There are three (3) items to consider when mounting the bell housing on a 7 frame plunger pump:

1. Remove existing bearing cover and shim(s).
   a. Determine whether or not the crankcase housing has eight (8) tapped holes. All eight (8) tapped holes will be used when mounting the bell housing.
   b. If crankcase has only four (4) holes tapped, then tap out the remaining four (4) holes with a M6x1.0 flat tap.

2. Replace shim(s).
   a. Pump may have no shims or up to two (2) shims.
   b. If no shim used, discard shim (8 hole) from bell housing assembly.
   c. If one shim (4 hole) used, discard shim (4 hole) and use new shim (8 hole) from bell housing assembly.

3. Before installing new bearing cover the following must be done:
   a. With the bearing cover removed in step 1, please note that the bearing will stay on the crankshaft, but the bearing race will still be in the old bearing cover along with oil seal and o-ring.
b. Remove o-ring, oil seal and bearing race from old bearing cover. Discard old bearing cover.

c. Place new bearing cover on work surface with larger opening facing up.

d. Install bearing race into new bearing cover with the larger opening facing up.

e. Install oil seal into new bearing cover with small spring facing up.

f. Install o-ring onto groove of new bearing cover.

g. Place new shim as supplied with bell housing onto new bearing cover, align with hole pattern.

h. Slide new bearing cover over crankshaft and ensure bearing race fits over the bearing on the crankshaft. Align new bearing cover holes with crankcase hole pattern.

i. Slide small diameter end of bell housing (Cat Pumps Logo facing up) over crankshaft and line up holes.

j. Slide conical lock washers over screws.

k. Apply Loctite® 242® to screw threads and torque to 50 in/lbs, 4.0 ft/lbs or 5.4 Nm.

Note: To determine if the proper amount of shims are used, turn crankshaft by hand. If the crankshaft is hard to turn add more shims. If the crankshaft turns freely with no horizontal movement then no additional shims are necessary. Shims can be added to the blind cover side as well.

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