

80032003-i - ATC MAGNET RELAY KIT **INSTALLATION INSTRUCTIONS**

Tools Required:

- Ratchet
- 3/8", 7/16" & 1/2" Sockets
- #2 Phillips screwdriver
- Standard screwdriver (1/8" narrow blade)
- Slip joint plier
- Drill
- 7/32" & 5/16" drill bits
- Center punch
- Hammer
- Wire cutter/stripper
- Wire crimper

Notes:

- ① *The following instructions are written for ATC units that are removable from the host pallet truck. For units permanently mounted to the host pallet truck, some steps must be performed from inside the ATC compartment.*
- ① *Refer to kit part # 80032003 or 80032005 for the complete bill of materials supplied.*



MAGNET RELAY KIT AS INSTALLED

IMPORTANT:

- **Read and understand the Safety and De-energization Procedure TP-616 before starting this procedure.**
- **Read and understand these instructions completely before starting this procedure.**

Procedure:

1. Fully extend the extractor arm.
2. Lockout/tagout the ATC per your corporate policy.
3. De-energize the ATC per BHS Safety and De-energization procedure TP-616.
4. Remove the rear panel of the carriage. See Figure 1.



FIGURE 1

5. Remove the pull switch from the dash panel by unscrewing the knob from the switch and then unscrewing the switch retaining ring. The switch will drop from the dash panel. See Figures 3 & 4.



FIGURE 3

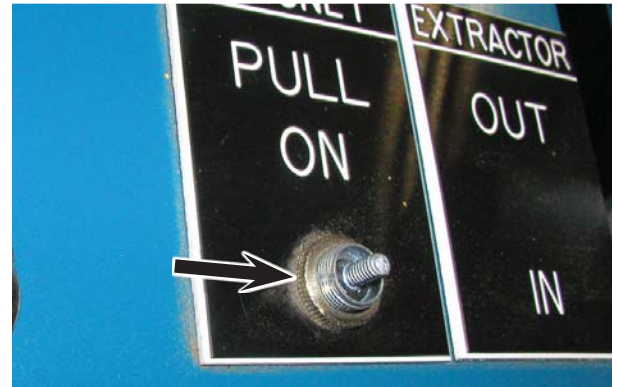


FIGURE 4

6. Locate the 16-2 cable from the magnet alarm junction box (located on the rear mid rail) to the power unit, shown in Figure 5.

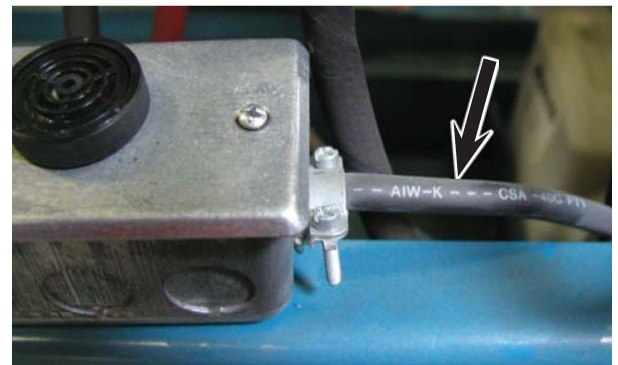


FIGURE 5

7. Remove the solenoid retaining nuts and disconnect the cable located in Step 6 from the solenoid. See Figure 6.



FIGURE 6

- Remove the junction box lid screws and lift the lid from the box. See Figure 7.



FIGURE 7

- Disconnect the wires from the audible alarm and remove the alarm/lid assembly. See Figure 8.
 Ⓢ *NOTE: The old magnet alarm may be kept and used as a replacement if still in working condition.*

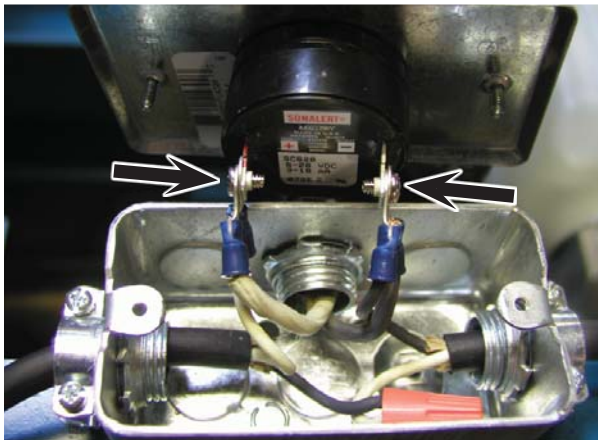


FIGURE 8

- Loosen the cable clamp and remove the coil cord from the alarm junction box. This cable will be reconnected later. See Figure 9.

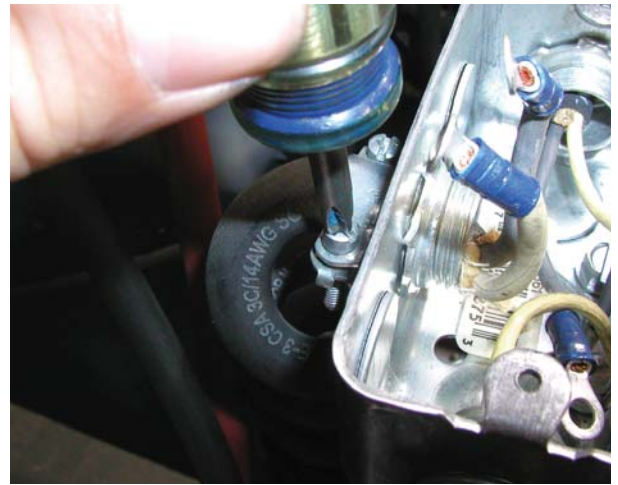


FIGURE 9

- Remove the alarm junction box by removing the (2) self tapping bolts attaching it to the ATC. See Figure 10.
 Ⓢ *NOTE: The pull switch cable and the cable disconnected from the solenoid still attached to the alarm junction box can be discarded. The old pull switch can be kept and used as a replacement if still in working condition.*

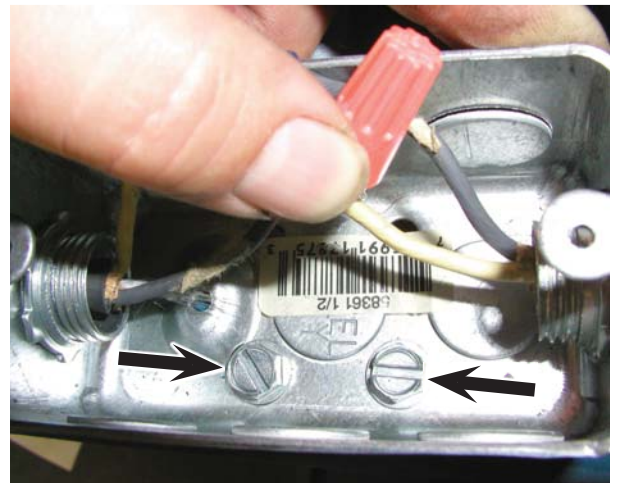


FIGURE 10

12. Mark the location for the first mounting hole on the left, vertical face of the rear spanner 3 1/4" from the end and 5/8" up. See Figures 11 & 12.

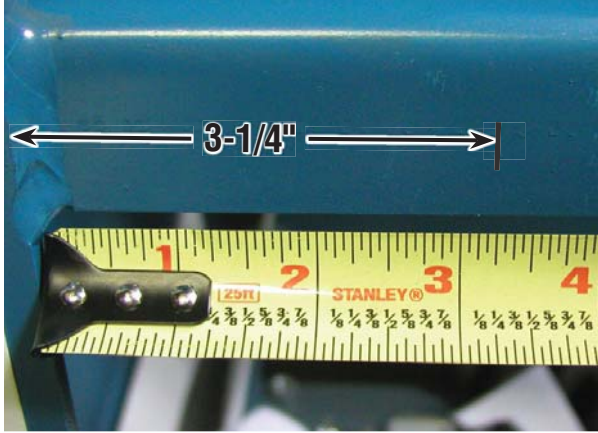


FIGURE 11

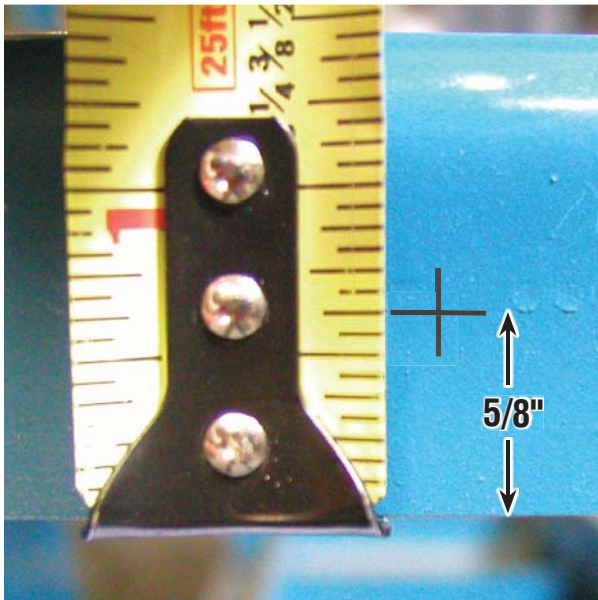


FIGURE 12

13. Make a second mark 4" to the right of the first, 5/8" up. See Figure 13.

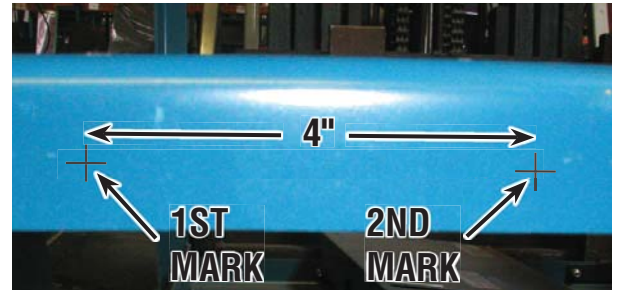


FIGURE 13

14. Center punch each mark. Drill 7/32" pilot holes at each location. Drill the pilot holes to 5/16". See Figures 14 & 15.

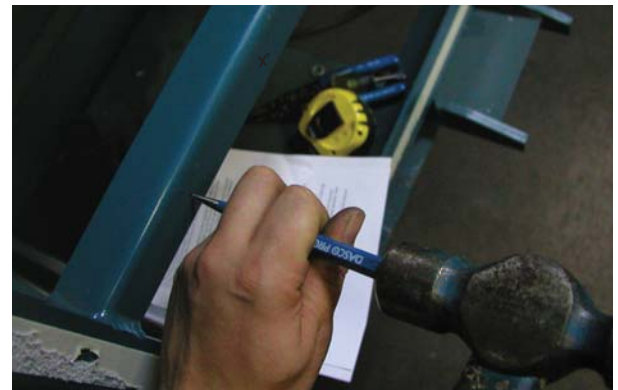


FIGURE 14



FIGURE 15

15. Mount the enclosure as shown using the 1/4" hardware provided. The mounting bolts must be inserted from the rear of the carriage to prevent interference with the rear panel. See Figure 16.

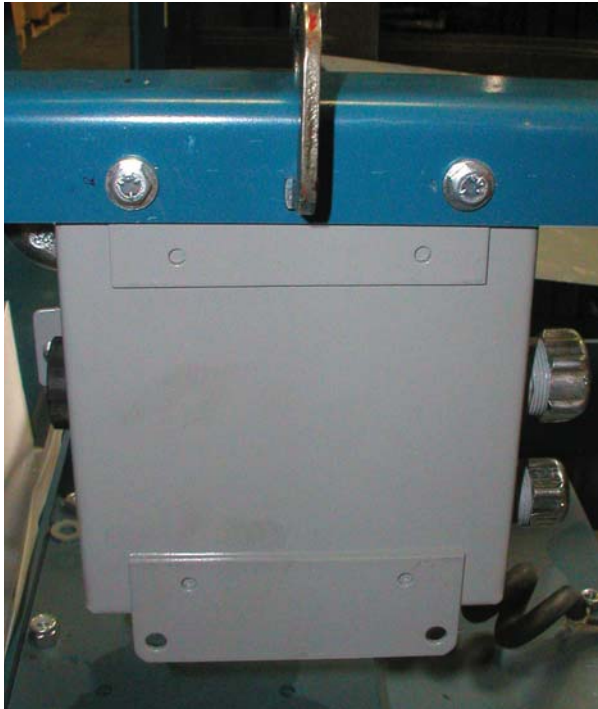


FIGURE 16

16. Remove the knob and retaining ring from the pull switch. Route the new pull switch to the dash panel and insert it through the mounting hole. Install the switch by threading on the retaining ring and install the knob.
17. Route the 16-2 cable from the enclosure to the power unit solenoid. Leaving a small amount of slack, trim the excess from the cable. See Figures 17 & 18.

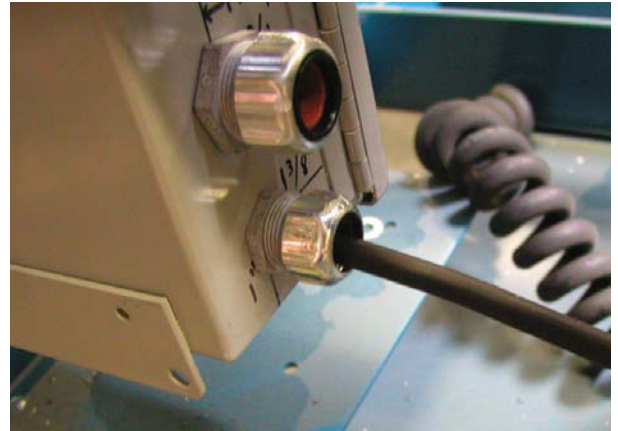


FIGURE 17



FIGURE 18

18. Remove 2" of the outer insulation from the end of the cable. Strip 1/4" from the ends of the black and white wires. Crimp the supplied ring terminals to the ends of the cable. See Figure 19.

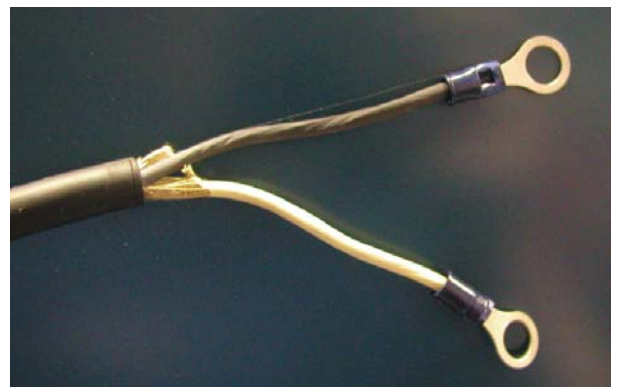


FIGURE 19

19. Connect the white wire to the positive solenoid terminal. Connect the black wire to the negative post on the power unit motor. See Figures 20 & 21.

① *NOTE: The location of the negative post on the power unit may vary depending on the age of the ATC.*



FIGURE 20

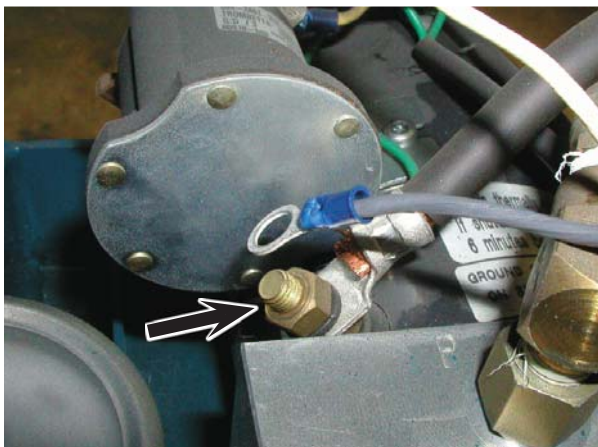


FIGURE 21

20. Cut the white and black wires of the magnet coil cable flush with the outer insulation. Remove 5" of the outer insulation. Trim off the green wire as it is not used. Feed the cable through the strain relief of the electrical enclosure and tighten the nut on the strain relief to secure the cable. See Figures 22 & 23.

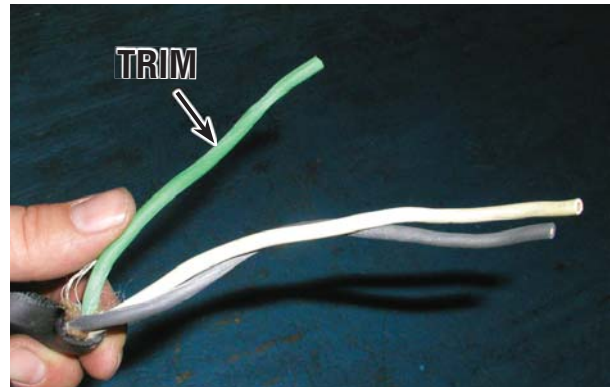


FIGURE 22



FIGURE 23

21. Strip 1/4" of insulation from the ends of each wire. Crimp a supplied push-on terminal on the white wire. Connect this wire to terminal #8 on the relay (this will be the only open terminal on the relay). See Figure 24.

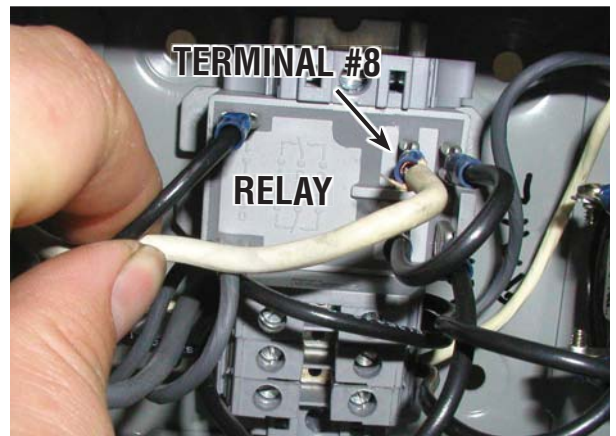


FIGURE 24

22. Connect the black wire from the coil cord and the black wire from the cable coming from the power unit motor to TB1-1. See Figure 25. An electrical schematic is included on the following page for reference.

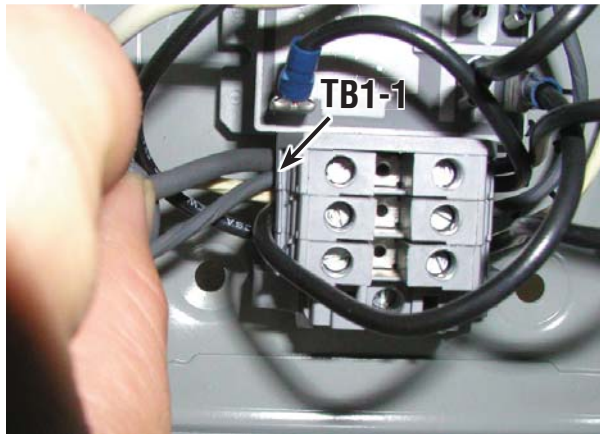
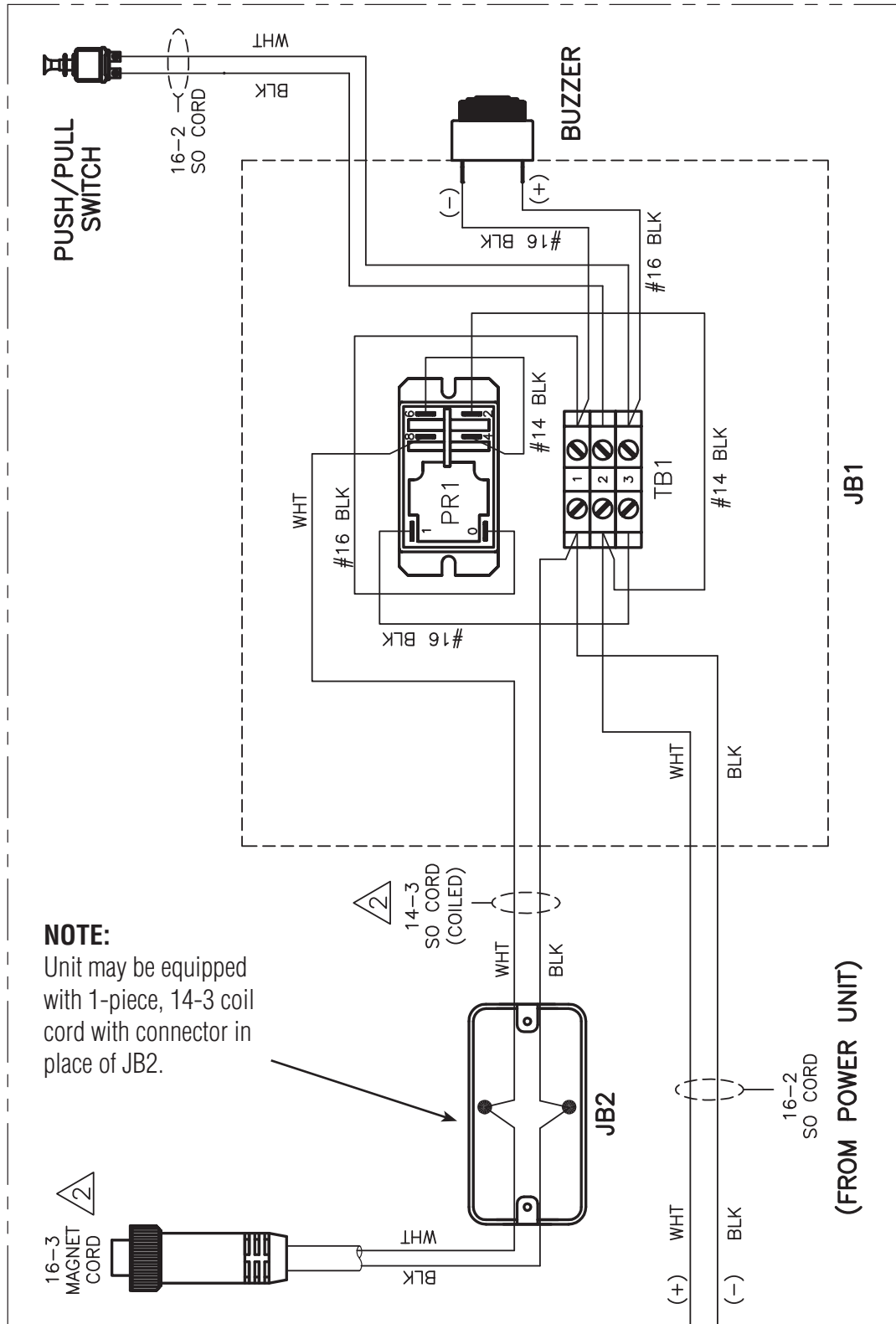


FIGURE 25

23. Verify that all electrical connections are secure. Close and latch the enclosure door.
24. Temporarily connect DC power to the ATC. Test the circuit by verifying the magnet and alarm operate properly. Once proper operation is verified, remove DC power.
25. Reattach the rear panel.



NOTE:

Unit may be equipped with 1-piece, 14-3 coil cord with connector in place of JB2.

ELECTRICAL SCHEMATIC