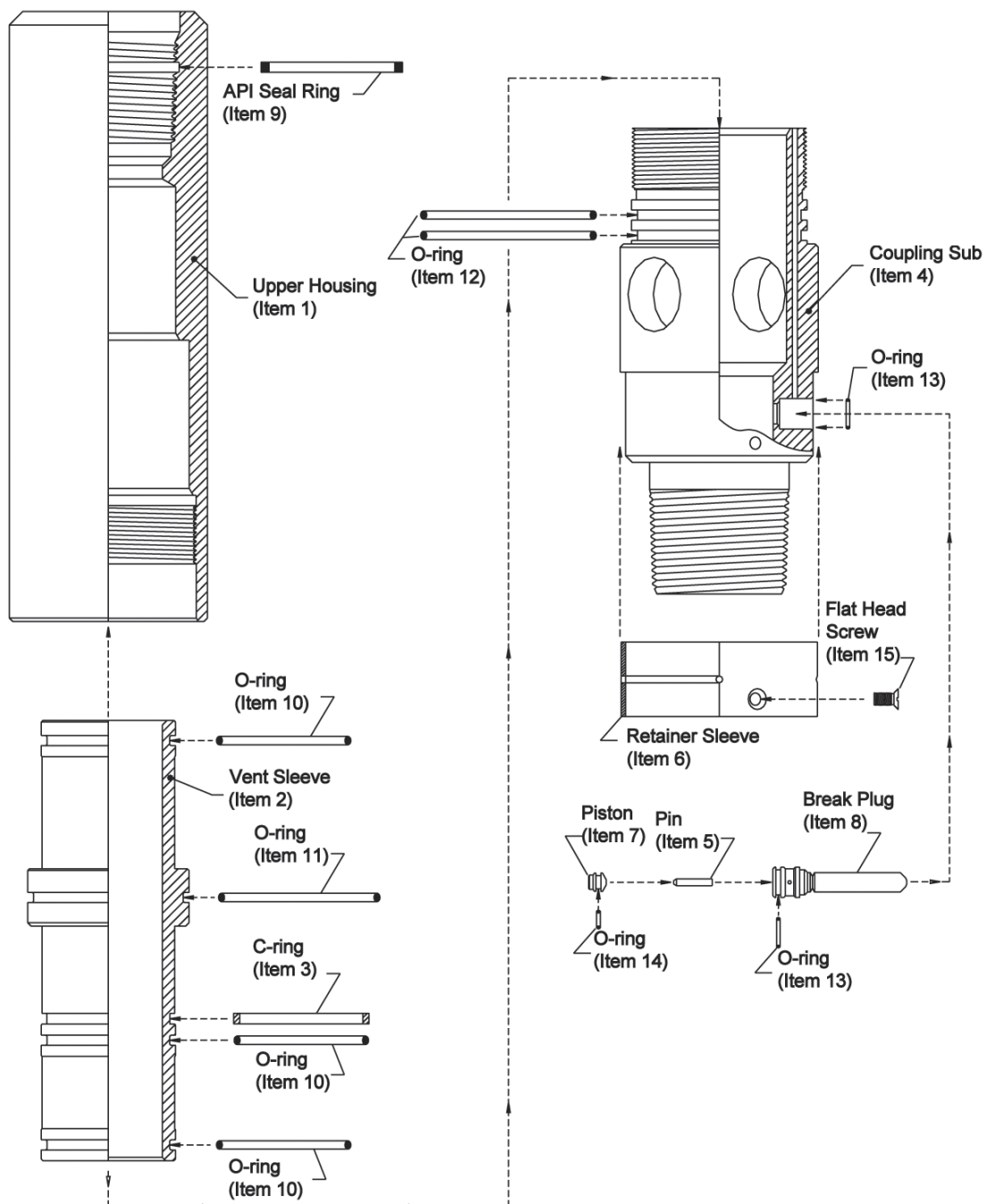
Item	Part No.	Qty	Description
--	TC-070-2875-000	--	Bar Activated Vent Assy; 2.25" I. D.
1	TC-070-0009-000	1	Housing, 2-7/8" Bar Vent
2	TC-070-0010-000	1	Sleeve, 2-7/8" Bar Vent
3	TC-070-0011-000	1	C-Ring, 2-7/8" Bar Vent
4	TC-070-0008-000	1	Coupling, 2-7/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
6	TC-070-0012-000	1	Sleeve Retainer, 2-7/8" Bar Vent
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-000	1	Break Plug
9	MI-305-2875-000	1	ABC Seal Ring - 2-7/8"
10	OOO-N569-230	3	O-Ring, Nitrile
11	OOO-N569-234	1	O-Ring, Nitrile
12	OOO-N569-236	2	O-Ring, Nitrile
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32
--	TC-070-2875-099	--	Redress Kit, 2-7/8" Bar Vent
--	TC-070-2875-199	--	Redress Kit High Temp - 2-7/8" Bar Vent
	MAN-TC-070		Operating Manual, Bar Vent

Item	Part No.	Qty	Description
--	TC-070-2875-099	--	Redress Kit, 2-7/8" Bar Vent
3	TC-070-0011-000	1	C-Ring, 2-7/8" Bar Vent
5	TC-070-0007-000	1	Pin - Break Plug
7	TC-070-0006-000	1	Piston - Break Plug
8	TC-070-0005-000	1	Break Plug
9	MI-305-2875-000	1	ABC Seal Ring - 2-7/8"
10	OOO-N569-230	3	O-Ring, Nitrile
11	OOO-N569-234	1	O-Ring, Nitrile
12	OOO-N569-236	2	O-Ring, Nitrile
13	OOO-N569-013	2	O-Ring, Nitrile
14	OOO-N569-009	1	O-Ring, Nitrile
15	PF-031-019F-038	2	Screw 10-32



Bar Activated Vent

Exploded View





Warning: **Explosives are destructive by nature! Do not attempt to disassemble or alter explosive products in any manner! Do not crush, hammer, pinch, impact, pull wires or abuse any explosive product!**



Warning: **Always be sure to follow safe operating practices as found in API RP-67 in accordance with governmental regulations, company policies and manufacturer's recommendations!**



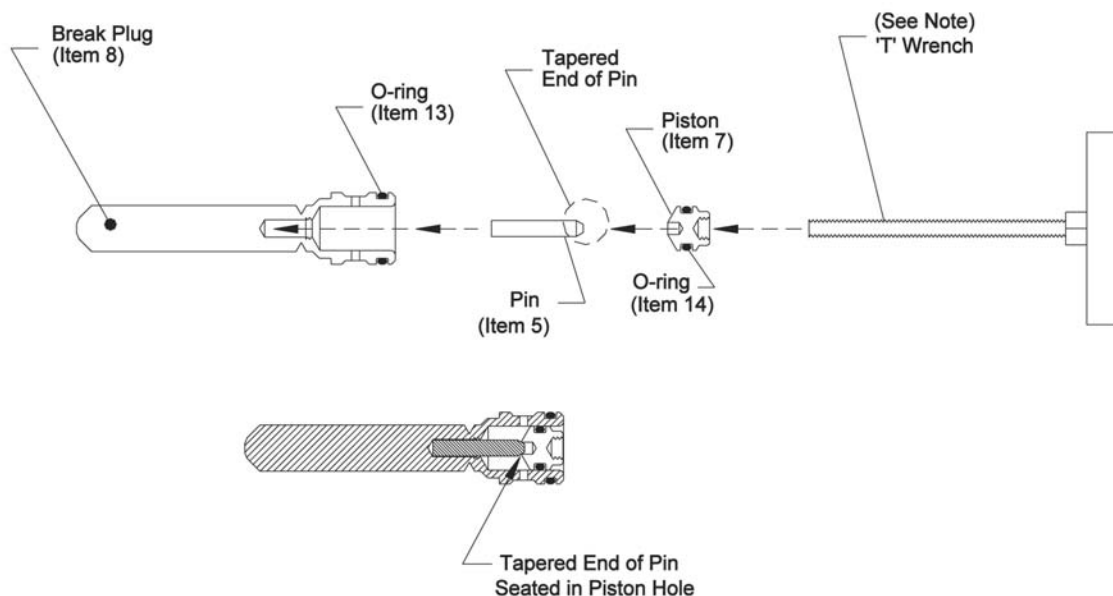
Note: *Before assembly, visually inspect the parts for any defects.*

1.0 Assembly

1.1 Install the O-ring (item #13) in the groove on the Break Plug (item #8) and the O-ring (item #14) on the Piston (item #7). Insert the Pin (item #5), with the taper end facing outward, into the Break Plug. Apply grease to the O-ring on the piston and place into the Break Plug until the taper end of the pin is inserted in small hole on Piston.



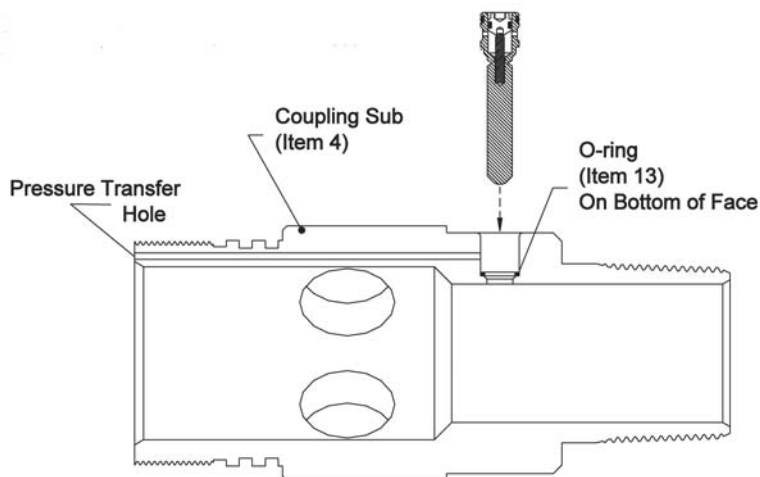
Note: *Use a 'T' Wrench (TC-070-0013-000) or 8-32 threaded bolt for installation of piston into break plug.*



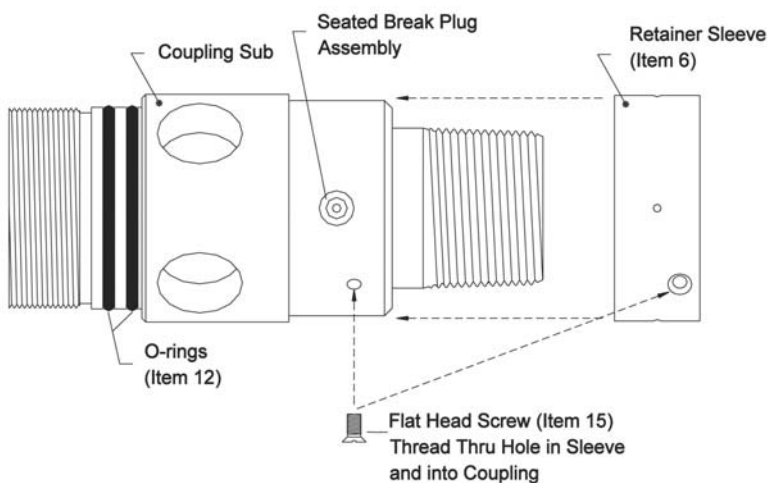
Bar Activated Vent

1.2 Apply grease to the O-ring (item #13) and seat it into the Break Plug port of the Coupling Sub (item #4). Apply grease to the O-ring on the Break Plug, then insert the plug into the port until it is fully seated. If properly seated, the plug should be flush with the surface of the Coupling Sub.

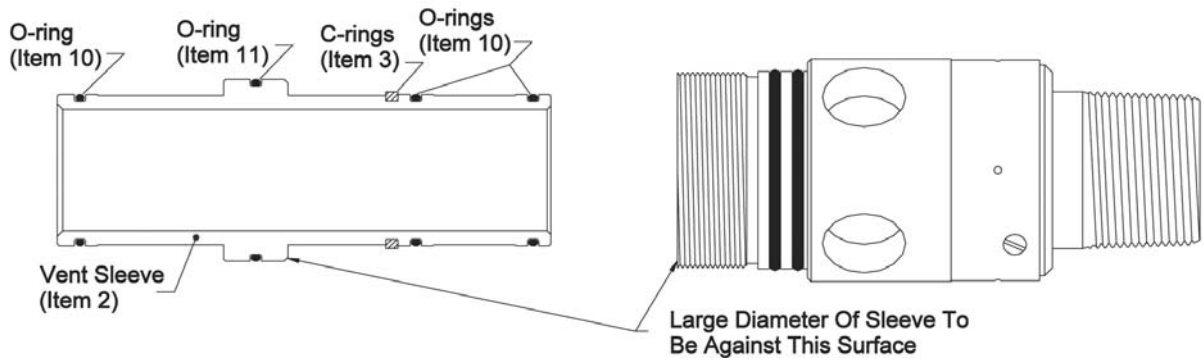
 **Caution: *Be careful not to damage the O-ring in the plug port when inserting the Break Plug!***



1.3 With the Break Plug assembly installed, slide the Retainer Sleeve (item #6) over the Coupling Sub and secure with the Flat Head Screw (item #15). This sleeve retains the Break Plug assembly during tool operation. Install the O-rings (item #12) in the grooves on the Coupling Sub.



1.4 Install the C-ring (item #3) in the correct groove on the Vent Sleeve (item #2). Then install the O-rings (item #10 and #11) in the corresponding grooves on the Vent Sleeve. Apply grease to inside of Coupling Sub and to the O-rings. Insert the sleeve into Coupling Sub. Be careful not to damage the O-rings on coupling ports. During installation, it will be necessary to collapse the C-ring into its groove so that it will fit into the Coupling Sub bore. Make sure that the large diameter of the sleeve is against the edge of the Coupling Sub, as shown below..



1.5 Install the API Seal Ring (item #9) into the groove in EUE thread of the Upper Housing (item #1). Apply grease to the O-rings on the Vent Sleeve and the O-rings and threads of the Coupling Sub. Thread the Upper Housing onto the Coupling Sub and tighten. The Bar Activated vent is now complete.

