

Service Instructions for TENV/IP54 (Small Frame) Super-Mod® Parts Kits (Rev. A)

Important

Please read these instructions carefully before installing, operating, or servicing your Stearns clutch, brake or clutch-brake. Failure to comply with these instructions could cause injury to personnel and/or damage to property if the unit is installed or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Industries, Inc., Stearns Division, 5150 S. International Dr., Cudahy, Wisconsin 53110, (414) 272-1100.

OEM's and subsystem suppliers, please forward these instructions with your components to the final user.

Caution

1. Servicing shall be in compliance with applicable local safety codes including Occupational Safety and Health Act (OSHA). All wiring and electrical connections must comply with the National Electric Code (NEC) and local electric codes in effect.
2. To prevent an electrical hazard, disconnect power source before working on the clutch, brake or clutch-brake. If power disconnect point is out of sight, lock disconnect in the *off* position and tag to prevent accidental application of power.
3. Be careful when touching the exterior of an operating unit. Allow sufficient time to cool before disassembly. Surface may be hot enough to be painful or cause injury.

General Instructions

1. With power *off* remove conduit box cover, disconnect power leads from coil lead wires and remove conduit connection from conduit box.
2. Remove access plug from side of Super-Mod and loosen two set screws in drive hub.
3. Remove four tie bolts and remove Super-Mod from drive source.

Clutch Assembly Kit

Note 1: Follow Steps 1 through 3 under *General Instructions* before proceeding.

1. Remove two machine screws from face plate of clutch assembly and slide assembly forward off the housing.
2. Remove wiring insulator plate from inside housing.
3. Feed lead wires from new clutch assembly through the access hole in housing and up into the conduit box.
4. Reinsert wiring insulator plate into housing.
5. Carefully align and insert new clutch assembly into housing while pulling excess lead wire into conduit box.

Note 2: Use care not to damage lead wires when reassembling unit.

6. With clutch assembly mounted flush against the housing, insert two flat head machine screws and tighten.
7. Follow installation instruction for your specific unit when reassembling unit to drive source.

Conduit Box Kit

Note: Follow Step 1 under *General Instructions* before proceeding.

1. Remove two screws securing conduit box to Super-Mod housing and lift conduit box and gasket off the housing.
2. Position new conduit box and gasket using care not to pinch coil lead wires under conduit box. Insert two self-tapping screws and tighten conduit box to housing.
3. Reconnect power lead wires using wiring diagram provided.
4. Secure conduit box cover and gasket using four screws provided. Use care not to pinch lead wires between box and cover.

Armature and Hub Kit

Note 1: Use of this kit requires the use of the hub extraction kit (P/N 5-77-1013-99).

Note 2: Follow Steps 1 through 3 under *General Instructions* and Steps 1 and 2 under *Clutch Assembly Kit* Instructions.

1. Remove the retaining ring that holds the splined hub to the shaft.
 2. Using the hub extraction tool, remove the old armature and hub assembly by securing the drive shaft in place and using the extraction tool to back off the hub.
 3. Remove pressed-in key using caution not to damage keyway or shaft.
- Note 3:** Ensure that armature assemblies are evenly centered on the hub before installing new assembly.
4. Carefully align the hub with the shaft and slide new armature and hub assembly into position.
 5. Align keyways of hub and shaft and drive new swaged key into place using a drive pin and hammer. (Grooved markings on key should face toward center of shaft.)

Note 4: CAUTION! Do not push armature assemblies out of position on hub.

6. Attach the new retaining ring to the shaft.
7. Reassemble clutch assembly following Steps 3 through 7 under *Clutch Assembly Kit*.

Output Shaft and Bearing Kit

Note 1: Follow Steps 1 through 3 under *General Instructions*, Steps 1 and 2 under *Clutch Assembly Kit* and Steps 1 and 2 under *Armature and Hub Kit*.

Note 2: Use of this kit requires the use of the hub extraction kit (P/N 5-77-1013-99).

1. Remove retaining ring from output shaft.
2. Place housing face down (shaft up) on a flat surface and use a press to push the shaft out of the bearings.
3. Turn housing over and support evenly off the C-face register approximately 3/4" off the flat surface to allow for bearing clearance.

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4. Using 1-1/4" round stock 2" long, insert through center of inner bearing and flush against outer bearing. Press outer bearing out of housing.
 5. Remove large internal retaining ring from inner bore of housing.
 6. Using 1-3/4" round stock 2" long, push the inner bearing from the output side inward to remove.
 7. Clean any Loctite® retaining compound residue from housing bore area.
 8. Use Loctite 609 (green) or equivalent retaining compound on inner bearing surface and press larger bearing into place first. Use a 2-3/8" diameter tube to press bearing evenly into place until fully seated.

Note 3: Allow approximately 5 minutes for Loctite material to set up before proceeding.

9. From the output side of the unit, support the inner race of the inner bearing (1-1/2" I.D. X 2" maximum O.D. X 3-1/4" long pipe). Press the output shaft through the inner bearing (from inside the housing outward) until the shaft collar is flush against the bearing.
10. Turn the housing over and support the inner of the output shaft with a piece of 1" X 1" bar stock at least 2-1/4" long.
11. Insert the internal retaining ring over the output shaft and down into the groove in the bearing bore area of the housing. Be sure ring is completely seated in its groove.
12. Use Loctite 609 (green) or equivalent retaining compound on the outer bearing bore surface and press the outer bearing into place using a 2" O.D. X 1-1/8" I.D. tube at least 2-1/4" long.

Caution! Be sure tube clears the shaft and that the bearing is pressed in evenly. Do not use excessive force causing preload on the bearing.

13. Insert outer retaining ring into place over the output shaft.
14. Reassemble armature/hub assembly and clutch assembly following *Armature and Hub Kit* instructions Steps 4 through 7.

Housing Kit

Note: For assembly of output shaft and bearings follow Steps 8 through 13 under *Output Shaft and Bearing Kit*.

1. Follow *General Instructions* Steps 1 through 3.
2. Follow *Clutch Assembly Kit* Steps 1 and 2.
3. Follow *Armature and Hub Kit* Steps 1 and 2.
4. Reassemble armature and hub to new shaft following *Armature and Hub Kit* instructions Steps 4 through 6.
5. Reassemble clutch assembly following *Clutch Assembly Kit* Steps 3 through 6.
6. Transfer conduit box from the old housing to the new housing using *Conduit Box Kit* Steps 1 through 4.
7. Follow installation instructions for your specific unit when reassembling unit to its drive source.