

OPERATING AND MAINTENANCE INSTRUCTIONS FOR ACE COOLERS

IMPORTANT

Before start up, check set screws and bolts in the fan assembly and set screws in locking collars of all bearings and sheaves. These items should be checked again several days after start up.

FAN & DRIVE

Although the fan and drive are inspected before shipment, clearance between the fan blades and the fan ring and guard, and alignment of the fan shaft should be checked to assure that rough handling during shipment has not loosened bearing mounting bolts or caused misalignment.

V-belt drives should be adjusted until tight enough to prevent excessive belt slippage. The belt is generally tight enough when it can be twisted one-quarter of a turn with the thumb and fore-finger.

LUBRICATION

Bearings should be greased in accordance with normal maintenance practice. Over-lubrication is the most common cause of bearing failure. In general, about one cubic inch of grease in each bearing every 2 to 3 months is adequate. The operating temperature of the bearing may indicate how much lubrication is required.

Normal temperature may range from “cool to warm to touch” up to a point “too hot to touch for more than a few seconds” depending on bearing size and speed, and surrounding conditions. Unusually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and slight showing of grease at the seals indicates proper lubrication.

TUBE CLEANING

Operating conditions sometimes cause an accumulation of dirt on the outside fin surface. This can be removed by directing compressed air, or a greaseless solvent followed by a water spray through the fins in a direction opposite the normal air flow. The inside of the tubes will require periodic inspection and cleaning as necessary. Removal of access plugs allows visual inspection, and if necessary, the use of mechanical tube cleaners.

PLUG LEAKS

Should tapered plugs develop leaks, additional tightening is normally all that is required. Thread dope may be used if tightening alone is not sufficient. If shoulder type plugs develop leaks, the gaskets should be replaced. Tapered plugs that are removed for the tube inspection or cleaning should be replaced in the same hole.

TUBE LEAKS

Tube leaks can be of two types: (1) leaks in the tubewall itself (usually corrosion) and (2) leaks in the tube to tubesheet joint. In the first case, it is usually most practical to plug both ends of the tube with the resulting loss in heat transfer surface. When so many tubes have been plugged that performance is affected, retubing will be necessary. If leaks develop in the tube to tubesheet joints, re-rolling of the tube will be required. Care must be used in selection of the proper tube expander for the size and BWG of the tube being used. As with all rolled tube joints, over-rolling must be avoided.

GENERAL

If it is ever necessary to contact our plant for service or replacement parts, it is essential that our serial number or other identifying data be obtained from the metal nameplate attached to the cooler. This is the only way to positively identify the correct parts that may be required.