UNITED TECHNOLOGIES CARRIER — Commercial Division, Carrier Corporation	BULLETIN: CA-SB-17-70-15 DATE: 7/24/70 PAGE: 1 OF: 6
SERVICE BULLETIN SUBJECT: EXTERNAL OIL PRESSURE REGULATOR, PART NO. 17MA41-1822	SUPERSEDE BULLETIN: DATE: PAGE: OF:

PURPOSE

To advise how to replace an internal regulator with an external regulator and how to modify the external regulator if required.

MACHINES AFFECTED

17M,P,S compressors shipped before March 1970.
17M,P,S compressors shipped after March 1970 and all 17MA,PA,SA compressors.

PROCEDURE

Converting from an internal to external regulator: To replace the internal oil pressure regulator in the older 17M,P,S compressors, several alterations are required (Figures 1 and 3). The flange weld assembly (Figure 2) and all external piping must be field fabricated. A suggested Bill of Materials is also included as part of Figure 3.

Setting the external regulator, Part No. 17MA41-1822: Turn in adjustment screw on the compressor oil pressure regulating valve approximately halfway of full travel. Turn on oil pump and adjust the auxiliary oil pump regulator to 30 PSID (seal housing minus reservoir pressure). Adjust compressor oil regulating valve to obtain 25 PSID (seal housing minus reservoir pressure). Re-adjust auxiliary oil pump regulator to obtain 18 PSID (seal housing minus reservoir pressure). Start machine and observe seal housing-to-reservoir pressure differential. Differential must be within 22 to 27 PSID. If required, trim adjustment of the compressor oil regulating valve until the correct differential is attained.

> NOTE: If difficulty is experienced in attaining the correct pressure differential by adjusting the compressor oil regulating valve, the following steps must be accomplished to check the valve power disc assembly and to check for spring interference:

Remove the compressor oil regulating valve. Remove the upper spring housing and check for clearance between the pressure adjust spring and the 1/4" flare connector (Figure 4). Remove the metal diaphragm and valve bonnet. Check for a 3/64" orifice in the power disc (Figure 5). If orifice is missing, further disassemble valve and remove the power disc and stem assembly. Drill orifice as shown in Figure 5. Assemble regulating valve and re-install. Re-set compressor oil pressure regulating valve.

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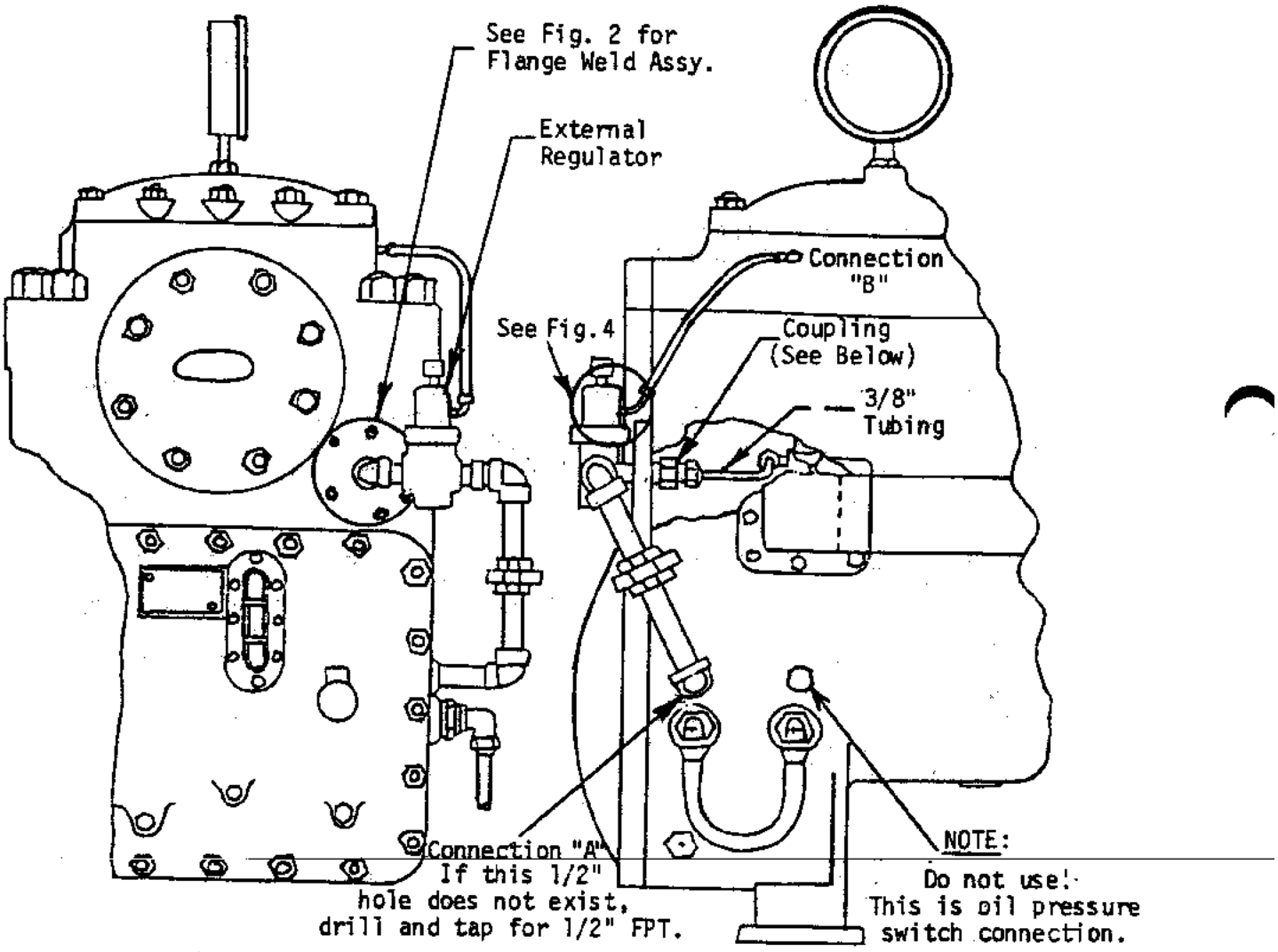

Coupling: 3/8" male flare to 1/2" FPT.
Use 1/2" steel pipe for external piping.

Fig. 1. Regulator Part No. 17MA41-1822

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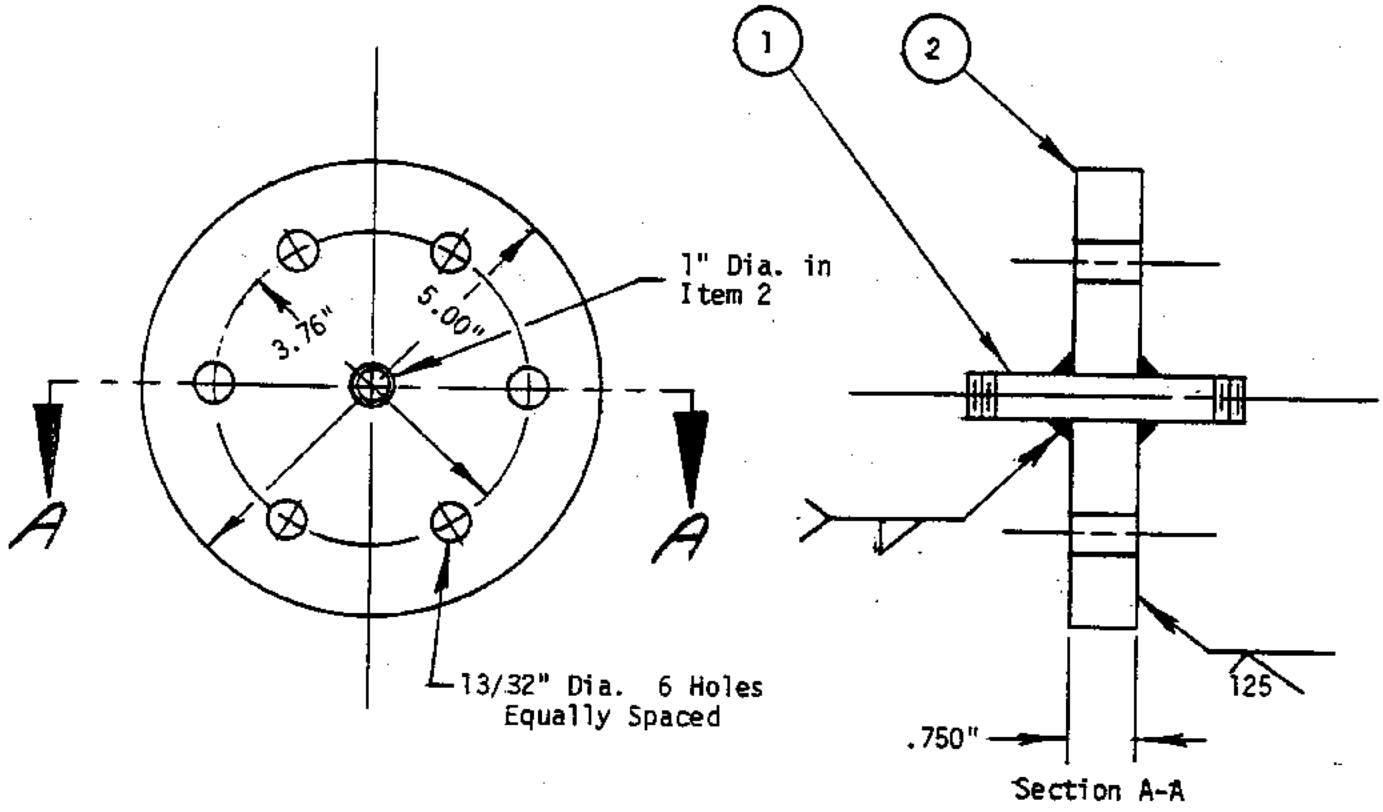
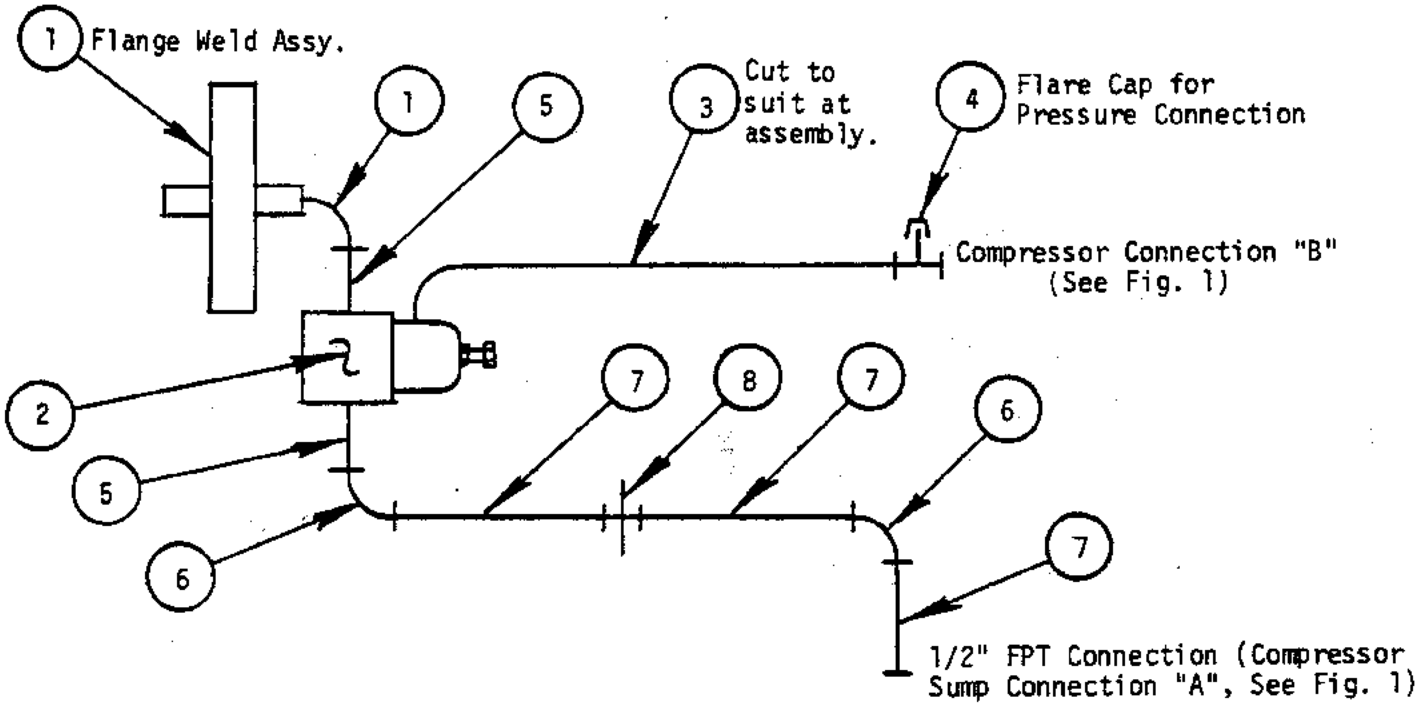


Item	Description
1	Nipple, 1/2" x 3" Long (Extra Heavy Wall, Sched. 80)
2	Flange, Nominal .750 H.R. Steel Plate Stock (See Note)

NOTE: Skim cut .750 stock to true-up and finish.

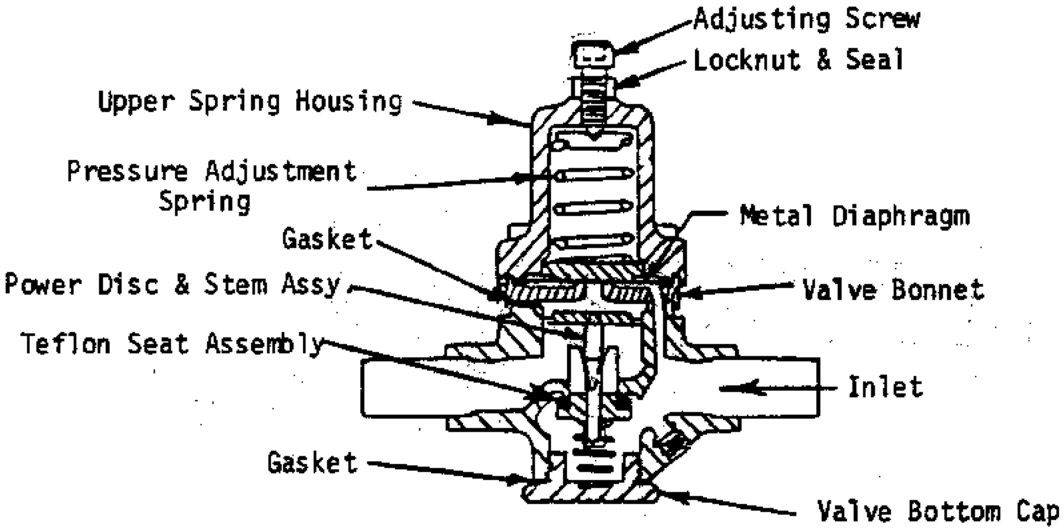
Fig. 2. Flange Weld Assembly



Suggested Bill of Materials

Item	Description	Part Number
1	Street Ell, 1/2" Pipe	Purchase Locally
2	Differential Regulator	17MA41-1822
3	1/4" O.D. Copper Tubing & 2 Flare Nuts	Purchase Locally
4	Tee, 1/4" Flare to 1/4" MPT to 1/4" Flare 1/4" Flare Cap	" "
5	Nipple, 1/2" Pipe	" "
6	Elbow, 1/2" Pipe	" "
7	1/2" Pipe, cut to suit at assembly	" "
8	Union, 1/2" Pipe	" "
9	Flange Weld Assembly	See Fig. 2

Fig. 3. Suggested Piping for Adding External Oil Regulator


Adjusting Screw
Locknut & Seal
Upper Spring Housing
Pressure Adjustment Spring
Metal Diaphragm
Gasket
Power Disc & Stem Assy
Valve Bonnet
Teflon Seat Assembly
Inlet
Gasket
Valve Bottom Cap

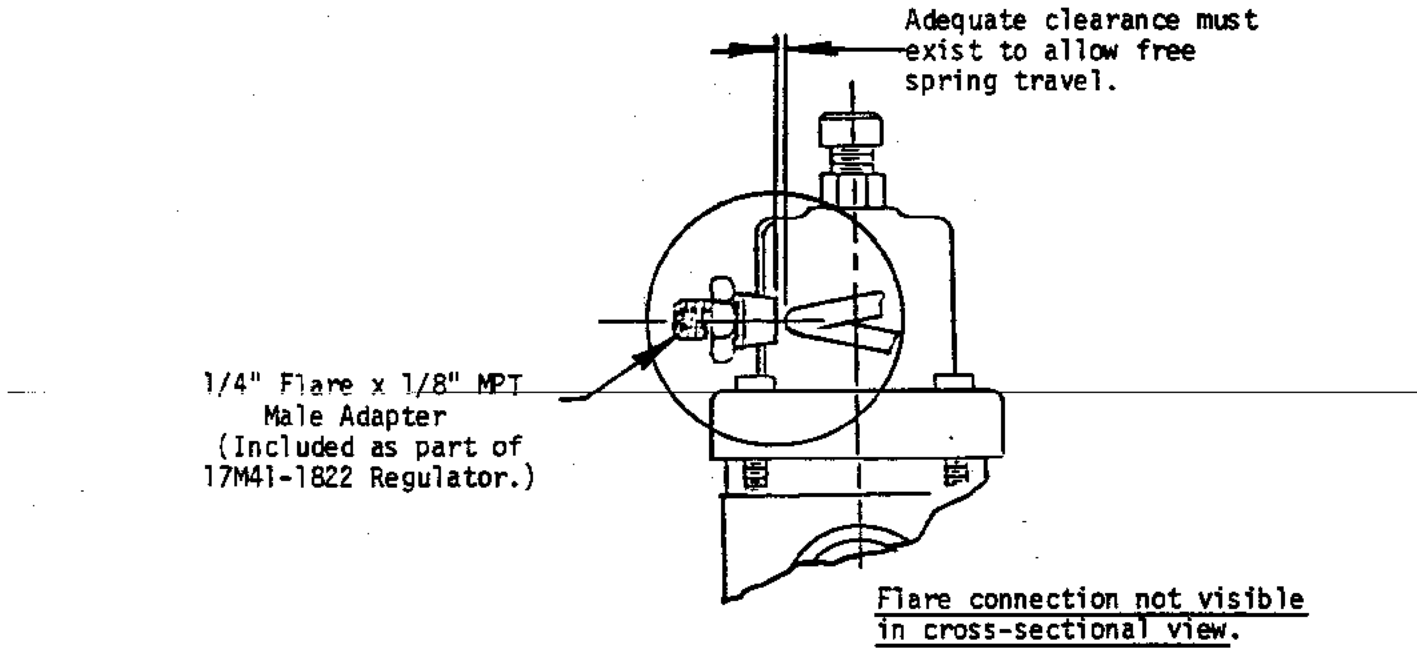

Adequate clearance must exist to allow free spring travel.
1/4" Flare x 1/8" MPT Male Adapter (Included as part of 17M41-1822 Regulator.)
Flare connection not visible in cross-sectional view.

Figure 4

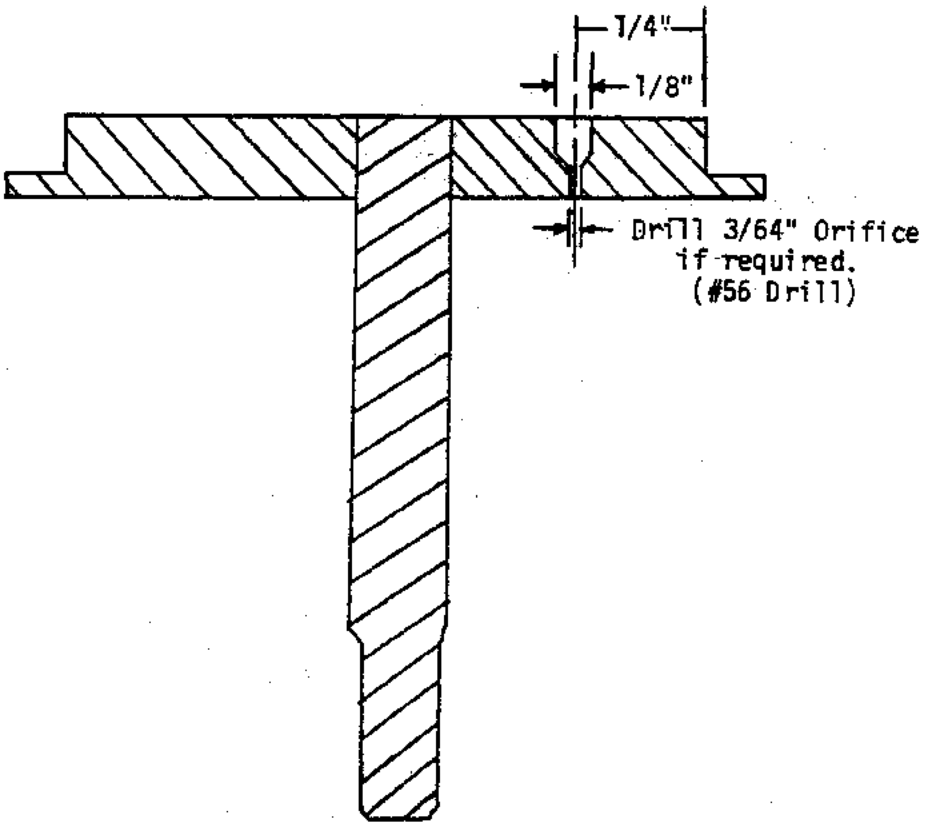


Fig. 5. Power Disc and Stem Assembly