Interoffice Letter

17 & 19 SERIES SERVICE ENGINEERS (A)

REGIONAL SERVICE MANAGERS (A)

MR. DAVE BUTTERMORE	COLLEGE PLACE	(B)
MR. JACK CAHILL	TR-1	(B)
MR. BILL GROTH	TR-20	(B)
MR. W. H. GUNTHER	TR-1	(B)
MR. ALAN JOHNSON	TR-1	(B)
MR. BOB KUHRY	TR-20	(B)
MR. MERRILL LEWIS	TR-1	(B)
MR. TED LIBERA	TR-1	(B)
MR. C. D. MILLER	TR-1	(B)
MR. LEE MOUNT	TR-1	(B)
MR. O. P. TEN EYCK	TR-1	(B)

Date: JUNE 30, 1975

From: RICHARD B. GROSS

Office: MSD SERVICE ENGINEERING - SYRACUSE

Subject: 19DG MOTOR COOLING PROBLEM

FIELD EXPERIENCE REPORT 74-3 REVISION
Supersedes FER 74-3 dated 6/5/74

Some larger 19DG machines have been experiencing nuisance tripouts due to motor over temperature. Engineering tests on these motors have prompted a factory modification to all C8 - C10 motors. This modification is the addition of another spray on top of the motor shell. (See figure 1.) This change is effective as of November 1974. If a 19DG machine is experiencing nuisance tripouts due to motor over temperature, it is recommended the following checks be made in addition to the installation of the factory fix:

1. Motor cooling supply line and spray ring supply parts - clear.
2. Refrigerant filter - clean.
3. Float chamber and pick-up tube - clean and positioned properly.
4. Minimum head control - free and operative.
5. Back pressure valve in refrigerant return line - functional.
6. Check for refrigerant leakage at spray ring to end bell bearing housing surfaces.
7. Check the position of the nozzles on the bell end relative to the inner and outer dam on the rotor. (See nozzle positioning procedure attached)

Recommendations from Factory Tests

Install a 1/2" line from the refrigerant supply line, after the filter, to the top of the motor shell. The 1/4" M.P.T. plugged hole on the terminal side of the shell will be utilized for additional cooling. The refrigerant should be metered through a 1/4" orifice (figure 1).

FILE INSTRUCTIONS: COMPRESSOR-MOTOR ASSEMBLY

Nozzle Positioning Procedure

Positioning of the nozzles, as stated in Check 7 is critical and should be checked as follows:

1. Measure the distance from the surface on the end bell that mates to the motor shell, to the surface that the bell end bearing bolts to (figure 6). Use a straight edge and a ruler recording this as dimension "A."
2. Lay the straight edge across the motor shell. Using a ruler, measure inward toward the rotor distance "A," and mark the shaft with a felt tip pen (figure 2).
3. Measure the distance "B" on the bell end bearing (figure 5).
4. From the mark on the shaft (step 2), measure outwards the distance "B" and make a second mark on the shaft (figure 3).
5. Hold the spray ring against the bell end bearing and slide the assembly over the shaft until the second mark just appears at the end of the bearing. The nozzles and bearing are now in the running position (figure 4).
6. Visually check to be sure the discharge area of the two longer nozzles is totally behind the inner dam, and the shorter nozzles are directed into the outer dam. Adjust nozzles as necessary (figure 4).

Regards,

RBG/lh

Attachments

Fig. 1

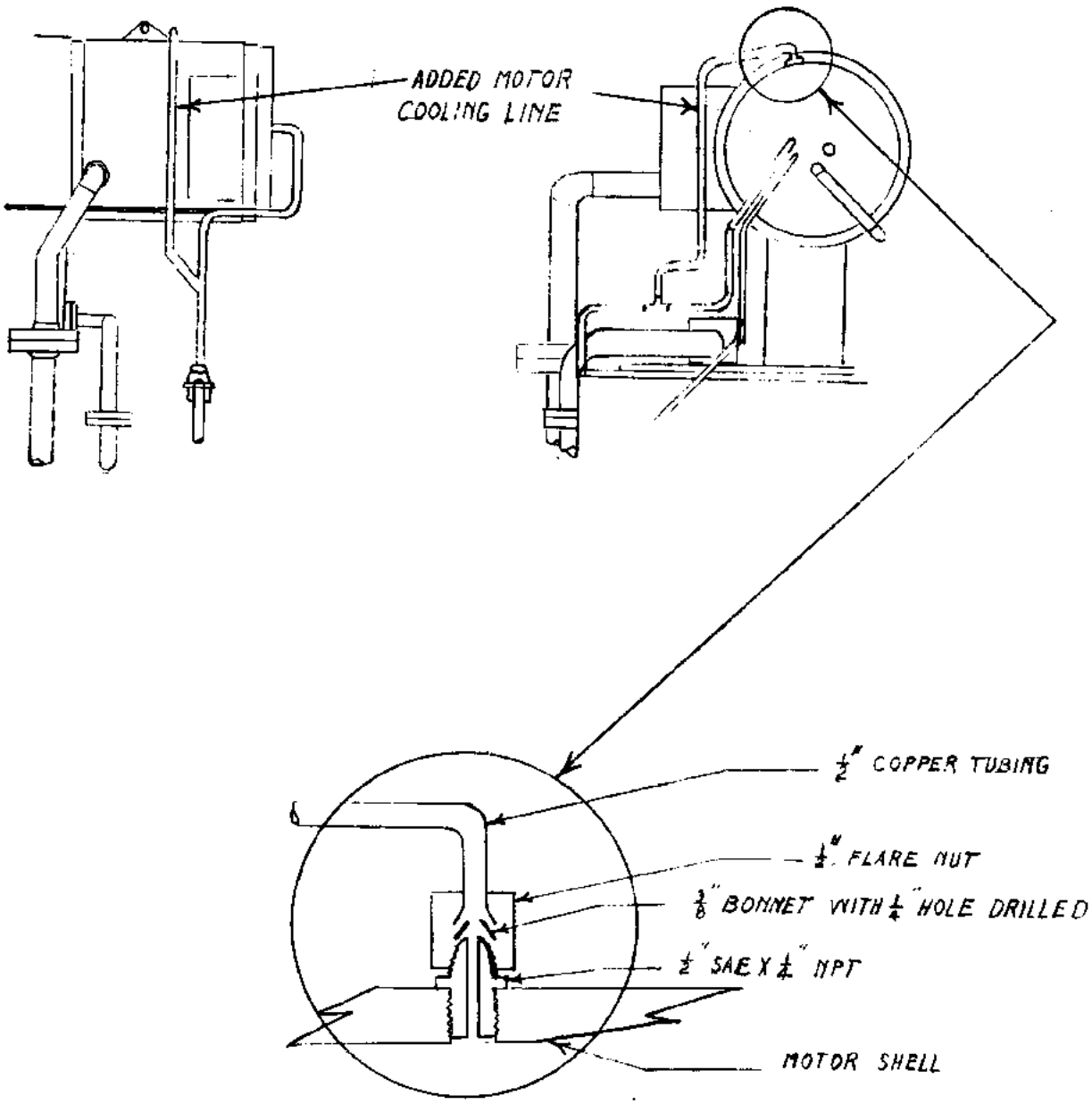

ADDED MOTOR COOLING LINE
½" COPPER TUBING
½" FLARE NUT
⅜" BONNET WITH ¼" HOLE DRILLED
½" SAE X ¼" NPT
MOTOR SHELL

Fig. 2

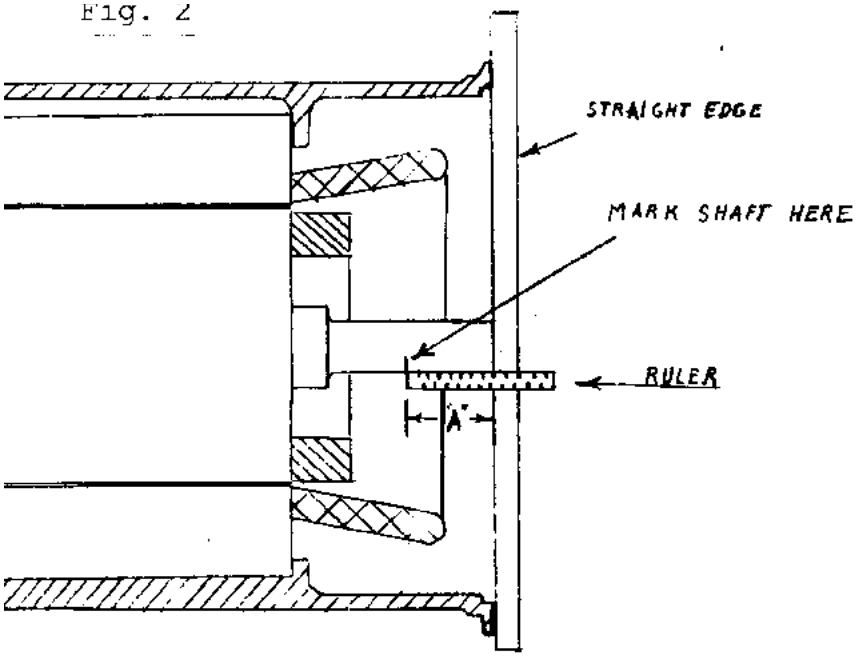


Fig. 3

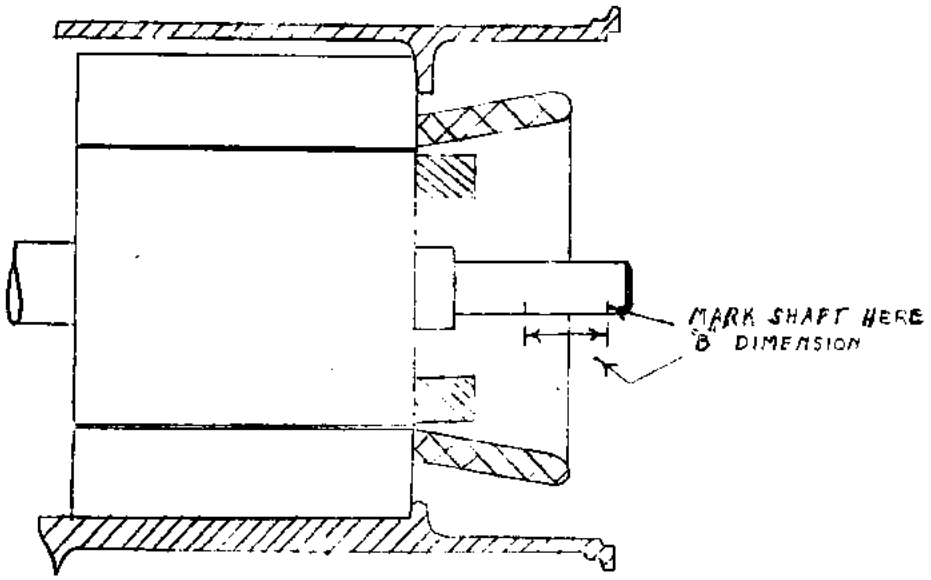
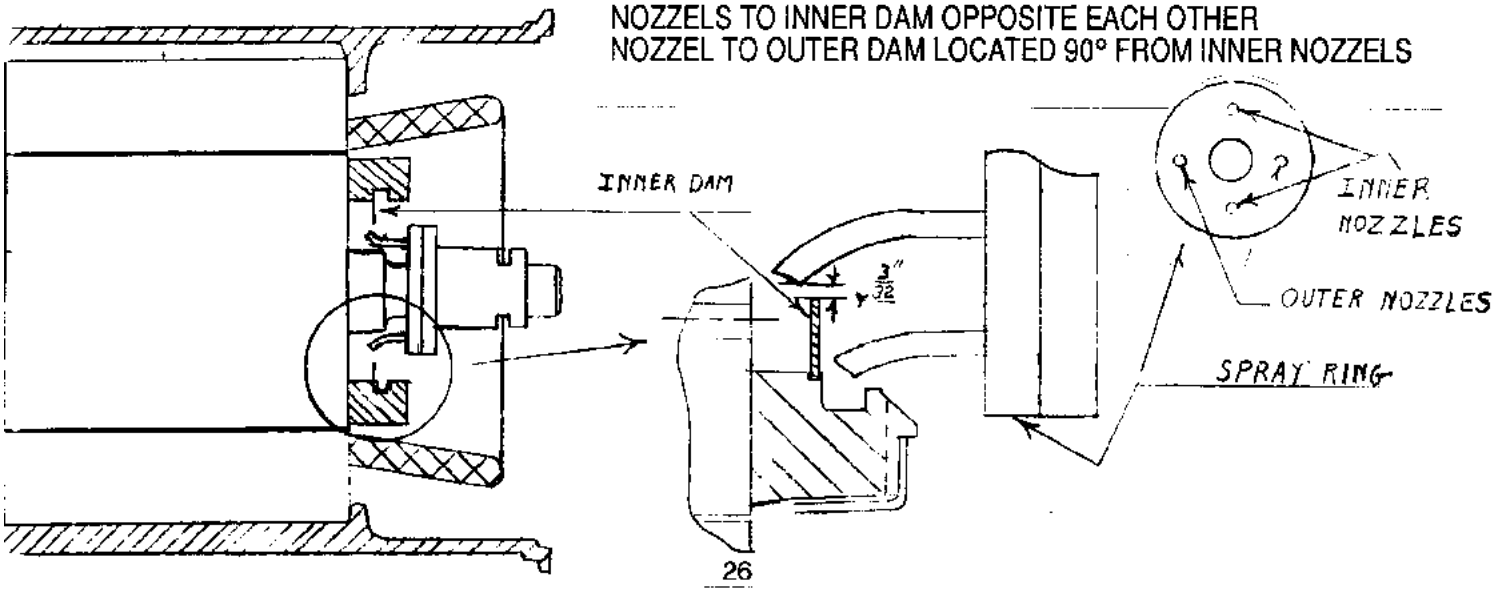


Fig. 4



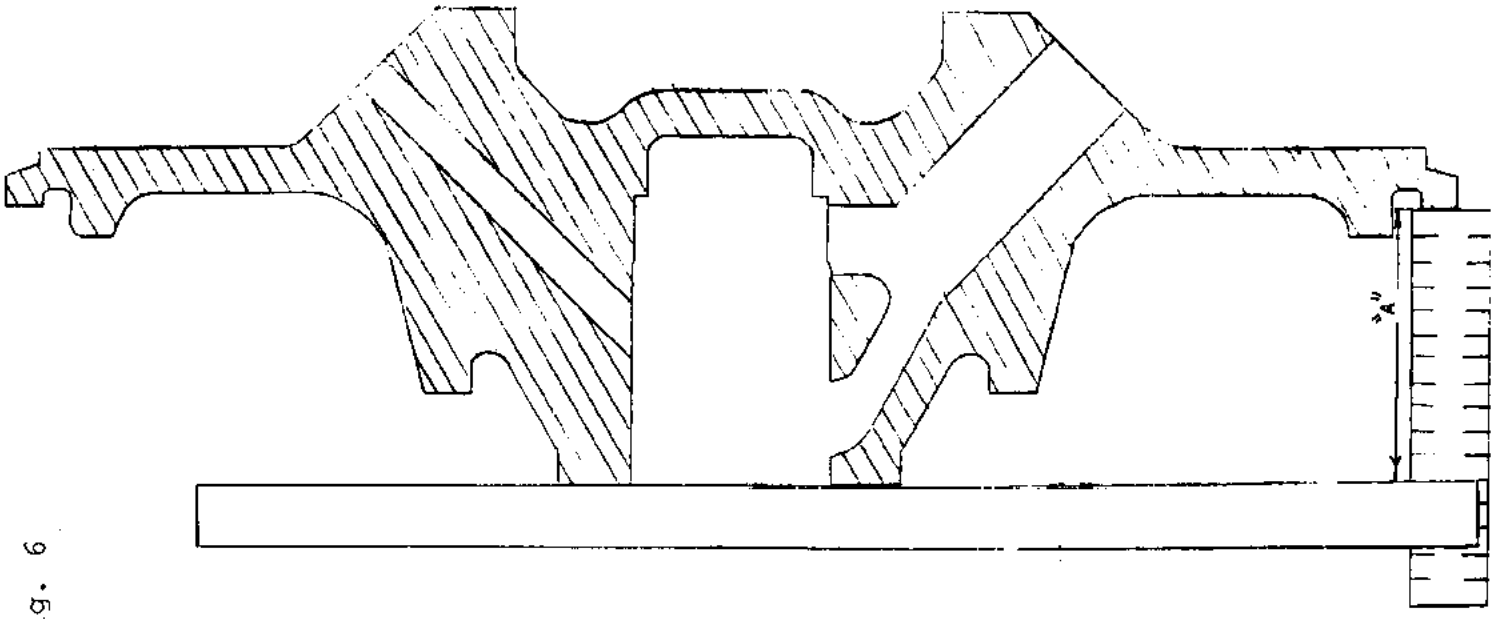


Fig. 6

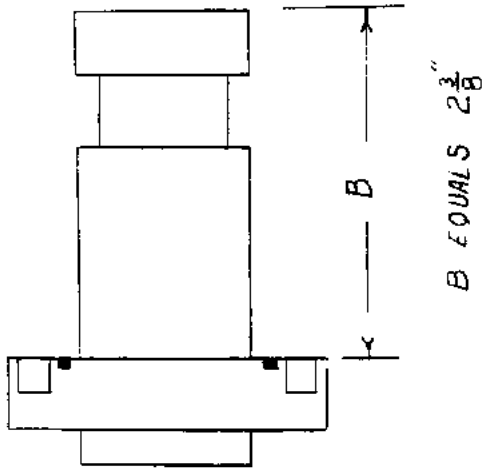


Fig. 5