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## Plug Fan Installation & Maintenance Suggestions

DF Fan Services, Inc. Plug Fans have been designed to operate at elevated temperatures and static pressure. Therefore, it is important that while operating or testing at cooler than design operating temperature and/or lower than design operating static pressure, that motor amps be monitored to insure against motor failure. See the Motor nameplate for maximum amp draw. There are two ways to limit amp draw while testing:

1. Run the fan wheel backwards.
2. Use an inverter drive to slowly ramp the speed up while monitoring amp draw.

**General:** Please follow "Recommended Safety Practices" AMCA publication 410-96 supplied with fan

**Initial operation:** Rotate shaft by hand to make sure fan runs free and clear. Apply power momentarily. Check for proper direction of fan rotation. Rotation is viewed from the frame/motor side. Check drive for smooth operation. After 50 hours of operation, re-tighten wheel hub set screws, bearing hold down bolts, and all assembly bolts.

### **Lubrication:**

**Bearings:** Bearings supplied are Browning SPB1000 series, taper roller with labyrinth seals. Use Drummond "Persist Premium Complex Red Grease". Follow bearing manufactures instructions and the following. Grease should be added to the bearing until it starts purging out the seal.

**Motor:** Follow motor manufactures instructions.

### **Belt Drives:**

Improperly installed V-belt drives cause vibration and excessive drive wear. Installation practices should be observed as follows:

1. Fan and motor shafts must be parallel.
2. Fan and motor sheaves must be aligned axially.
3. Belts must have proper tension, neither too tight or too loose.
4. When installing bushed sheaves, locking bolts must be tightened uniformly to avoid sheave eccentricity.
5. Always tighten setscrew over keyway first.

**After Run:** Fans must be operated after heater shut-off until system is cool (100°F or less) to prevent shaft bending because of creep during high temperature soaking.