

**BULLETIN #:** 03T-1A

SUPERSEDES: 03T-1 dated Feb-13-2003

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AUTHOR: M. Mowers

**SUBJECT:** 06E, 06CC, & 06T Terminal Wiring Instructions TECHNICAL MARKETING

Page 1 of 3

 06D 06E 06CC 06M 06U 06V**Products Affected:** 5F 5H 05G 05K 06TA/TR 06TS-TT-TU-TV

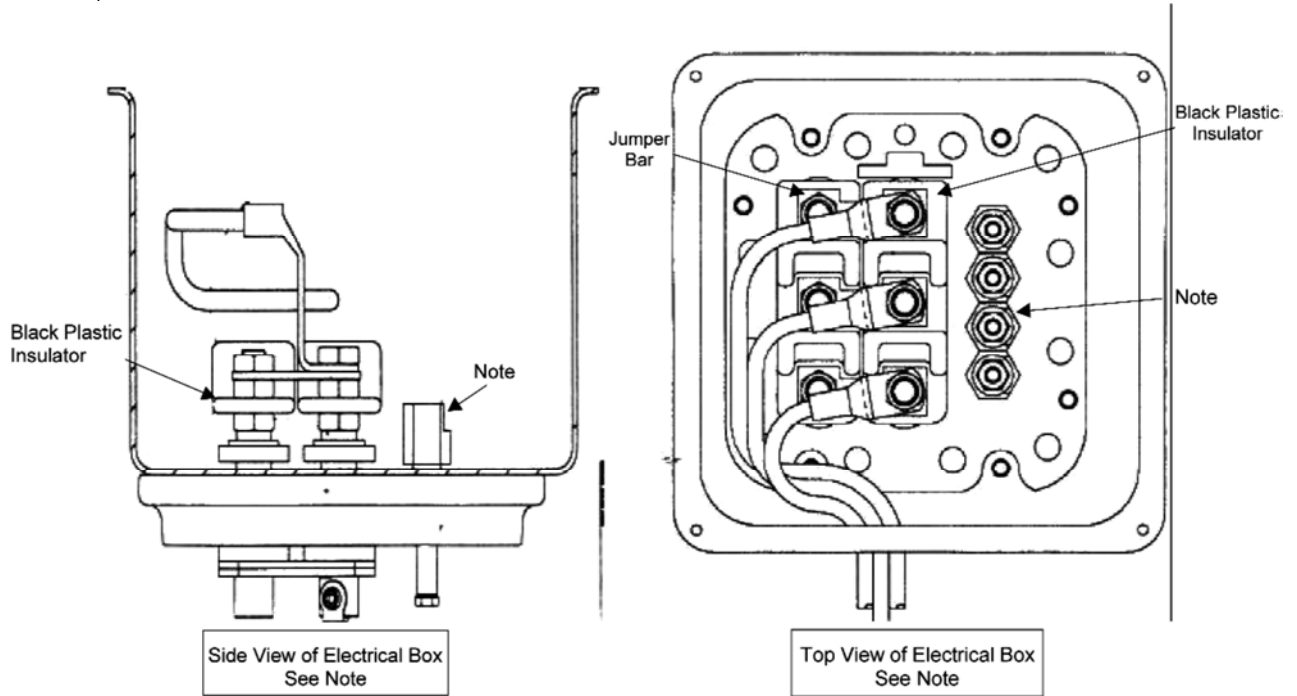
Updates have been made to the terminal wiring instructions to all 06E, 06CC (50-99CFM) semi-hermetic reciprocating and 06T screw compressors built after 2003, as well as good practice recommendations during installation. Additionally Carlyle has increased the recommended torque of the jam nut #3 (Figure 2) used to tighten the field power wires.

This change is to ensure the power wiring is secure in the field. The legacy and now obsolete bulletin 98T-1 recommended up to 12 ft-lbs max torque to tighten the power wiring (jam nut #3). Carlyle has increased the required torque to **18 ft-lbs max** and dropped the requirement of adding Loctite (thread lock) to the jam nut #3. This increase in allowable torque is based on the following limitations:

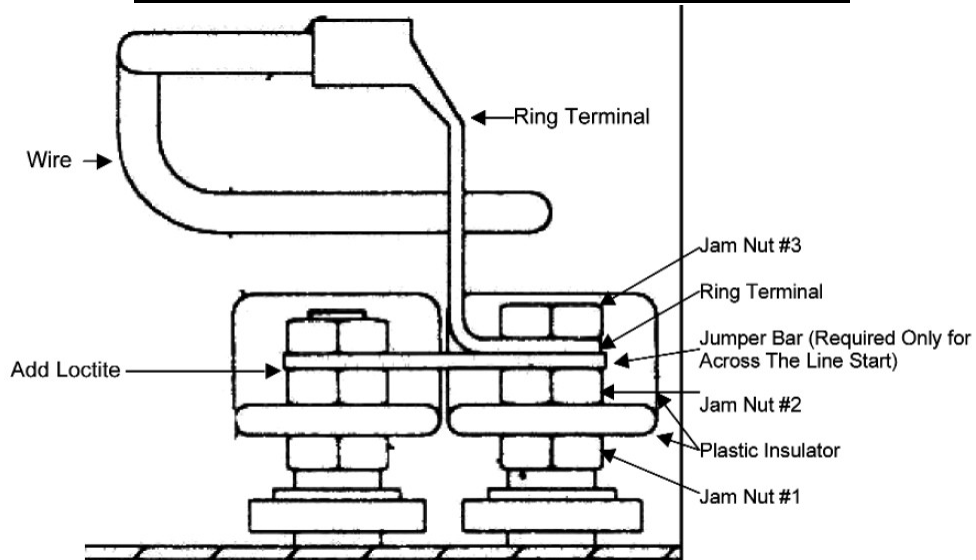
- Allowed on any terminals where a jumper bar is used over jam nut #2 (Figures 1 thru 7). This allows the increased torque to any across-the-line wiring arrangements shown in attached Figures 3 & 4 on all current and older compressors.
- For compressors being wired per figures 5, 6, & 7 the #2 jam nut must be restrained when the higher torque is applied to jam nut #3. Carlyle recommends using serviceable Loctite to restrain jam nut #2. To assist in this application, jam nut #2 at terminals T1, T2, T3 & T7, T8, T9 will have Loctite applied at Carlyle factory on all 06E, 06CC, & 06T compressors beginning with serial number (06E, 06CC (50-99 CFM) starting 0203J00322 and for 06T starting 0403J09339). Compressors built after this serial number will be able to be applied with the higher 18 ft-lbs max torque.
- Compressors built before this serial number should have Loctite applied on the terminal bolts in the area where jam nut #2 is installed for wiring arrangements shown in figures 5, 6 & 7. The following procedure is recommended:
  - Install plastic insulator on top of jam nut #1.
  - Install jam nut #2 on top of plastic insulator and torque to 3 ft-lbs.
  - Put a small amount of serviceable Loctite (Grade AA Green #089 can be used) on top of jam nut #2 at terminal bolt thread surface. Loctite recommends letting the material set for 72 hours before disturbing.
- Terminals T4, T5 & T6 will always have a jumper bar applied with them. Therefore higher torque can be applied without adding any Loctite. These terminals may also have the plastic isolator removed to add the 3-hole jumper as shown in Figures 4 & 7. Loctite will not be applied to these terminals at Carlyle for this reason nor is it recommended in the field.

**FIGURE 1: 06E, 06CC (50-99CFM), & 06T Terminal Box & Wiring:**

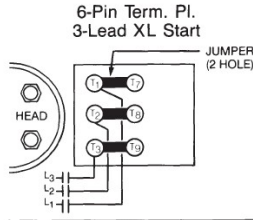
Note: 06T terminal arrangement shown. The 06E and 06CC (50-99 CFM) terminal box may or may not have three electrical posts in place of the 4 thermistor pins shown below.



**FIGURE 2: Detail View of Terminal Post Arrangement:**

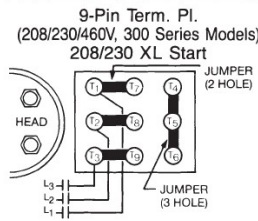


**06E COMPRESSORS (ACROSS-THE-LINE (XL) START):**



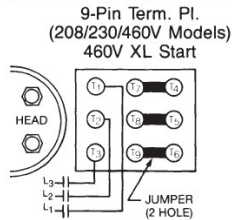
**Figure 3: 6-Pin Terminal Plate**

- For all across-the-line start
- Jumper bars at all terminals
- 06T's wired with 6-pin terminals
- See Figure 2 for jumper bars & power terminal connections
- Torque power wires to: 18 ft-lbs **max**
- Loctite not required on jam nut #2 for any terminals with jumper bars



**Figure 4: 9-Pin Terminal Plate**

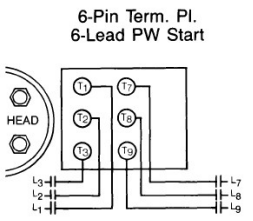
- For 208/230V across-the-line start with 9-pin terminal plate
- Jumper bars at all terminals
- Not an option with 06T's
- See Figure 2 for jumper bars & power terminal connections
- Torque power wires to: 18 ft-lbs **max**
- Loctite not required on jam nut #2 for any terminals with jumper bars



**Figure 5: 9-Pin Terminal Plate**

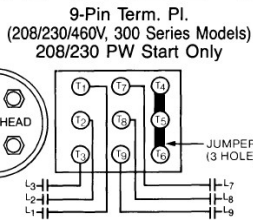
- For 460V across-the-line start with 9-pin terminal plate
- No jumper bars at terminals 1, 2 & 3
- Not an option with 06T's
- See Figure 2 for jumper bars & power terminal connections
- Torque power wires to: 18 ft-lbs **max** if loctite applied to jam nut #2 at terminals T1, T2 & T3

**06E COMPRESSORS (PART WINDING (PW) START):**



**Figure 6: 6-Pin Terminal Plate**

- For all part-winding start
- No jumper bars at all terminals
- 06T's wired with 6-pin terminals
- See Figure 2 for jumper bars & power terminal connections
- Torque power wires to: 18 ft-lbs **max** if loctite applied to jam nut #2 at all terminals



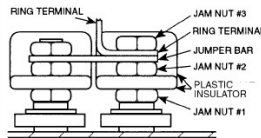
**Figure 7: 9-Pin Terminal Plate**

- For 208/230V part-winding start with 9-pin terminal plate
- No jumper bars at terminals 1, 2 & 3 and 7, 8 & 9
- See Figure 2 for jumper bars & power terminal connections
- Torque power wires to: 18 ft-lbs **max** if loctite applied to jam nut #2 at terminals T1, T2, T3, T7, T8 & T9



**WARNING**

With 208/230/460V 300 Series Models, the 460V cannot be wired for PW start. Use distinct 460V 600 Series Models for any 460V PW application.



Terminal Post Arrangement, Detail View (06E and 06CC 50 to 99 Cfm)