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BULLETIN

LITERATURE FILE NO.

HCOM-SB-51

**GENERAL
SERVICE BULLETIN**

Since the Trane Company has a policy of continuous product improvement, it reserves the right to change specifications and design without notice. The installation and servicing of the equipment referred to in this booklet should be done by qualified, experienced technicians.

7/1/81
Supersedes G-106
Dated 10/22/74

SUBJECT: MODEL F COMPRESSOR, STATOR BOLT BREAKAGE

INTRODUCTION

In 1974, some 40 ton Model F compressor motors burned out as a result of stator bolt breakage. This situation occurred usually on high voltage, across-the-line start applications.

The purpose of this bulletin was to define the cause of this situation and outline a procedure to repair this condition and prevent future similar situations.

DISCUSSION

The stator bolt breakage condition was caused by rapid compressor short cycling. This will not happen under normal operating conditions.

The repeated high starting torque caused elongation of the motor laminations, increasing stator bolt-to-stator tolerance. The increased tolerance allowed the stator to rotate in the motor housing at start-up, applying enough stress to break the stator bolt.

Once the stator bolt broke, the stator was free to rotate in the motor housing. The motor leads pulled out of the terminal studs, resulting in a motor burnout.

CORRECTIVE ACTION

If a motor burnout has been caused by a short cycling condition, install a anti-recycle timer on the unit.

When repairing a compressor after a motor burnout caused by a broken stator bolt, follow this procedure:

1. Inspect the motor housing for internal and external damage. The casting must not be damaged to insure a leak-free compressor.
2. Once the new stator has been installed, make a one inch tack weld at the location shown in Figure 1 to tack the stator to the motor housing. Use

a 1/8 inch welding rod similar to N1-ROD55. Protect the motor windings and leads from heat and weld splatter with a piece of sheet asbestos (See Figure 1).

If it should ever become necessary to remove the stator from the housing, break the tack weld with a cold chisel or remove it with small grinder.



FIGURE 1