SERVICE INSTRUCTIONS
“250” Series

1. Refer to leaflet 25.41.05 for routine installation and operating instructions. Follow motor manufacturer’s instructions regarding motor maintenance and service. Optimum machine performance requires that the sheaves be in good alignment and the belts be under proper tension (check with tensiometer). Always use matched belts for multiple belt drive replacements.

2. Part numbers below refer to standard repair parts lists, 25.41.05.

3. To remove free bearing (drive end):
   A. Remove driven sheave and key.
   B. Remove bearing cap (Item #11).
   C. Remove bearing locknut and lock washer (Items #24 and #26).
   D. Remove cap screws holding bearing housing (Item #13) to inlet head (Item #17).
   E. Attach puller plate to housing (Item #13). Pull bearing housing, bearing, grease slinger and bearing shim(s) (Items #13, #9, #16 and #30) off shaft. Do not use hammer or wedges to pry bearing housing.
   F. Remove bearing (Item #9) from housing (Item #13). If bearing does not slip out, dislodge by tapping very gently from back of housing.
   G. Clean parts thoroughly, keep covered and protected. If grease slinger (Item #16) is damaged or bent, straighten carefully or replace with a new one.

4. To install free bearing:
   A. Bolt bearing housing firmly to inlet head. Tighten cap screws slowly and evenly (Torque = 9 to 11 Ft. Lbs.).
   B. Place bearing shim(s) and grease slinger (Items #16 and #30) on shaft. Make certain that it fits flat against the shaft shoulder. A small amount of bearing grease may be used on back side of grease slinger and shim(s) to hold them in position.
   C. Use special bearing drive tools to mount new bearing (Item #9). Bearing must be per Lamson Division specifications. Exercise extreme care to drive both inner and outer races simultaneously. Avoid striking balls or retainer or damaging races. Use clean tools and keep bearing absolutely free of dirt. When tapping on the free bearing, keep rotating between taps and support shaft axially at end to prevent damage to thrust bearing.
   D. Install bearing lockwasher and locknut (Items #26 and #24). Tighten down firmly and fasten locknut securely with lockwasher.
   E. Smear small amount of grease on balls and retainer. Make sure grease is absolutely clean.
   F. Fill bearing cap (Item #11) one half full of grease, no more, and bolt to inlet head (Item #17). Use Lamson #5 grease (see 25.41.05).
   G. Mount driven sheave. Replace belt drive in accordance with installation and operating instructions leaflet 25.41.05.
   H. Start machine. Caution: Do not start or stop machine with inlet and outlet wide open as motor will overload and burn out. If unit is run before piping connections are made, close off inlet by means of a plate placed over the inlet opening.
   I. If machine vibrates excessively, check sheave alignment. Vibration in belt driven units can be caused by misalignment. Follow procedure outlined in 25.41.05 to correct.
   J. If bearings overheat rapidly, excess grease may be the cause (refer to 25.41.05). Do not remove any grease, however, until it has had time to channel out.

5. To remove thrust bearing (opposite drive end):
   A. Remove bearing cap (Item #12).
   B. Remove bearing locknut and lock washer (Items #24 and #26).
   C. Attach puller plate to bearing housing. Pull bearing housing, bearing and grease slinger (Items #13, #10 and #16) off shaft. Do not use hammer or wedges to pry off bearing housing.
   D. Remove bearing (Item #10) from housing (Item #13). If bearing does not slip out, dislodge by tapping very gently from back of housing.
   E. Clean parts thoroughly. Keep covered and protected. If grease slinger (Item #16) is damaged or bent, straighten carefully or replace with a new one.
6. To install thrust bearing:
   Follow steps A-F as outlined in paragraph 4 above, except there are no bearing shim(s) under grease slinger to install. When mounting bearing, Step C, block drive end of shaft to hold it in place axially while seating bearing firmly against grease slinger and shaft shoulder.

7. To completely dismantle blower/exhauster, proceed in the following manner:
   A. Remove driven sheave.
   B. Up-end blower and shaft extension up.
   C. Remove #11 bearing cap.
   D. Remove #24 and #26 locknut and lockwasher.
   E. Remove #13 bearing housing, #9 bearing, #16 grease slinger and #30 bearing shim(s) together (per paragraph 3 above).
   F. Remove #8 tie rods and feet.
   G. Remove #17 inlet head.
   H. Remove #23 shaft sleeve and #29 impeller shim(s).
   I. Remove #2 impeller and #29 impeller shim(s).
   J. Remove #3 intermediate section or #3A intermediate section with feet.
   K. Remove #2 impeller and #29 impeller shim(s).
   L. Remove #3 intermediate section.
   M. Continue step J and K until all sections, impellers and shim(s) are removed.
   N. Return shaft and outlet head assembly to horizontal position with free shaft end supported.
   O. Remove cap screws holding #13 bearing housing to #18 outlet head and slip #18 outlet head off shaft.
   P. Remove #12 bearing cap.
   Q. Remove #24 and #26 locknut and lockwasher.
   R. Separate #13 bearing housing with #10 bearing and #16 grease slinger from shaft.
   S. Tap #10 bearing from #13 bearing housing. Remove #16 grease slinger.

8. To reassemble blower/exhauster:
   A. Thoroughly clean both grease reservoirs. Obtain new bearings per Lamson Division specifications. Clean all mating surfaces to insure proper fit.
   B. Reassemble in reverse order to disassembly above, carefully replacing all spacers, shims and intermediate sections in the same positions relative to the shaft that they occupied before removal. Take up evenly on tie rod nuts. (Torque = 7 to 8 Ft. Lbs.; Max. Torque on single nut tie rod = 6 Ft. Lbs.) When machine is put back on base, be sure feet set down evenly. If inlet and outlet head are twisted out of position, loosen tie rod nuts slightly, bolt machine to base and then retighten tie rod nuts. Be sure shaft turns freely by hand.
   C. Follow lubrication and alignment instructions given under installation of free bearing, 4-F through 4-J above.