UNITED TECHNOLOGIES CARRIER

SERVICE BULLETIN

Title: 19FA MOTOR COOLING

Number: C8816
Date: 12/12/88
Supersedes:
Date:

Models Affected: 19FA MACHINES WITH COPPER BAR ROTORS

PURPOSE

This bulletin describes the motor cooling line modification that must be made when a 19FA compressor is field retrofitted with a Copper Bar Rotor.

BACKGROUND

When a 19FA 4 size or 5 size compressor is field retrofitted with a Copper Bar Rotor it will be also required to make a modification to the motor cooling line to restrict the refrigerant flow to the compressor. The present motor cooling line provides more than enough refrigerant to cool the motor. In the new Copper Bar Rotor the bars are external to the rotor end ring. They can act like "paddlewheels" if the refrigerant level is high in the motor housing. This can lead to motor vibration and raise the motor power. Restricting the refrigerant flow to the motor eliminates this possibilty.

PROCEDURE

A bypass orifice and valve should be installed as shown figure 1. The orifice is a hole drilled in a 5/8 flare cap. The orifice size is as follows:

4 Size Compressor.... 1/4 inch

5 Size Compressor.... 3/8 inch

The valve should be rated for a minimum of 225 psig. A preferred valve would be a 3/4" Jamesbury "Clincher" ball valve with teflon seats and seals. (Jamesbury part no. 21-11 00 TT). The valve is left in the closed position with the handle removed. It would only be opened in an emergency if the orifice were to get plugged.

ATTACHMENT (Figure 1)

MAIL KEYS: 2.33B, 2.33D, 2.40B, 2.45, 2.53, 5.14A & 5.14B

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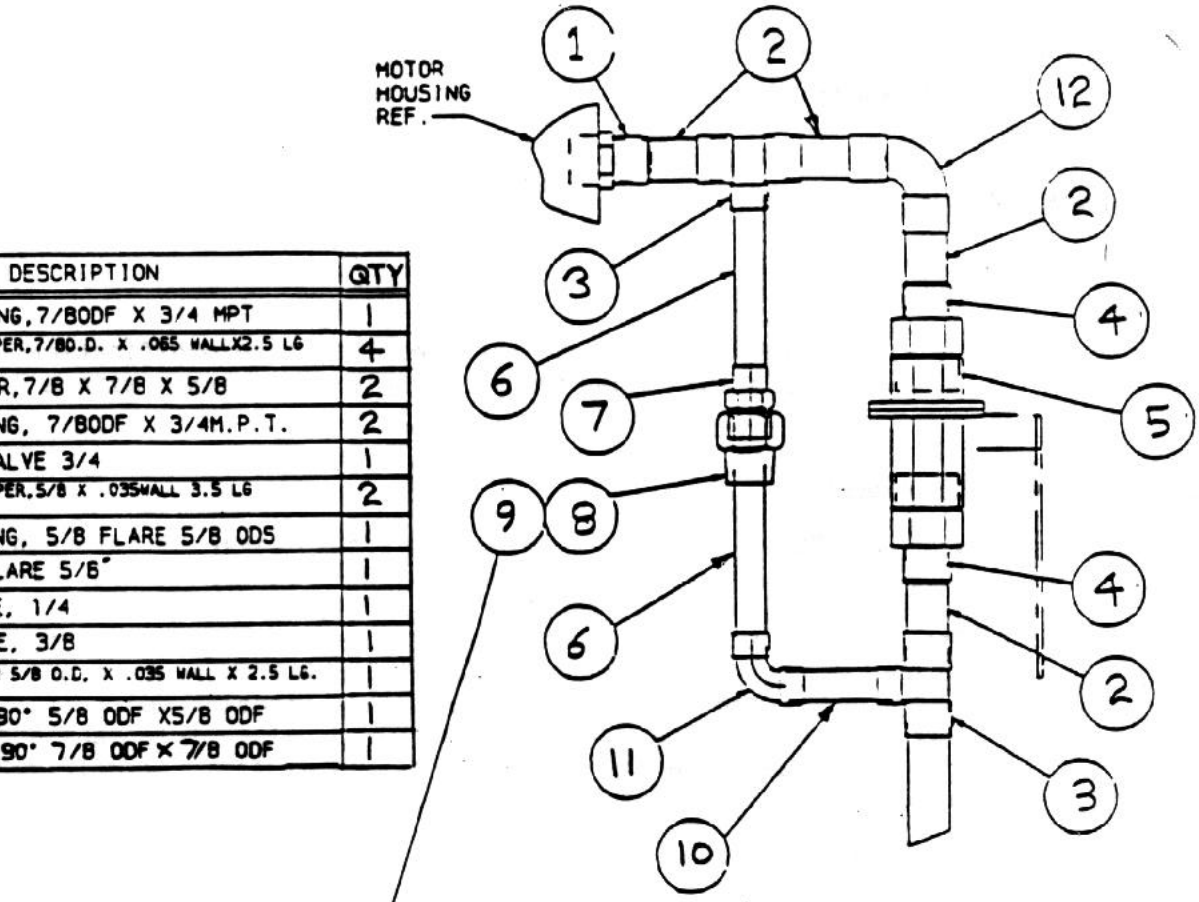
Approved By: James Curry

Item	DESCRIPTION	QTY
1	COUPLING, 7/8ODF X 3/4 MPT	1
2	TUBE COPPER, 7/8 O.D. X .065 WALL X 2.5 LG	4
3	TEE, COPPER, 7/8 X 7/8 X 5/8	2
4	COUPLING, 7/8ODF X 3/4M.P.T.	2
5	BALL VALVE 3/4	1
6	TUBE, COPPER, 5/8 X .035 WALL 3.5 LG	2
7	COUPLING, 5/8 FLARE 5/8 ODS	1
8	NUT, FLARE 5/8"	1
-9-	ORIFICE, 1/4	1
	ORIFICE, 3/8	1
10	TUBE, COPPER 5/8 O.D. X .035 WALL X 2.5 LG.	1
11	ELBOW, 90° 5/8 ODF X5/8 ODF	1
12	ELBOW, 90° 7/8 ODF X 7/8 ODF	1



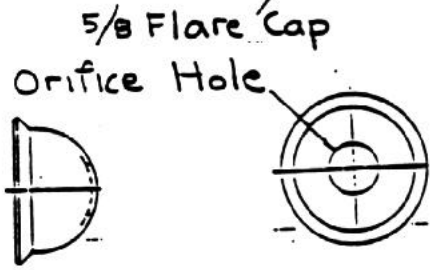


Figure 1

19FA Bypass Orifice