Installation and Operating Instructions
“250F” Series

1. HANDLING
Move bare machine by lifting from beneath bearing housings. Move complete assembly by lifting from beneath steel base. DO NOT lift with sling around shaft.

2. LOCATION AND ERECTION
Remove shipping skids. On a firm level surface in a clean dry place, set the unit on the six base pads provided. Locate one under each corner and one under the approximate center of each base flange, toward the heaviest end. Do not bolt down. If bolts are used to position machine, omit fastening with nuts.

Remove shipping covers and connect piping. Use extreme caution to prevent foreign material entering blower/exhauster. Use flexible connections between unit and piping system.
3. ALIGNMENT
Blower/exhauster and motor are properly lined up at the factory, but MUST BE CHECKED after machine is positioned and piping connections made.

BELT DRIVE
For maximum belt and bearing life, sheaves must be in good alignment and belt(s) must be under proper tension. Be sure belt(s) is clean, free of grease and oil, by wiping with a dry cloth. Do not apply belt dressing.

Check alignment with straight edge or cord across the faces of both sheaves. This should show square contact on both sheaves if they are parallel and with belts running at right angles to the shaft.

Use tensiometer for determining proper belt tension. Belts that are too tight cause a sharp decrease in bearing and belt life. If too loose, they will slip, fail prematurely and decrease machine performance due to reduced speed. Belts may stretch slightly when first placed in service. Check belt tension after the machine has operated a few days. If left out of service for a lengthy period, all tension should be removed.

When replacing the belt or belts, move motor toward the blower/exhauster. Never force a belt over a sheave. If replacing a multiple belt drive, replace all belts with a matched set.

4. IDLE PERIODS
If the blower/exhauster is standing idle for extended periods, before or after initial operation, the shaft should be rotated by hand about once a month, and if over three months have elapsed since shipment or last operation, the bearing caps should be removed and a little grease forced into the bearings. Care should be taken to prevent any dirt from entering the grease reservoir.

If grease shows any signs of deterioration, repack per paragraph 11. If the machine has been idle for one year, or over six months in an area where vibration is present, the safest practice is to replace the bearings before putting it into operation. Ball bearings can be damaged when not operating particularly if vibration is present.

5. OVERLOAD CAUTION
Centrifugal blowers/exhausters should not be operated before piping connections are made. They are under heaviest load when inlet and outlet are wide open. If necessary to test the unit, close off the inlet with a metal plate or board placed over the inlet flange.

6. MOTOR INSTRUCTIONS
Instructions for electrical connections, care and operation of motor are attached to the motor. Motors should be connected by an experienced electrician. Be sure power characteristics on motor nameplate agree with available power supply.

7. STARTING INSTRUCTIONS
Be sure that alignment has been checked, shaft turns freely by hand and shipping covers have been removed. Start the unit with inlet closed off. Open inlet only after the motor has reached operating speed. Do not permit the motor load to exceed nameplate full load amperage.

Admit maximum volume of air (within motor nameplate full load amperage rating) for period of one to two minutes to purge blower and system piping of loose material before final connection to process equipment.
8. DIRECTION OF ROTATION
A raised arrow on the blower inlet head shows proper direction of rotation. Change wiring connections to correct, if necessary.

9. LACK OF PRESSURE OR VACUUM
1. Check Rotation and Speed.
2. Be sure there are no stoppages in piping and that pipe line leakage is minimal.
3. Check motor load: a machine operating beyond rating will develop reduced pressure or vacuum.
4. Check rubber sleeve on inlet, if used. If it should be collapsed, exchange for outlet sleeve until new one can be obtained.
5. If inlet filter is used, remove temporarily and test unit, or clean the filter.

10. VIBRATION AND NOISE
Misalignment between blower and motor sheaves will cause vibration and noise. Restore proper alignment at once to prevent damage to bearings and/or drive.
A worn or damaged ball bearing will make a shrieking noise and cause vibration. As soon as abnormal operation is detected, replace the defective bearing per service instruction sheet #25.51.05. Use bearing specified by Lamson Corporation.

11. LUBRICATION
Correct lubrication is of prime importance in maintaining long bearing life. The most common causes of overheating, noise and premature bearing failure are overgreasing, use of the wrong type of grease, and use of contaminated grease.

A special high speed grease, Lamson #5, is required in these machines and the use of any other type grease will automatically VOID THE MACHINERY WARRANTY. Lamson #5 grease may be purchased from the supplier of the blower/exhauster or direct from Lamson Corporation, Syracuse, New York.

Blower/exhauster bearings are greased before leaving the factory and, under normal operating conditions (2000 hours per year), require the addition of a small amount of Lamson #5 grease each year (about 1 oz.). Under abnormal operating conditions, relubricate on a thirty to ninety day cycle. Do not overgrease or permit dirt or dust to enter the bearing chamber. Do not use a pressure gun for lubricating as it does not permit control of the amount of grease added. DO NOT USE STANDARD CUP GREASE. The optimum time to lubricate a machine is when it is at operating temperature. Consequently, greasing should be accomplished when the machine is running or immediately after it has been stopped.

Once every two years of normal operation or one year of abnormal operating conditions, the grease reservoir should be cleaned thoroughly with hot light oil (SAE #10), or non-toxic solvent. After all solvent has evaporated, repack one-half full of new grease (about 2 oz. for each bearing). Be sure that no dust or dirt gets into the bearing or grease. Abnormal conditions of operation are considered to be: high ambient temperatures, severe dust conditions or long periods of continuous operation.
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All correspondence should include complete blower/exhauster nameplate data, particularly the serial number. When ordering replacement parts also give description and item number above. If ordering impeller(s), check to see if different types are used. If so, describe the types required. Replacement bearings must be per Lamson Corporation specifications.

**MACHINERY WARRANTY**

Lamson Corporation warrants this apparatus to be of first-class material and workmanship and will repair or replace F.O.B. factory without charge within one year from date of shipment any defective parts provided that the Purchaser gives immediate notice in writing and examination proves the claim. This warranty does not cover motors, starters, etc., manufactured by others and does not cover erosion or corrosion of the apparatus. The Purchaser agrees that no other claim for damages will be made against Lamson Corporation.