



Little Red Booster Pumps Service Instructions




SAFETY INSTRUCTION


This safety alert symbol will be used in this manual and on the pump safety instruction decal to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**




Your Booster Pump should have the warning label (displayed above) affixed to the pump near the pump nameplate. If this warning is missing or illegible, contact your local B&G Representative for a replacement.


INSTRUCTIONS FOR REMOVAL AND MAINTENANCE

 **WARNING: UNEXPECTED START-UP HAZARD**
Single phase motors are equipped with automatic reset overload protectors. The pump can restart without warning. Disconnect and lockout power before servicing. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

 **WARNING: ELECTRICAL SHOCK HAZARD**
Disconnect and lockout the power before servicing. Failure to follow these instructions could result in serious personal injury or death.

1. Remove smaller backplate from pump by removing two screws at top. Disconnect electrical supply to pump. (See Figure 1.)
2. Close the valves on the suction and discharge sides of the pump. (If no valves have been installed, it may be necessary to drain the system.)

 **WARNING: HOT WATER HAZARD**
Before draining the system, allow water to cool to at least 100°F, open the drain valve (take precautions against water damage) and leave the drain valve open until servicing is complete. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

 **WARNING: HIGH PRESSURE HAZARD**
Pressure may be present in the pump body. This pressure can be relieved by loosening the flange bolts and shifting the pump assembly slightly to allow the pressurized water to escape. Failure to follow these instructions could result in serious personal injury or death.

3. Loosen the four capscrews that hold the motor housing to the pump body. Remove these screws and remove the housing from the pump body. (See Figure 2.)



FIGURE 1



FIGURE 2

4. Place the pump on a flat work surface and insert the plastic assembly tool (furnished with the repair kit) into the middle horizontal vent holes of the rear motor housing coverplate. Push forward until it engages the rotor cooling fins. This will lock the rotor, allowing removal of the impeller. (See Figure 3.)



FIGURE 3

5. Remove the impeller nut – left hand thread! – from the pump shaft. Remove the impeller and rotating seal assembly.
6. Clean the ceramic seat with a clean rag and inspect for grooving or cracks. If it shows no grooving or cracks, it may be cleaned and reused.
7. If the ceramic is to be replaced, the face plate must be removed from the motor housing, by gently prying the face plate away from the motor housing. (See Figure 4.) Remove the damaged ceramic seat and boot from the face plate. Install a new ceramic seat and boot in the recess in the face plate.



FIGURE 4

8. Reposition the face plate on the motor housing and gently tap the face plate evenly around its diameter, driving it into the recess provided in the motor housing. (See Figure 5.)

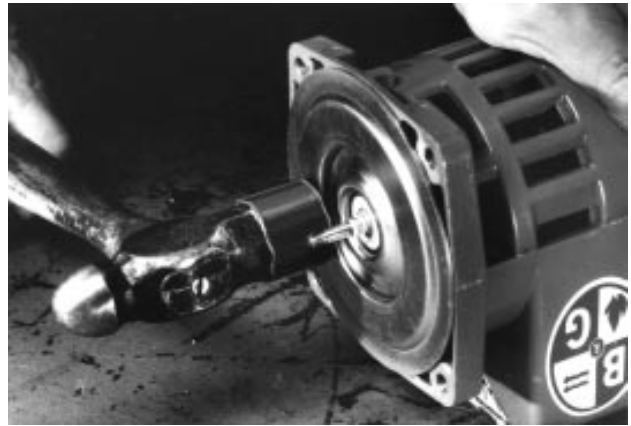


FIGURE 5

9. Press the rotor fully forward with the plastic assembly tool. Clean the shaft and sleeve before installing the seal. (See Figure 6.)



FIGURE 6

10. Press the replacement carbon seal assembly firmly into the recess in the back side of the impeller.
11. Assemble the seal/impeller assembly to the pump shaft by pushing the rotor fully forward with the plastic assembly tool and sliding the seal/impeller assembly onto the pump shaft until the seal face contacts the ceramic seat. (See Figure 7.)



FIGURE 7

12. Continue holding the rotor fully forward with the assembly tool. Install and torque the impeller nut – left hand thread! – to 15 in-lb. torque.
13. Clean the recess in the pump body and install a new body gasket.

⚠ WARNING: HOT WATER HAZARD
Whenever disassembling a gasket joint, always use a new gasket upon reassembly. NEVER RE-USE OLD GASKETS. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

14. Install the motor housing in the pump body and secure with four capscrews. Apply torque evenly in a crisscross pattern in 40 in-lb. increments to a torque of 80 in-lb. (See Figure 2.)
15. Reconnect electrical wiring and install small backplate with two screws. (See Figure 1.)

⚠ WARNING: ELECTRICAL SHOCK HAZARD
Be certain that all connections are secure and the conduit box cover is closed before electrical power is connected. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

SYSTEM PREPARATION

Prior to pump start up, closed heating and cooling systems should be cleaned, drained, and refilled with clean water. System pH must be maintained between 7 and 9.

⚠ WARNING: HOT WATER LEAKAGE HAZARD
Pressurize the pump body slowly while checking for leaks at all joints with gaskets. Failure to follow these instructions could result in serious personal injury, and/or property damage.

PRIMING

Do not run the pump dry. These pumps must be filled with liquid before being placed in service. Air should be vented from the system by means of an air vent located at a high point in the system, or by an alternate method.

⚠ CAUTION: SEAL DAMAGE HAZARD
Do not run pump dry – seal damage may occur. Failure to follow these instructions could result in moderate personal injury and/or property damage.

LUBRICATION

All new Bell & Gossett Little Red Booster Pumps are thoroughly tested at the factory and have been enhanced with a superior lubrication system which requires a minimum of attention. Please refer to the recommended lubrication instructions noted below for the type of pump service required.

1. At installation: Pumps have been factory lubricated and do not require additional lubrication on start-up.
2. Heating system operation: Pumps should be lubricated at the start of every heating season. Add one tube (5cc) of Bell & Gossett P15775 lubricating oil.
3. Continuous duty: Pump should be lubricated every six (6) months. Add one tube (5cc) of Bell & Gossett P15775 lubricating oil.

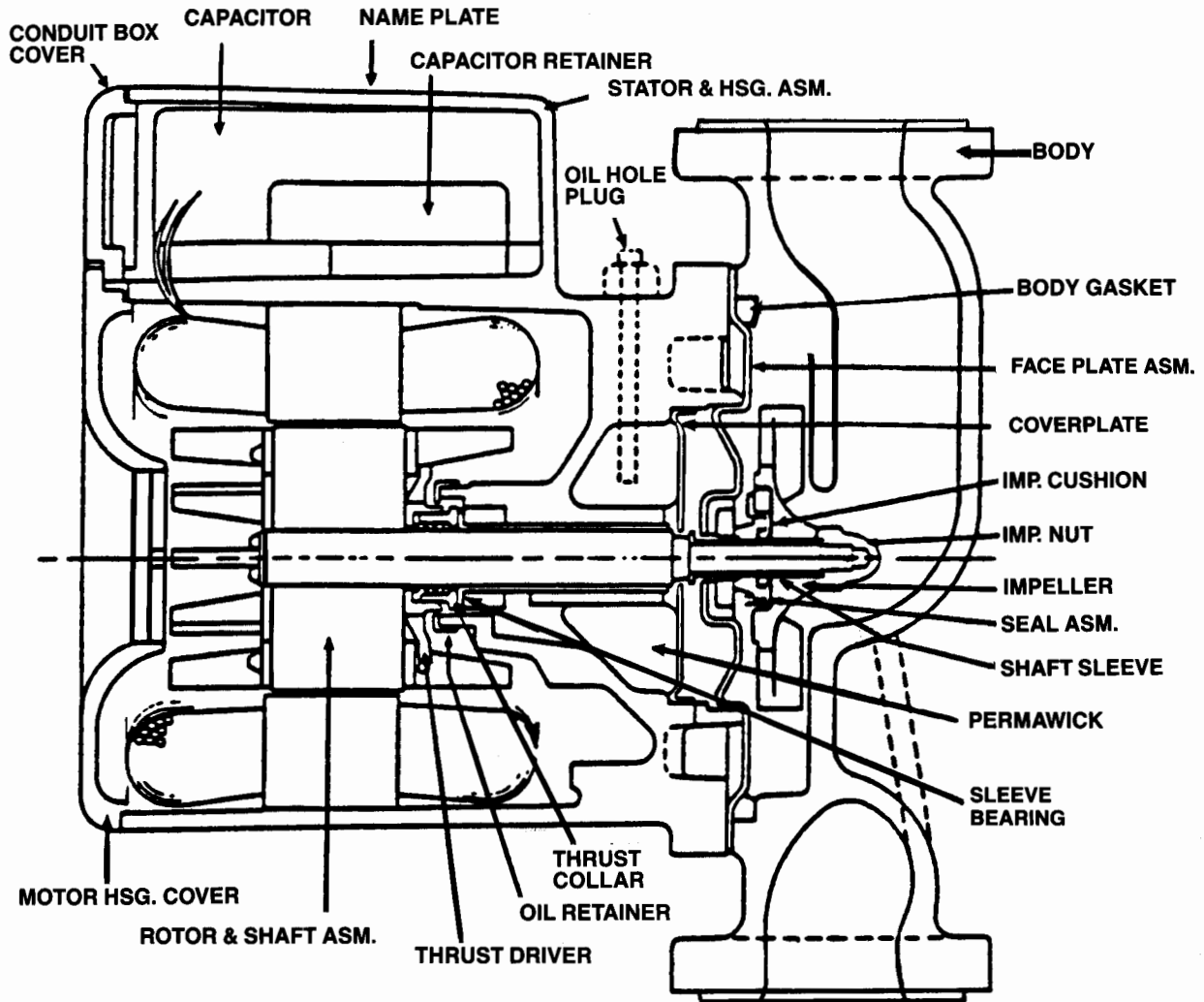
NOTE: In lieu of genuine Bell & Gossett P15775 lubricating oil, use one teaspoon of Mobile 1 motor oil as required.

IMPORTANT: Over oiling of the pump will result in the overflow of oil from the oil reservoir and spillage onto surrounding surfaces. (See Figure 8.)



FIGURE 8

Little Red Pump Cross Sectional View



PERIODIC INSPECTION

Bell & Gossett Booster Pumps are designed to provide years of trouble free service. It is recommended that periodic inspections be made to check for potential problems with the pump. If any leakage or evidence of leakage is present repair or replace the unit.

To insure continued quality performance, use only genuine Bell & Gossett replacement parts.

xylem
Let's Solve Water

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