

MAINTENANCE (REFER TO SAFETY SECTION)

Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations and experienced with this type of equipment. Preventive maintenance is the best way to avoid unnecessary expense and inconvenience. Start-up and routine maintenance should cover the following items:

- a. Tighten all setscrews, bolts and wire connections.
- b. Check belt tension and sheaves for wear.
- c. Lubricate fan bearings (see tables below).
- d. Cleaning of unit, wheel and damper (if present).

All motors containing ball bearings are permanently lubricated from the factory. No additional maintenance is required.

SUGGESTED FAN BEARING GREASING INTERVALS

INTERVAL (MONTHS)	TYPE OF SERVICE
12 to 18	Infrequent operation or light duty in clean atmosphere.
6 to 12	8 to 16 hrs./day in clean, relatively dry atmosphere.
3 to 6	12 to 24 hrs./day, heavy duty, or if moisture is present.
1 to 3	Heavy duty in dirty, dusty locations; high ambient temperatures; moisture laden atmosphere; vibration.

CAUTION

1. Sharp edges and screws are a potential injury hazard. Avoid them.
2. Greases of different soap bases (lithium, sodium, etc.) may not be compatible when mixed. Prevent such intermixing by completely purging the bearing of old greases.

WARNING

Hazardous moving parts. Unit may contain protected fan motor which may start automatically and cause injury. Allow time for reset. Disconnect power before servicing.

GREASE MANUFACTURERS

MANUFACTURER	GREASE (NLGI #2)
Shell	Gadus S2 V100 2 or equivalent
Exxon/Mobil	Ronex MP

1. Before performing any maintenance on the fan, be sure power is turned off and locked in the OFF position at the service entrance.
2. Ventilators should be carefully checked at least once a year. For critical or rugged applications, a routine check every two or three months is suggested.
3. All motors supplied with Twin City Fan & Blower ventilators carry a one-year limited warranty from date of shipment. For repairs within the warranty period, the motor must be taken to the motor manufacturer's authorized service dealer. Contact your representative for additional warranty details.
4. A periodic motor check should consist of spinning the motor shaft with the power off to be sure the motor turns freely and the bearings run smoothly. The belt on belt driven units should be removed from the motor sheave.
5. When removing or installing a belt, do not force the belt over the sheave. Loosen the motor mount so that the belt can be easily slipped over the sheave.
6. The belt on belt driven units should be removed and carefully checked for glazing, cracks, ply separation or irregular wear. A small irregularity in the contact surface of the belt will result in noisy operation. If any of these defects are apparent, the belt should be replaced. Check the sheaves also for chipping, dents or rough surfaces which could damage the belt.
7. The correct belt tension is important. Too tight of a belt will result in excess bearing pressure on the motor bearings and shaft pillow blocks and may also overload the motor. Too loose of a belt will result in slippage which will quickly "burn" out belts. A belt should feel "live" when thumped, approximately ¼" belt deflection (3 to 5 lb.) when subject to finger pressure at midpoint between sheaves.
8. The belt alignment should also be checked to be sure the belt is running perpendicularly to the rotating shafts. Fan and motor shafts must be parallel. Improper alignment will result in excessive belt wear.
9. Check sheave setscrews to ensure tightness. Proper keys must be in keyways.
10. Do not readjust fan RPM. If sheaves are replaced, use only sheaves of identical size and type.
11. If unit is to be left idle for an extended period, it is recommended that belts be removed and stored in a cool, dry place to avoid premature belt failure.

MAINTENANCE (CONTINUED)

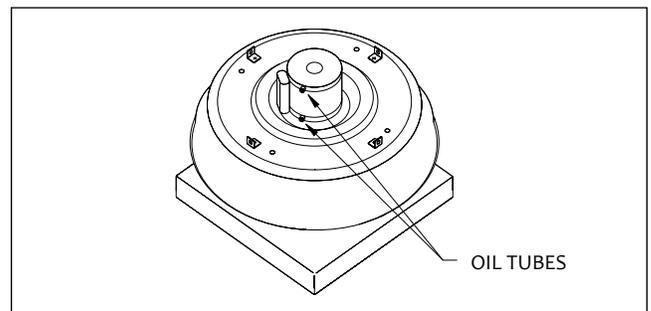
12. The standard pillow block bearings on belt driven ventilators are factory lubricated and are provided with external grease fittings. Lubrication annually is recommended or more frequently if needed (see Greasing Intervals table).
It is recommended to add fresh grease at start-up, but do not over-grease. Use only 1 or 2 shots of a recommended lubricant with a hand gun in most cases (see Grease Manufacturers table). Maximum hand gun rating 40 P.S.I. Rotate bearings during lubrication where good safety practice permits.
The most frequent causes of bearing failure are not greasing often enough, using an excessive quantity of grease, or using incompatible greases. Excessive vibration, especially if the bearing is not rotating, will also cause bearings to fail. Bearings must also be protected from water and moisture to avoid internal corrosion.
13. During the first few months of operation it is recommended that the bearing setscrews be checked periodically to ensure that they are tight.
14. The rotating wheel requires particular attention since materials in the air being handled can build up on the blades to cause destructive vibration or weaken the structure of the wheel by corroding and/or eroding the blade metal. Regular inspection and corrective action at intervals determined by the severity of each application are essential to good service life and safety.

MOTOR LUBRICATION

Motors which contain ball bearings are permanently lubricated from the factory. No additional maintenance is required.

Motors which contain sleeve bearings require lubrication every six (6) months. Use SAE-20W lubricant and add five (5) drops to each location shown in figure on the right. **DO NOT OVER LUBRICATE.**

SLEEVE BEARING MOTOR OIL TUBE LOCATION



DUCT CONNECTIONS

(REFER TO SAFETY SECTION)

The ductwork is run into the inside of the roof curb and connected to the curb. This must be done before the fan is mounted to the roof curb. The duct must be equal to or larger than the inlet of the fan.

