Autogap™ Installation for Sizes 475 & 650 Basic Brakes & Clutches

Installation Instructions

Assembly Instructions
Brake or Clutch Coupling Installation

WARNING Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

Step 1
Place straight springs over armature bosses on back side of armature. (Figure 1)

Step 2
Place armature hub over straight springs assembled in Step 1. (Figure 2)

CAUTION Straight springs must fit into grooves in armature hub.

Figure 1

Step 3
Compress conical spring against retainer ring by sliding detent spring towards head of pin. (All 4 pins) (Figure 3)

Figure 3

Step 4
Insert assembled drive pins through armature hub, through straight springs and into threaded holes in back side of armature. Drive pins require application of Grade “AA” Loctite®, Sealant on threads. (Figure 4)

Figure 4

* The size 475 armature will differ in appearance from the one shown, but the assembly procedure is the same.
**Assembly Instructions Clutch Brake Coupling Installation Size 650 Only**

**Step 1**
Place straight springs over armature bosses on back side of both armatures. (Figure 1)

![Figure 1](image1)

**Step 2**
Compress conical spring against retainer ring by sliding detent spring towards head of pin. (All 8 pins)

![Figure 2](image2)

**Step 3**
Insert (4) of the compressed drive pins through the armature hub so that the threaded end of the pins come through on the side of the armature hub with the groove around the hole. (Figure 3)

![Figure 3](image3)

**Step 4**
Repeat Step 3 above for the remaining (4) drive pins inserting them from opposite side of armature hub.

**Step 5**
Draw drive pins up tightly until shoulder of pin is against face of armature boss, (since threads are class No. 3 fit, pins may seem to bind).

**Step 6**
Compress the retainers against the armature hub and check to see that the armature hub is held tightly to the armature bosses.

**NOTE:** This position must not be disturbed during completion of assembly.

**Step 7**
Slide the armature and armature hub with taperlock bushing over the shaft. Place the face of the armature approximately 1/32" from the magnet face and secure the taper lock bushing to the shaft. This gap will be automatically maintained throughout the life of the unit. The unit should be checked for concentricity and squareness to the shaft by means of a dial indicator. The unit should be concentric to the shaft within .010 T.I.R. and square to the shaft within .006 T.I.R. (Figure 5)
through remaining (4) holes. (Figure 4)

**Figure 4**

**Step 5**
Holding the pins in position, place the armature hub over one armature. **NOTE:** Make sure that the straight springs on the armature bosses fit into the grooves in the armature hub. Drive pins require application of Grade “AA” Loctite®, sealant on threads. (Figure 5)

**Figure 5**

**Step 6**
Draw these (4) drive pins up tightly until shoulder of pin is against face of armature boss (since threads are class No. 3 fit, pins may seem to bind).

**Step 7**
Place the armature hub and armature assembled in step 5 & 6 over the remaining armature. **NOTE:** Make sure that the four remaining straight springs on the armature bosses fit into the grooves in the armature hub. Drive pins require application of Grade “AA” Loctite®, sealant on threads. (Figure 6)

**Figure 6**

**Step 8**
Draw drive pins up tightly until shoulder of pin is against face of armature boss, (since threads are class No. 3 fit, pins may seem to bind). **NOTE:** Rotate tightening of drive pins, tightening each drive pin a few turns at a time. (Figure 7)

**Figure 7**

**Step 9**
Compress one of the armatures and armature hub together until the armature hub bottoms on the armature boss. Slide the retainer, on each pin, down tightly against the armature hub. Turn the assembly over and repeat this procedure for remaining armature. **NOTE:** This position must not be disturbed during completion of assembly. (Figure 8)

**Figure 8**

**Step 10**
Slide the assembly with taperlock bushing over the shaft. Place the face of the armature approximately 1/32" from the brake magnet face and fix the taperlock bushing to the shaft.

**Step 11**
Place the clutch magnet approximately 1/32" from the armature face, and tighten the taperlock bushing to the shaft. The unit should then be checked for concentricity and squareness to the shaft by means of a dial indicator. The unit should be concentric to the shaft within .010 T.I.R. and square to the shaft.

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**Machining Instructions for Gear, Sprocket, or Pulley—Size 650 Only**

As in the case of a clutch, the customer may wish to mount the armature to his pulley, hub, etc. The above dimensions must be followed for adaptation to the armature.

1. The chordal dimension must be held for all chords between pin holes.
2. Sleeve bearings (Oilite Bronze) must be provided in the holes of pulley or hub with an I.D. of .376 ± .001 at the chordal and bolt circle dimensions shown above.
3. The drive pins must be square with plane of mounting surface and magnet within .006 T.I.R. Our standard armature hub may be used for the mounting of a gear, sprocket or pulley.
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