

High Pressure Differential Sub Non-Ported

TC-280-2375-XXX

MAN-TC-280-000 (R00)

OWEN OIL TOOLS

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High Pressure Differential Sub Non-Ported

TECHNICAL INFORMATION:



The High Pressure Differential Sub is a tool which may be run in a TCP string or on the bottom of production tubing to maintain a high differential pressure in favor of the annulus (underbalance), while keeping fluid from entering the tubing. This tool features a convex ceramic dome which can withstand high differential pressures of up to 15,000psi imposed by fluid in the tubing-casing annulus.

A Drop Bar released from surface or pressure applied to the tubing is used to shatter the ceramic dome. The instant the dome fragments, a passage is created for reservoir fluids to surge into the tubing after the ceramic dome is broken out.

ADVANTAGES:

- The unique convex ceramic dome allows the tool to withstand a high differential pressure in favor of the annulus.
- High strength and consistent properties of ceramic allow a thin cross-section of the dome, ensuring better shattering properties than glass.

NOTE: When being used as a Pressure Barrier in Snubbing applications, Owen Oil Tools recommends a procedure is in place in the unlikely event the ceramic dome in this tool is compromised.

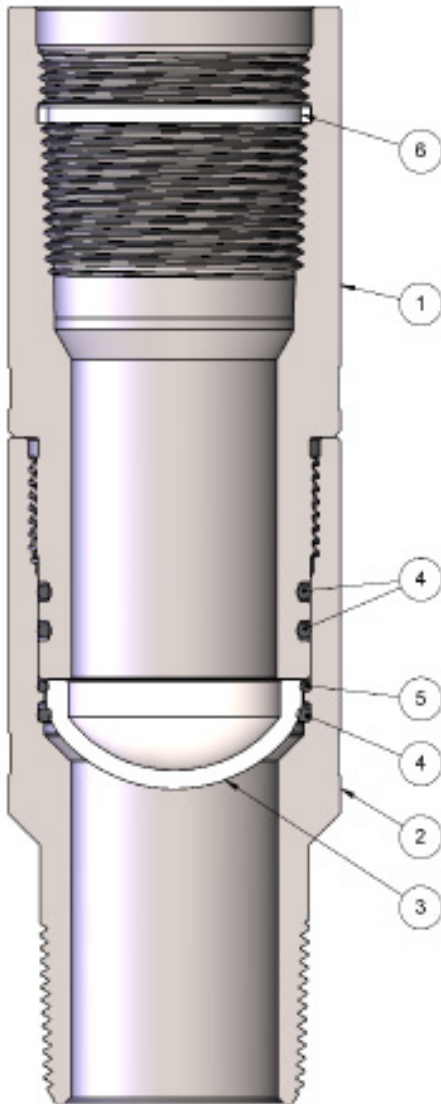
SPECIFICATIONS:

Description	2-3/8" (60.3 MM) EUE			
	Standard		High Temperature	
Maximum OD	3.103 in	78.8 mm	3.103 in	78.8 mm
Minimum ID	1.980 in	50.3 mm	1.980 in	50.3 mm
Overall Length	10.6 in	269 mm	10.6 in	269 mm
Max Pressure ¹	15,000 psi	103.4 MPa	15,000 psi	103.4 MPa
Max Temperature	250°F (121°C)		450°F (230°C)	
Tensile	135,000 lb (60 051 daN)		135,000 lb (60 051 daN)	
Connection	2-3/8" (60.3 mm) EUE		2-3/8" (60.3 mm) EUE	
Part Number	TC-280-2375-000		TC-280-2375-100	
Redress Kit	TC-280-2375-099		TC-280-2375-199	

¹ The maximum pressure from above is 1,000 psi differential.

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TECHNICAL INFORMATION:



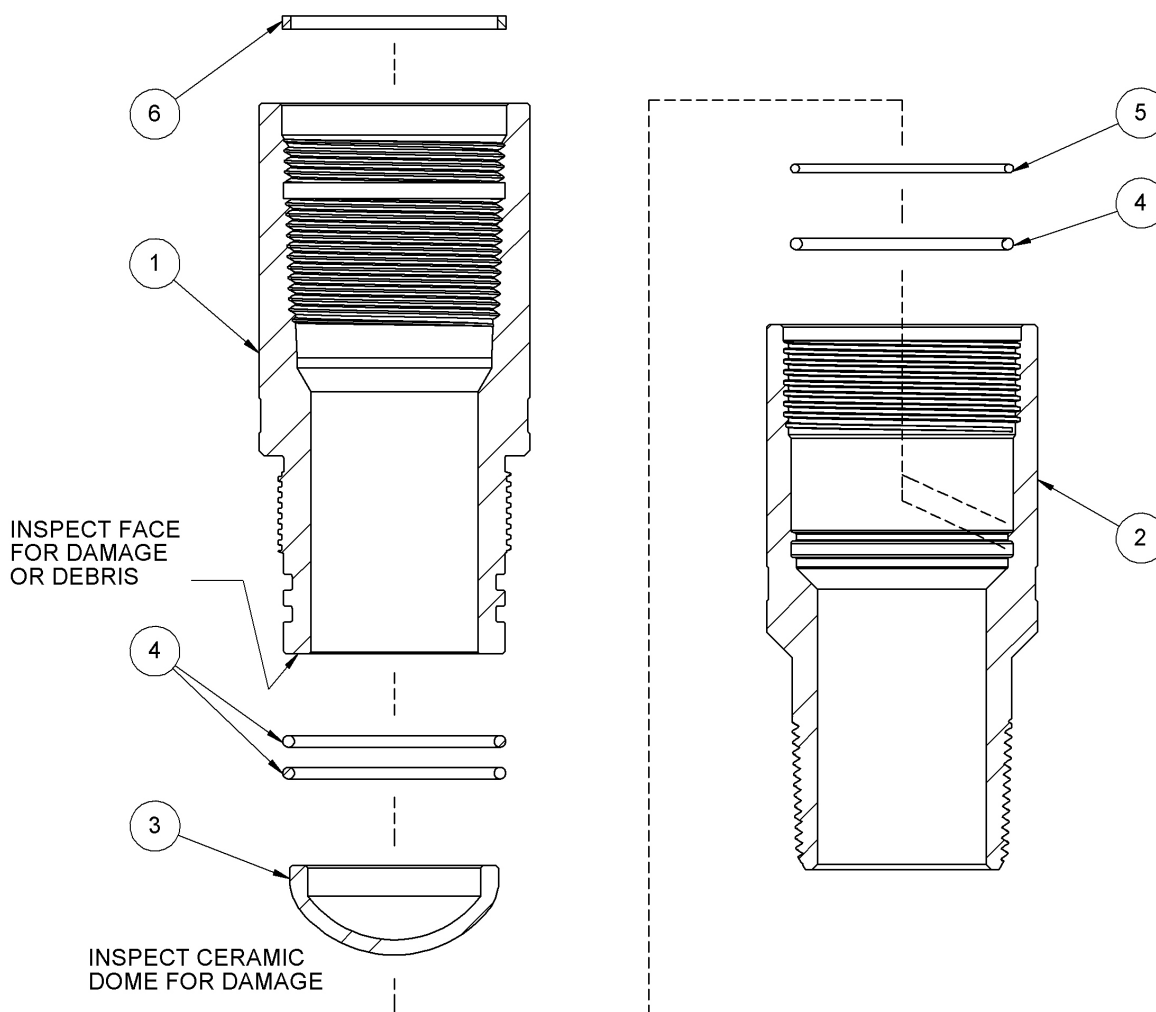
ITEM	PART NUMBER	QTY	DESCRIPTION
--	TC-280-2375-000	--	2-3/8" EU Differential Sub, Non-Ported, 15 ksi
1	TC-280-0001-000	1	High Pressure Top Sub, 2-3/8" EU
2	TC-280-0004-000	1	15 ksi Bottom Sub, 2-3/8" EU
3	TC-081-0002-000	1	Ceramic Dome, 2-3/8" EU
4	OOO-N569-229	3	O-Ring, 90 Durometer Nitrile
5	OOO-N569-143	1	O-Ring, 90 Durometer Nitrile
6	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring
--	TC-280-2375-099	--	Redress Kit, 2-3/8" High Pressure Differential Sub

ITEM	PART NUMBER	QTY	DESCRIPTION
--	TC-280-2375-100	--	2-3/8" EU Differential Sub, Non-Ported, 15 ksi, HT
1	TC-280-0001-000	1	High Pressure Top Sub, 2-3/8" EU
2	TC-280-0004-000	1	15 ksi Bottom Sub, 2-3/8" EU
3	TC-081-0002-000	1	Ceramic Dome, 2-3/8" EU
4	OOO-V569-229	3	O-Ring, 90 Durometer Viton
5	OOO-V569-143	1	O-Ring, 90 Durometer Viton
6	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring
--	TC-280-2375-199	--	Redress Kit, 2-3/8" High Pressure Differential Sub, HT

ITEM	PART NUMBER	QTY	DESCRIPTION
--	TC-280-2375-099	--	Redress Kit, 2-3/8" 15 ksi Differential Sub
1	TC-081-0002-000	1	Ceramic Dome, 2-3/8" EU
2	OOO-N569-229	3	O-Ring, 90 Durometer Nitrile
3	OOO-N569-143	1	O-Ring, 90 Durometer Nitrile
4	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring

ITEM	PART NUMBER	QTY	DESCRIPTION
--	TC-280-2375-199	--	Redress Kit, 2-3/8" 15 ksi Differential Sub, HT
1	TC-081-0002-000	1	Ceramic Dome, 2-3/8" EU
2	OOO-V569-229	3	O-Ring, 90 Durometer Viton
3	OOO-V569-143	1	O-Ring, 90 Durometer Viton
3	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring

Exploded View



1. Inspect the top sub (Item 1) for any debris or damage on the outer face adjacent to the O-Ring grooves.
2. Lightly grease the O-Rings (Item 4) and install two on the top sub (Item 1) and one into the bottom sub groove (Item 2).
3. Lightly grease the O-Ring (Item 5) and install on the shoulder inside the bottom sub.
4. Set the top sub on a table so the pin thread is pointing up. Inspect the ceramic dome (Item 3) for and debris or cracks before carefully placing it on the outer face of the top sub.
5. Thread the bottom sub onto the top sub and tighten.
6. Install the seal ring (Item 6) into the EU threads of the top sub.