



Model: MPD-READY

Serial #: All

Feb. 22, 2019

Product Bulletin # MPD-002

Alert



Replacing DP Transmitter Flange Gasket

Field tests have revealed that alloy gaskets out-perform the current Aramid gasket on MPD-Ready systems. To avoid critical failure, Canrig recommends replacing the Aramid gasket (a green, fibrous paper-like gasket) with an alloy gasket immediately. This bulletin describes the process to replace the gasket for both flange locations (HI and LO) for one dpDensity spool. Each MPD-READY® system has two spools for a total of 4 flange locations. Contact RigLine 24/7™ Support for more information.

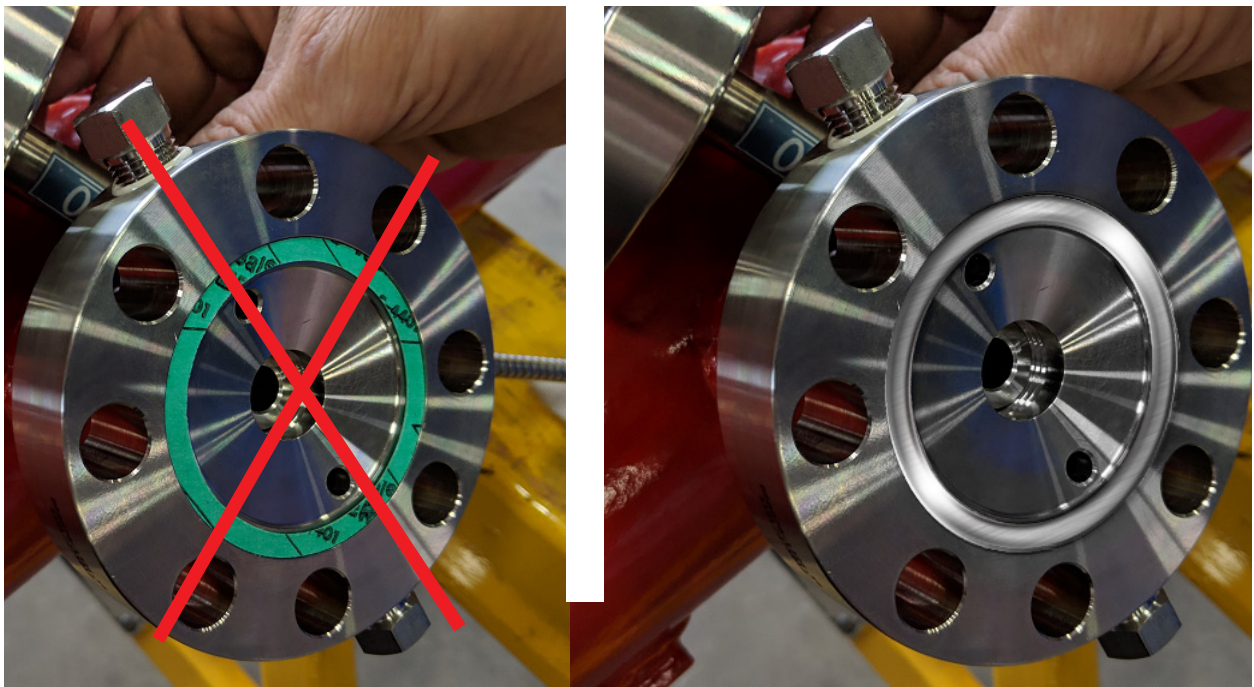


Figure 1: DP Transmitter Flange with Aramid gasket (left, replace) and alloy gasket (right)

Precautions

If the rework is performed on site, ensure that there is no internal pressure in the spool, and that all drilling mud is drained from the spool before beginning disassembly process.



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Disassembly Procedure

Refer to pages 5 and 6 in conjunction with the disassembly and assembly procedure.

1. Undo all zip ties (item 9) securing the capillaries (Item 1E) and pigtail (Item 8) to the support cage (Item 7).
2. Remove the attaching hardware and support cage (Item 7).
3. If the repair is performed on a rig site, remove one 1/4" NPT Plug (Item 5) at the HI location to ensure that there is no internal pressure present, and that all residual drilling mud is drained from the Spool.



Warning!

Prepare for containing a large amount of drilling mud to prevent a spill.



Note

The spool is installed in the vertical orientation and **the HI location should be the closest to the ground.**

4. Remove Nuts (Items 1G) and bolts (Items 1F) from the Upper RTW flange (Item 1B) at the HI location.
5. Separate the upper flange (Item 1B) from the lower flange (Item 1C) at the HI location and suitably secure the capillary (Item 1E).
6. Remove the existing Aramid gasket (Item 1D), and clean the sealing surfaces on both the upper flange (item 1B) and lower flange (Item 1C).
7. Verify that the inlet nipple (item 4) is free from any mud residue or blockages.
8. Repeat Steps 4-7 for the LO location. Note:



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Note

The spool is installed in the vertical orientation and **the LO location should be the *furthest* from the ground.**

Assembly Instructions

1. If the repair is performed on a rig site, re-install the one 1/4" NPT Plug (Item 5) at the HI location, using sealant (Item 10).
2. Verify that the sealing surfaces of both the upper flanges (Item 1B) and lower flanges (Item 1C) are free from dirt or debris.
3. Verify Gasket (Item D) is alloy 400 material. Use only Canrig Part Number N11376-04.
4. Straighten out the Capillary (Item 1E) for the HI location and verify that there are no kinks or twists.
5. Place the Gasket (Item 1D) into the groove of the Lower Flange Housing (Item 1C).
6. Place the Upper Remote Seal Flange (Item 1B) for the HI location on top of the Gasket (Item 1D) in the Lower Housing Flange (Item 1C). Ensure proper alignment with the Lower Housing Groove to prevent pinching the Gasket (Item 1D).
7. Install Bolts (Item 1F) and Nuts (Items 1G) at the HI location and tighten by hand.
8. Use a torque wrench on the Nuts (Items 1G), and tighten the assembly in a cross-pattern to ensure even installation. The Lower Flange Housing includes a small hole designed to facilitate this process and to obtain the required torque level as follows:
 - a. Starting at any position, tighten nut to 30 ft-lb, and then move clockwise skipping two nuts each time until all nuts have been tightened.



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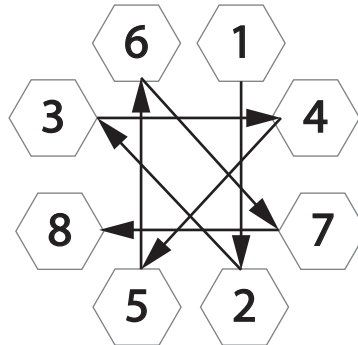


Figure 2: Torque Pattern

- b. Check the flange gap for uniformity, and then tighten in the same sequence as in Figure 2 to 70 ft-lb.
 - c. Check the flange gap for uniformity, and then continue to tighten in the same sequence as in Figure 2 to 105 ft-lb.
 - d. Time permitting, wait a minimum of four hours and repeat the torque pattern and torque again to 105 ft-lb to restore any short-term creep/relaxation in the connection.
9. Repeat steps 4 – 8 for the LO location.
 10. Install the Support Cage (Item 7) using suitable hardware. Refer to the next higher level assembly for details.
 11. Position the Pigtail (Item 8) towards the end of the Spool (Item 6). Refer to the next higher level assembly for details.
 12. Zip tie (Item 9), the Pigtail (Item 8) and Capillaries (Item 1E) to the support bar of the Cage (Item 7).



Engineering Bill of Material

Part: AY23222
Description: ASSY,TRANSM, D PRESS, 10K EX IS 1/2" NPT
BoM Descr:

Eng ID: 0
Drawing ID: AY23222 **Rev No:** 01

Level	Piece No	Item (Ref) No	Qty	Usage Units	Part ID	Eng ID	Description
1	30	03	1.00	EA	E17449		PLUG, 1/2IN NPT, Exd, Exe, BRASS
1	40	04	2.00	EA	H13860		NIPPLE 1/2IN NPTM-1/2IN NPTM 15K
1	50	05	4.00	EA	H14029		PLUG, 1/4 NPTM, 15K
1	60	10	0.10	EA	TK1-51		SEAL, PIPE, C/W TEFLON, 50ML
1	70	09	30.00	EA	E03-2000-010		CABLE TIE, 13.4 IN LG, 120 LB
1	90	11	0.00	EA	ES10357		SCHEMATICS, MPD-READY KIT, OFF SKID
1	10	01	1.00	EA	N11376		TRANSM, D PRESS REM, 10K EX IS 1/2" NPT
1	20	08	1.00	EA	AY23683-010		CABLE, PIGTAIL, PLUG 6 PIN, 3TP SHD 10FT
1	30	02	1.00	EA	E14252		GLAND, CABLE, 1/2 NPT, 0.28-0.47 IN, Exe

