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# Warner Electric
# Clutch Mounting for Mobile Climate Control Bus Applications

Mobile Climate Control

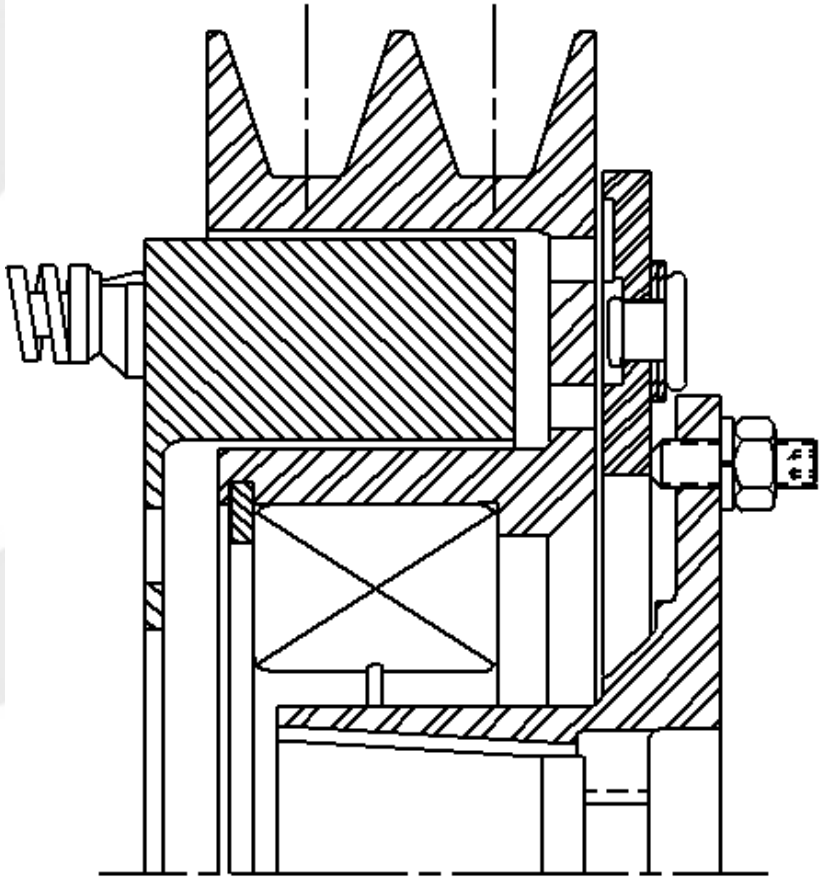
Warner Electric

Y66-14119
INST INSTRUCTIONS, CLUTCH ASSY 05G
REV 1(10/11/2016)

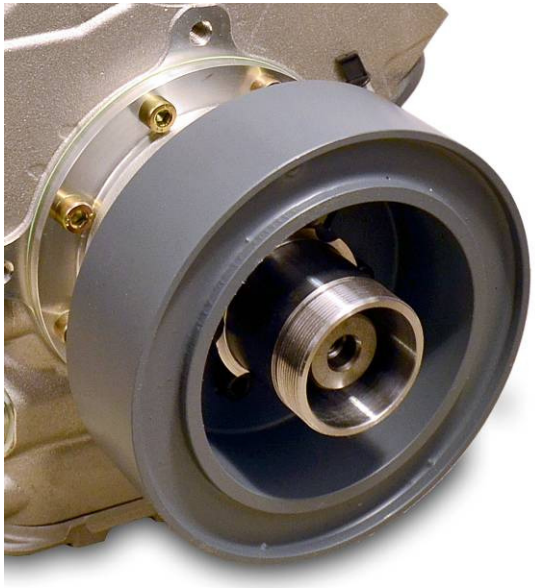
# Bus Air Conditioning

## 05G Compressor

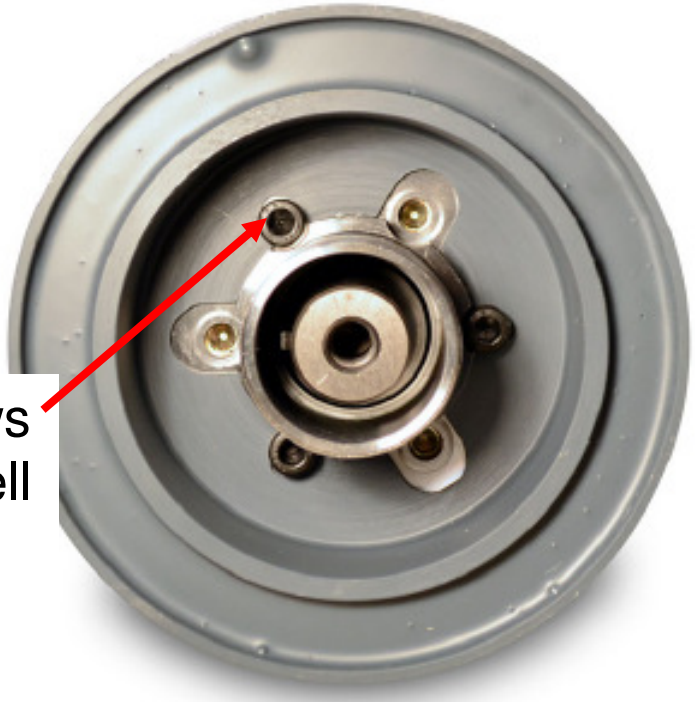
- **Warner Electric**
  **Current Production**
  **Nose Mounted**
  **Bus Clutches**



# INSTALLING THE FIELD

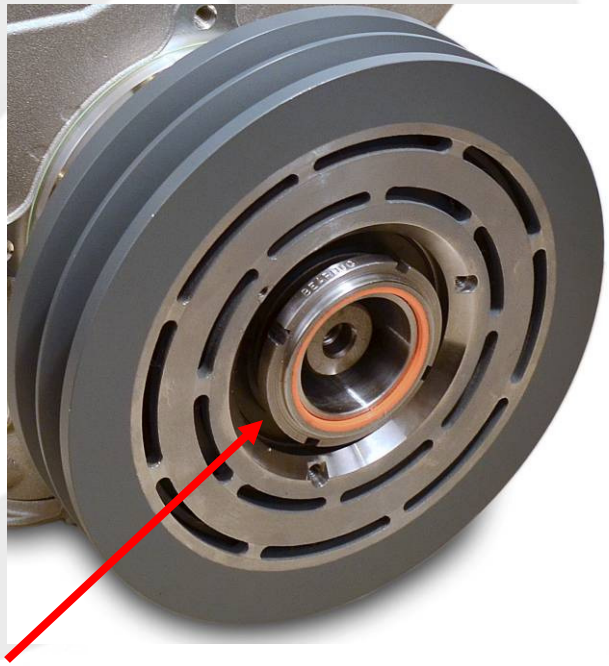


Before installing the field make sure the lead wires are in the proper orientation.



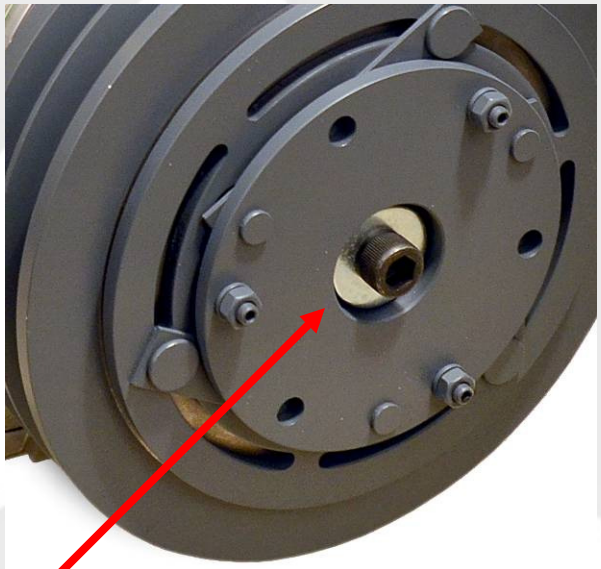
Three of the nose mount hub screws also retain the field assembly as well as retaining the hub. Torque the mounting bolts to 45-50 ft-lbs.

# INSTALLING THE ROTOR



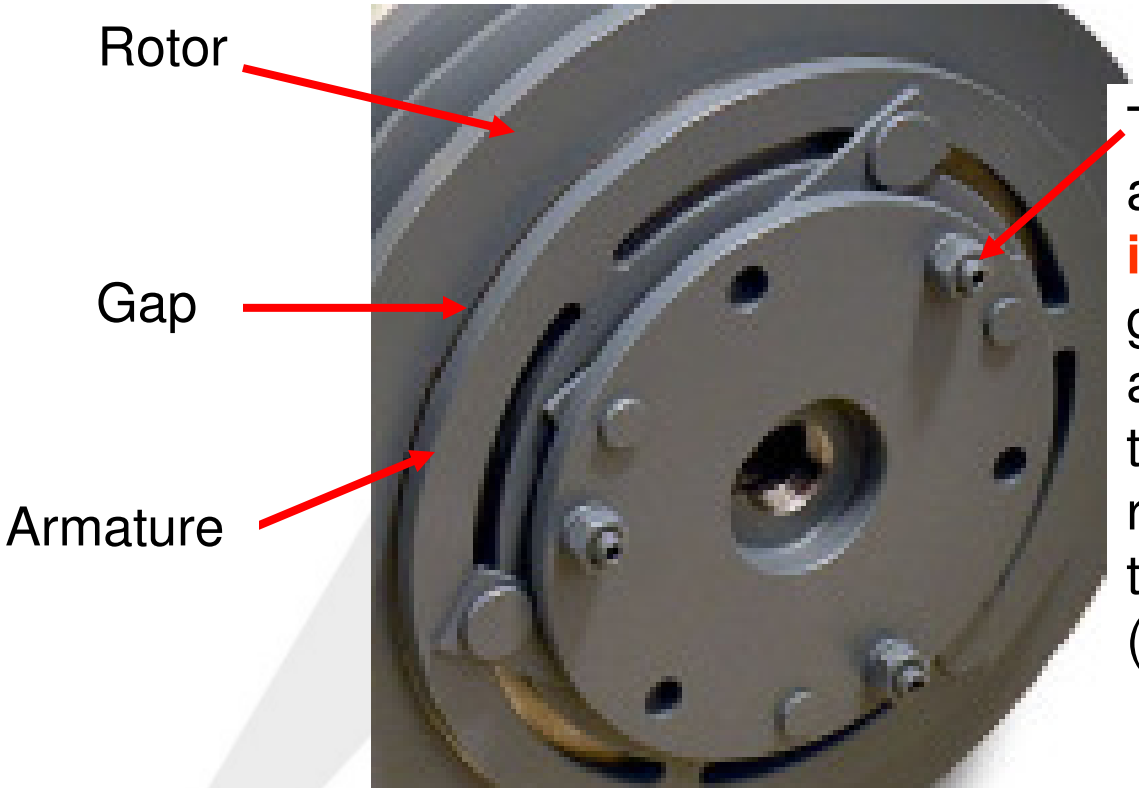
The rotor is mounted on the hub and the N-11 bearing nut is torqued to retain the rotor bearing. Torque to run on torque plus 50 ft-lbs.

# INSTALLING THE ARMATURE



The armature is mounted on the compressor shaft and the bolt is torqued (18-20 ft-lbs) to retain the armature.

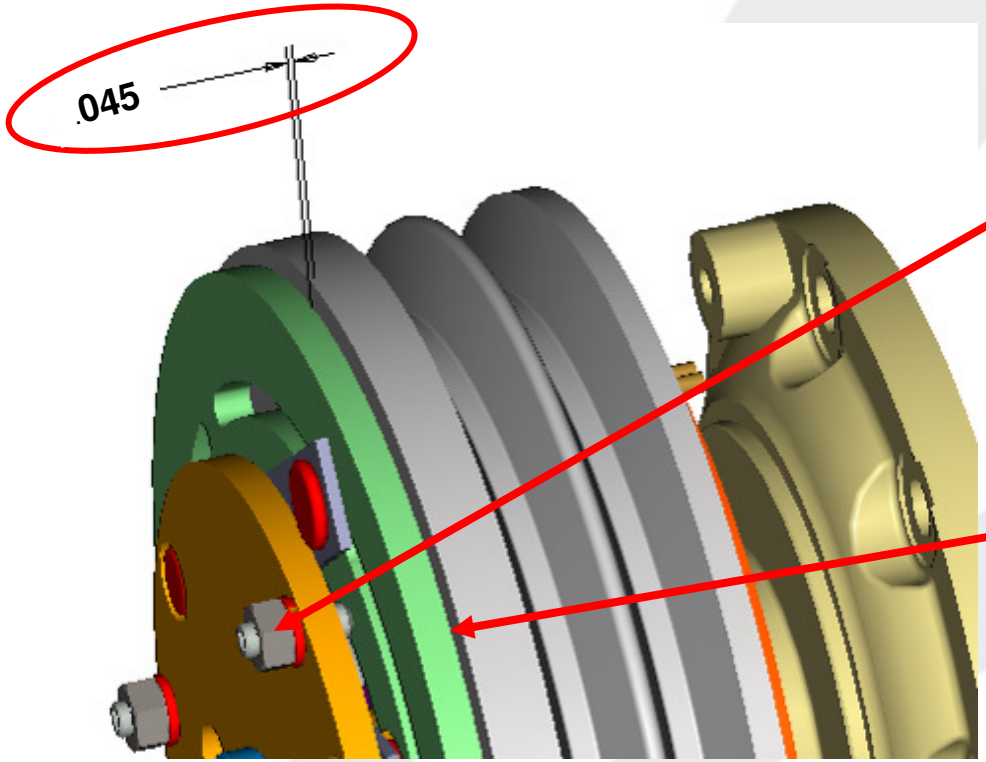
# SETTING THE ROTOR TO ARMATURE GAP




The armature set screws are used to set a **.045 inch (.030 to .060 inch)** gap between the rotor and armature. Turning the screws in (Clockwise) reduces the gap and turning the screws out (CCW) increases the gap.

**THERE SHOULD BE AT LEAST 30 PSI OF VAPOR PRESSURE IN THE COMPRESSOR TO SET THE GAP.**

# ADJUSTING THE ROTOR TO ARMATURE GAP




- Loosen the armature adjustment lock nuts
- Turn the armature adjustment set screws to obtain a **.045 in** gap between the rotor and armature
- Re-torque the lock nuts to **3-5 Ft-Lbs**

# AIR GAP ADJUSTMENT NOTES (from zero gap)

**THERE SHOULD BE AT LEAST 30 PSI OF PRESSURE IN THE CRANKCASE TO SET THE AIR GAP.**

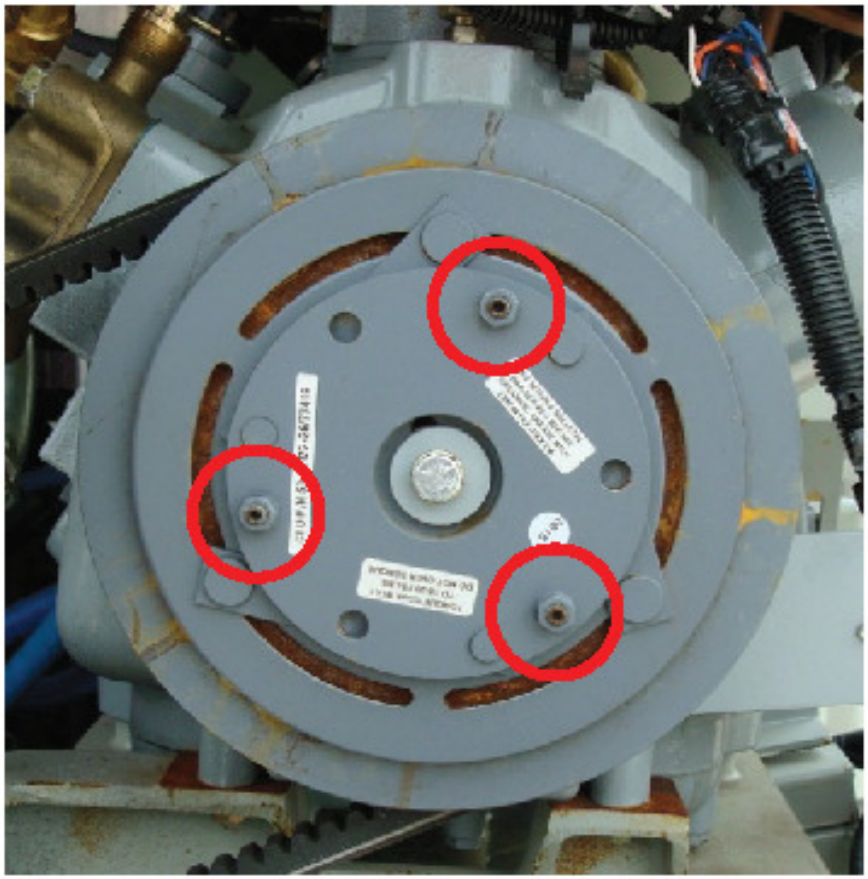
- The air gap can be adjusted by turning the adjustment screws all the way in (Clockwise) until the armature contacts the rotor. Then turn the screws out (Counter Clockwise) one and one quarter (1¼) turns to get the proper gap. Check the rotor to armature gap and if it is .045 in tighten the lock nuts to 3-5 ft-lb.

# OPTIONAL AIR GAP ADJUSTMENT (from as installed gap)

- The air gap can also be adjusted by turning the adjustment screws all the way out (Counter Clockwise) and then turning the screws in (Clockwise) until the screws just touch the back of the armature. Then measure the rotor to armature gap, subtract .045 inch from that gap divide that number by .035, this is the number of turns the setscrews need to be turned in (CW) to get the proper gap. Recheck the gap and if it is .030 - .060 tighten the lock nuts to 3-5 ft-lb.

# MCI INSTRUCTIONS TO SET AIR GAP

## Magnetic Clutch Assembly - Without Shims



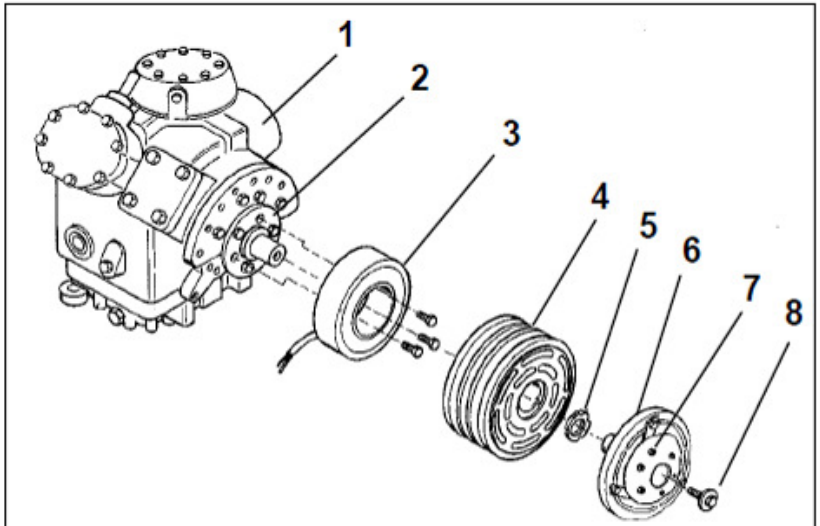
Introduced 2/2008, same adjustment (0.030”-0.060”) with 0.045” ideal setting with at least 30psi vapor pressure in compressor

Adjusting screws (3) used instead of shims

As always, accuracy and consistency will lead to longer clutch life

# CARRIER SERVICE MANUAL INSTRUCTIONS TO REPLACE A CLUTCH

- **SECTION 4.14.3**
- Instructions to reinstall a clutch that has been replaced in the field




1. Compressor
2. Seal Cover
3. Coil
4. Rotor
5. Rotor Nut
6. Armature
7. Spacer Nuts
8. Retaining Capscrew, Lockwasher, 3/8 Washer

**Figure 4-13. Compressor Clutch**

# CARRIER SERVICE MANUAL SECTION 4.14.3

h. Remove every other bolt from the seal cover of the new compressor in the same manner as the original compressor. Mount the coil assembly with the wire in the same orientation as it was mounted on the original compressor. Tighten the mounting bolts to 45–50 ft/lbs (5.53–6.92 mkg).

i. Mount the rotor on the shaft. Seat the rotor to the hub, using the rotor nut. Be sure pulley turns freely without binding. Tighten rotor nut by first noting torque necessary to start the nut on the hub and then adding 50 ft/lbs (6.92 mkg) of torque.

# CARRIER SERVICE MANUAL SECTION 4.14.3

j. Install armature on shaft using original key and tighten mounting bolt to 20 ft/lbs (2.8 mkg).

k. Perform a check of the air gap between the inside face of the armature and the mating face of the rotor. The air gap should be measured with a minimum of 30 psig (2.04 bar) in the crankcase. A preliminary check may be performed before the crankcase is pressurized but a final check must be performed before the clutch is operated. The gap should be between 0.030 and 0.060 inch (7.62 to 15.24 mm).

# CARRIER SERVICE MANUAL SECTION 4.14.3

l. Loosen each of the three lock-nuts with a 7/16" box wrench while holding the jacking screws with a 1/8" hex socket wrench.

m. Back off the three jacking screws until they do not touch the armature plate.

n. Turn the jacking screws clock-wise until they make contact with the armature plate and then one and one half more turns after contact.

o. Measure the initial clearance, the gap should be between .030" and .060". All three set screw locations should be very close in clearance dimensions.

p. With the clearance set, hold each set screw while tightening the lock nuts to 7 ft/lbs.

q. Reconnect wiring and test clutch operation.

# Clutch Installation Synopsis

- Field
  - Three of the nose mount hub screws also retain the field assembly as well as retaining the hub. Torque the mounting bolts to **45-50 ft-lbs**.
- Rotor
  - The rotor is mounted on the hub and the N-11 bearing nut is torqued to retain the rotor bearing. Torque to **run on torque plus 50 ft-lbs**.
- Armature
  - The armature is mounted on the compressor shaft and the bolt is torqued to **18-20 ft-lbs** to retain the armature.
- Adjustment
  - The armature set screws are used to set a **.045 inch** gap between the rotor and armature.
  - Re-torque the armature lock nuts to **3-5 Ft-Lbs.**