

ISSUE DATE 7/20/15		INSTALLATION & MAINTENANCE INSTRUCTIONS	PRODUCT BULLETIN SW-PB-100
INITIAL REL. DATE 7/24/15			REVISION LEVEL B
SUBJECT: 4476A VALVE COVER CONVERSION			PAGE 1 OF 5

1.0 Description of Affected Products

4476A Valve Cover Conversion

2.0 Issue (Installation & Maintenance Instructions)

INSTALLATION:

1. Remove Original valve cover plug, seal, flange, and studs.
2. Tap existing tell-tale hole with ¼"-18 NPT and install ¼"-18 NPT pipe plug.
3. Clean stud holes and packing shoulders.
4. Lubricate thread of studs (part no. 4015-54) and install with taper end into the module torque to 1000 lb-ft.
5. Place flange (part no.4476) with mill slot facing down to the module and with slot opposite the gear end.
6. *Torque nuts on flange to 2200 lb-ft in the sequence shown in Figure 1. Then re-torque using same sequence to 2400 lb-ft. (note: when using a high quality grease, the torque values should be reduced to 1900 lb-ft and 2040 lb-ft respectfully.)
7. Place adapter ring (part no. 4676-1) into the seal area as shown in Figure 2.
8. Place seal (part no. P-107) with small end of taper upward as shown in Figure 2. The seal should be stretched to remain snug in bore of pump as some shrinkage may occur while in stock. Grease lightly before installing.
9. Remove and rust preventative from plug (part 4676).
10. Place plug (part no. 4676) with valve guide into position shown Figure2 after installing valve seat, valve, and valve spring.
11. Screw in gland (part no. 4597) as shown and hammer up tightly.
12. Run pumps to observe and movement in valve cover that may take place.
13. If Movement occurs, hammer up gland until movement is observed.

MAINTENANCE:

1. Each assembly (4476A) should be checked daily to detect any movement. If any movement is noted, the screw gland (part no. 4597) should be hammered up tightly until no movement is observed during operation. Also, the pipe plug for the original tell-tale hole should be checked for leakage. If any leakage is observed, the pump should be taken off line and the pipe plug removed. The tell-tale hole should be retapped, cleaned, and a new pipe plug installed.
2. Once a month the screw gland and plug (part no. 4676) should be removed for inspection.
 - Monthly inspection is a simple visual inspection to find any abnormal wear pattern. The threads of the screw gland and the flange (part no. 4476) should be observed to find any cracks or abnormal wear evident to the naked eye. If abnormal wear or cracks are found, the part should either be reworked to meet original specifications of Southwest Oilfield Products or replaced altogether.
 - The plug should be visually inspected to see if any wear is noted around the seal area (this is the taper at the shoulder of the plug). Again, if any wear is noted, the plug should either be reworked or replaced.
 - The bottom face (the face that contacts the top of the plug) of the screw gland as well as the top of the plug should be checked for wear. If any wear is detected, the face should be machined to maintain a flat and perpendicular surface.
3. Every six months the nuts for studs (part no. 4015-54) should be re-torqued according to number 6 of Installation Instructions for 4476A Valve Cover Conversion

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4. Once a year the complete assembly should be removed and given a thorough inspection.

- Yearly inspection includes checking the threads of the gland (part no. 4597) and flange (part no. 4476) using dye check type crack detection. If any cracks are detected, the part should either be reworked or replaced.
- The plug and gland should be inspected for abnormal wear in the same manner as monthly inspection.
- The studs (part no. 4015-54) should be observed to note any corrosion pitting or scarring on the surface of the stud. If pitting or scarring is noted, the stud should be replaced. The thread of the stud should also be inspected for galling. If any galling is noted, the stud should be replaced.
- The studs should be retorqued according to Installation Instructions for 4476A Valve Cover Conversion.

5. Every two years the assembly should be removed for inspection (same as yearly inspection for flange, gland, and plug) and the studs replaced. The studs should be torqued according to Installation Instructions for 4476A Valve Cover Conversion.

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SOUTHWEST

OILFIELD PRODUCTS

**INSTALLATION
& MAINTENANCE
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PRODUCT BULLETIN
SW-PB-100

REVISION LEVEL
B

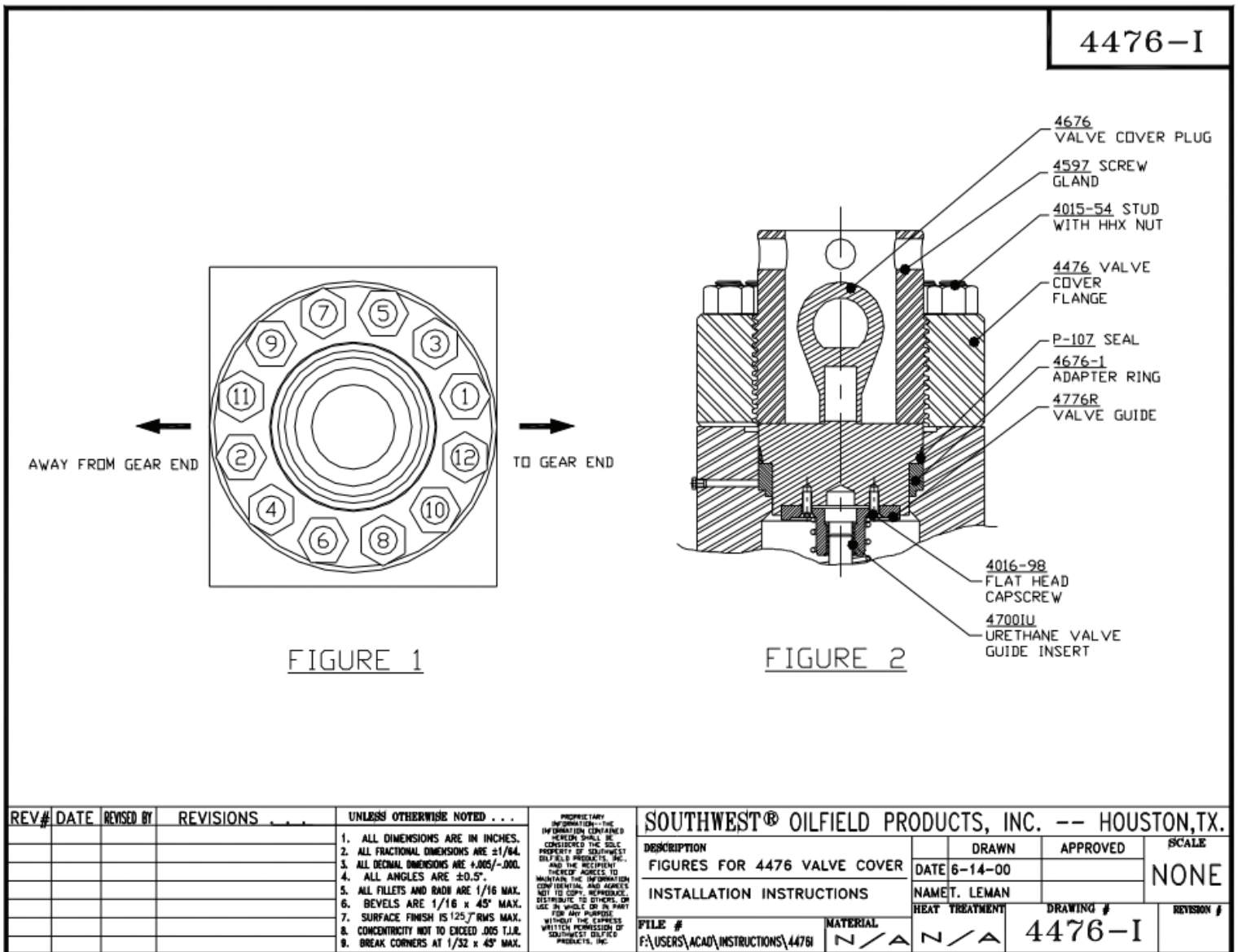
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3.0 Fix (N/A)

4.0 Action(s) (N/A)

5.0 Drawing References - 4476-I (Rev-0)



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6.0 REVISION HISTORY

REV	ECN	DESCRIPTION	CREATED BY:	DATE:	CHECKED BY:	DATE:	APPROVED BY:	DATE:
A		INITIAL RELEASE	EF	3/30/10	JK	3/30/10	EF	3/30/10
B		UPDATED TO NEW FORMAT	MG	7/20/15	JM	7/24/15	EF	7/24/15