

PUMP PACKINGS - INSTRUCTIONS FOR
INSTALLATION, LUBRICATION, AND
RUN-IN.

1(3)

A. Installation of Packings in Housings:

1. It is extremely important that the work be done in an area clean and free of dust, dirt or foreign matter of any kind. All tools should be wiped clean before using.
2. The packing housings should be inspected for loose chips, burrs, sealing compound, etc. and cleaned up as required without scratching the seal bore surfaces.
3. The outside surface of the housing which slides into the pump case and centralizes the packing housing should be wiped clean.
4. The gasket surfaces should also be prepared and fitted with a new gasket.
5. A very thin film of Plasgon (or similar seal compound) should be applied to the bore at the position of the primary pressure packing (inboard, closest to the impeller) to prevent leakage around the outside of the packing case when operating on hydrant. A similar film may be applied at the vacuum and secondary pressure seals if desired.
6. If an arbor press is available it should be used to press the packings into position. If one is not available special driving tools should be used to install the packings.
7. Any excess seal compound which is squeezed out during installation should be wiped out.
8. No "O" ring to be used in front packing housing, on 700 Series or Commercial Chassis Pumps.

B. Lubrication:

1. The packings should be well lubricated. It is recommended that "Lubriplate No. 910" be used. If this is not available "Lubriplate No. 110" or a good grade of light-duty, general-purpose grease or ball bearing grease may be used. Do not use a "waxy" type of grease such as commonly used for automotive water pumps or a fibrous type such as commonly used for automotive wheel bearings.

Note: Lubriplate No. 910 is a high-temperature, waterproof grease which is also recommended by the packing manufacturer. It may be obtained from Fiske Brothers, Newark, N.J., in cans of 1 and 5 pounds or drums of 25, 100 and 450 pounds.

2. The lubricant should be "packed" in and around the "lips" of the packing elements, and the cavity between the primary pressure and vacuum packings should be completely filled. It is not desirable to pack the lantern ring (the perforated spacer which is used in some pumps between the vacuum and secondary pressure packings) completely full but some grease here will not be harmful. Don't be afraid of "over-greasing" the packings.
3. The lubricant should be applied with a brush or by finger. Hard or sharp "paddles" or tools should not be used because they might cut the packing lips.

4. A light film of lubricant should be applied to the "thimble" used for installing packings before it is inserted in the packings.
5. A light film of lubricant should also be applied to the shaft at both ends in the region of sealing after the shaft has been properly prepared in accordance with instructions below.

C. Installation of Packings in the Pump:

1. The shaft should be well polished with crocus cloth at both ends in the region of sealing to remove roughness, scratches, and any foreign material adhering to the surface. It should be wiped clean to remove any traces of dirt or abrasive.
2. The shaft shoulders past which the seals must slide should be inspected for sharp edges. These should be removed by stoning lightly so as to avoid a heavy chamfer.
3. The "thimble" used for installing the packings should be polished and cleaned. It should also be checked on the shaft to insure proper mating with the shaft shoulder, and it should be "dressed" or replaced entirely if necessary.
4. After lubricating the thimble as noted above the thimble should be inserted in the packing housing twisting it slowly as it is pushed in. The thimble should be inserted "nose" first from the inboard and (closest to the impeller) of the packing housing.
5. The housing should then be placed in position over the shaft. After making certain that the thimble is butting properly against the shaft shoulder, the housing may be pushed into position. "Hammering" on the housing should be avoided if possible because any "sense of feel" is lost. Proper care in aligning the housing and a small amount of grease on the housing "pilot" surface will tend to minimize difficulty. Sometimes a little support for the transmission case will help in installing the rear packing housing on 700 series pumps.
6. The assembly may now be completed in the usual manner. The atmospheric drain lines (or ports) and the bleed line connected between the high pressure packing housing and the pump suction should be checked for possible obstructions and cleaned out if necessary.

D. Initial Run-In:

The initial "run-in" procedure is important and should be carefully observed.

1. Prime the pump from draft or admit water from hydrant before engaging the pump transmission.
2. With the pump running in series (pressure) position and with the discharge gated to maintain a reasonably low flow "run-in" the pump for 30 minutes as follows:
 - (a) 10 minutes @ 750 RPM engine speed
 - (b) 10 minutes @ 1500 RPM engine speed
 - (c) 10 minutes @ 2250 RPM engine speed