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INSTALLATION INSTRUCTION

Club Car Precedent Installation Notes

**CURTIS 1234, 1236 OR 1238
AC INDUCTION MOTOR/
CONTROLLER
REVISION: B**

This kit is designed to integrate a HPEV AC Induction Motor and a Curtis AC controller model 1234, 1236 or 1238 to a Club Car Precedent. Verify the kit contains the following:

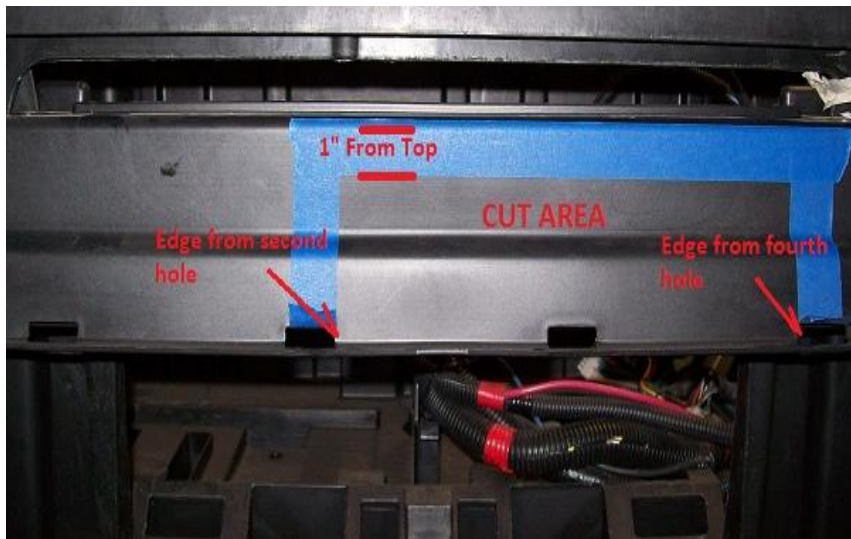
- 1- AC motor
- 1- Curtis Motor controller (1234, 1236 or 1238 model)
- 1- Controller mounting plate
- 1- Upper mounting plate bracket
- 2- Lower support brackets
- 1- Wire Harness kit (system and dash harness)
- 1- Multi Function Display (mounting hardware included)
- 1- Menu button
- 3- Motor cables (14 ½")
- 1- Contactor to controller (+) red cable (15")
- 1- Battery to contactor (+) red cable (20")
- 1- Battery to controller (-) black cable (20")
- 4- Battery interconnect cables (17")
- 1- Battery interconnect cable (8")
- 3- ¼ x 2" screws
- 4- ¼ x 1 ¼" screws
- 4- ¼ x 1" screws
- 9- ¼ x ½" screws
- 11- ¼" flat washers
- 11- ¼" lock washers
- 2- ¼ x ¾" self tapping screws

INSTRUCTIONS:

COMPONENTS REMOVAL & PREPARATION

1. Turn ON/OFF Switch to OFF position and remove key from key switch.
2. Remove all battery cables. These will be replaced with heavier gauge cables that are included in the kit.
3. Remove the two middle batteries to facilitate access to the stock controller. Remove the rear motor cover.
4. Remove the car dash (consult with service manual). Unplug any connectors. The dash will be modified at later steps.

5. Remove the rear controller dust cover (motor area). Disconnect all the connectors. Do not cut any wires at this time. The original stock wire harness will be re-used.
6. Remove the stock motor. Save the 5/16" bolt that was used to fasten the lower portion of the motor; it will be reused when installing the new AC motor.
7. Remove the stock controller plate by unscrewing the black screw located at the top plate. Remove and save the following items from the stock controller plate:
 - a. Charge computer
 - b. Stock Contactor. Note: The contactor is removed by sliding it up. Do not break the retainer legs. Discard the resistor across the main terminals.
 - c. Controller plate black screw
8. Mark and cut the rear controller plastic opening. See picture.





AC SYSTEM COMPONENT INSTALLATION

1. Install the charge computer in the supplied controller plate. Use two $\frac{1}{4}$ x $\frac{1}{2}$ " screws, two flat and two lock washers. Do not over tighten the screws. Make sure that no screws protrude to the other side of the plate since the controller will be installed on that area. See picture for location.



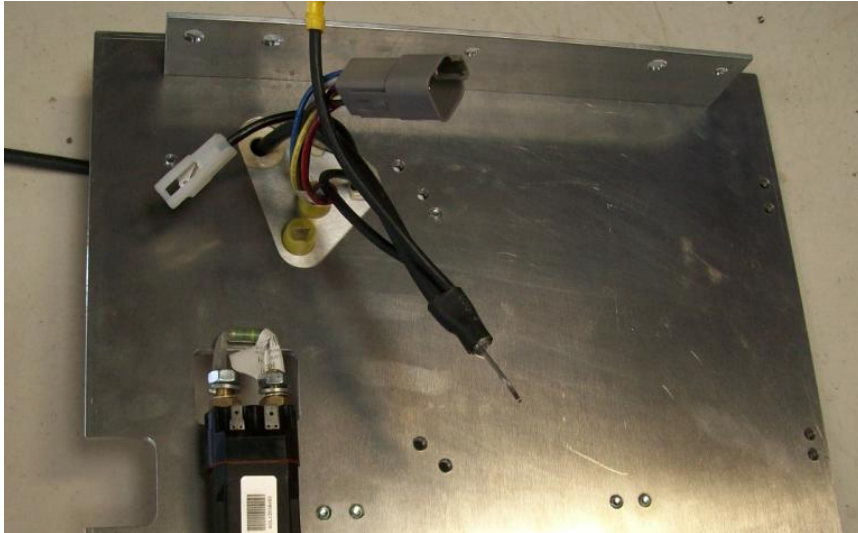
2. Install the lower support brackets. See above picture for hole locations. Use four $\frac{1}{4}$ x 1" screws, flat and lock washers. Make sure that the screws do not protrude to the other side of the plate. The lower support bracket should create a "hook" or gap where the controller plate will be mounted in the car. See pictures.



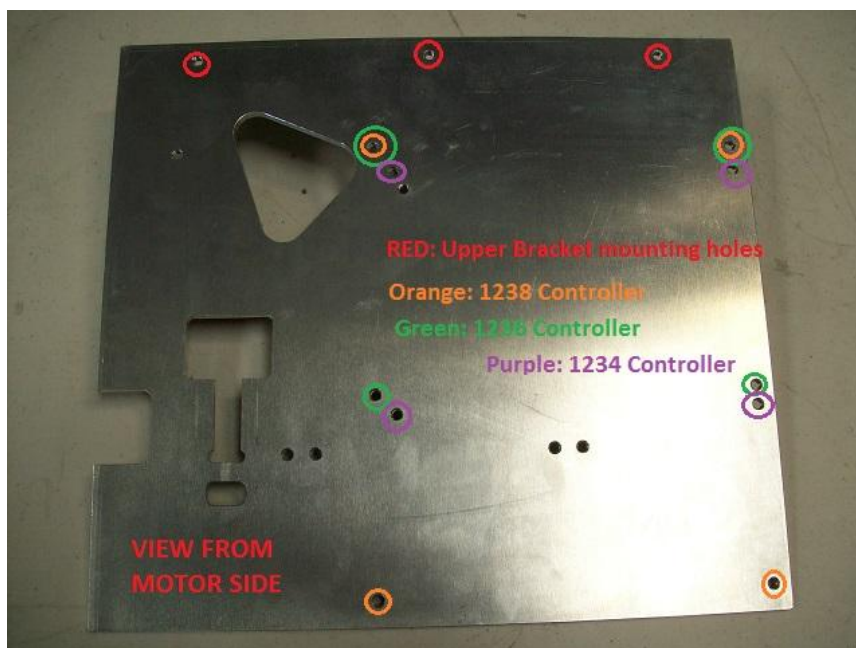
3. Install the contactor by sliding it until the retainer bottoms out in the opening. The contactor body must be located on the motor side, similar to the stock location.



4. Install the upper mounting plate bracket. The upper mounting bracket is facing the motor side of the car. Use three $\frac{1}{4}$ x $\frac{1}{2}$ " screws, flat and lock washers. There is no need to fully tighten the screws at this step. The bracket's wider side will be mounted on top of the car similar to the stock controller bracket.

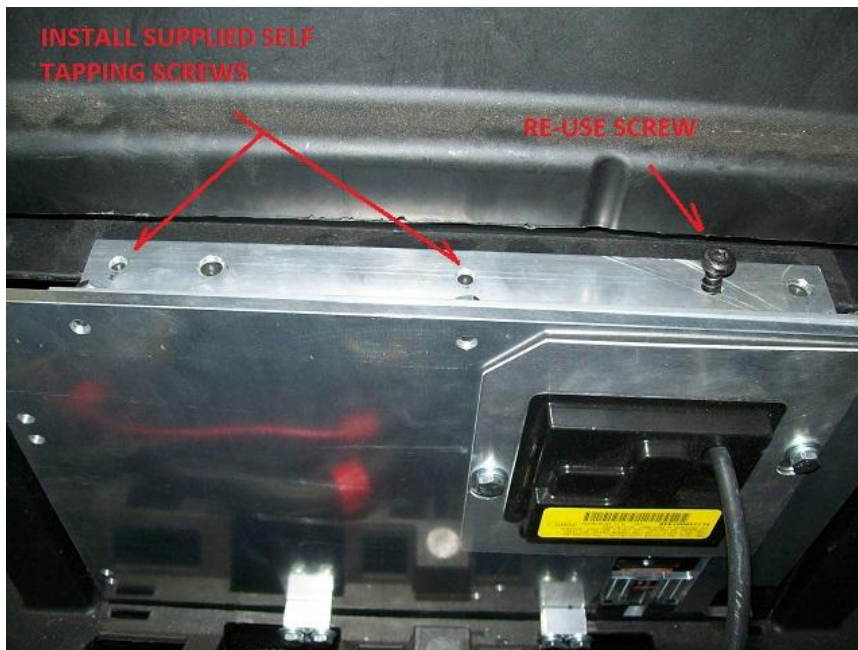
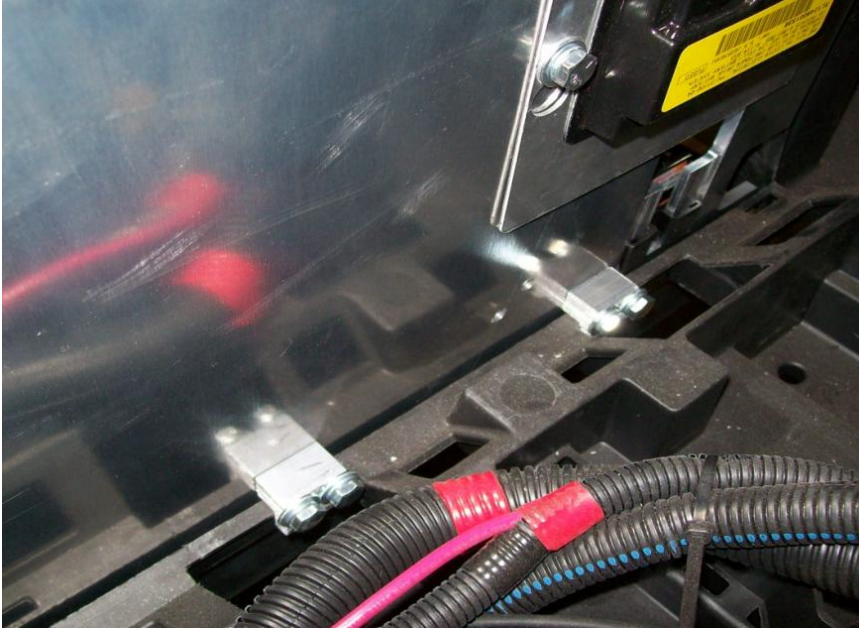


5. Install the AC controller. Similar to the stock controller, the controller is mounted on the motor side of the car. Depending on the controller used in a particular application, different sized screws will be used. For 1238 and 1236 controllers use four $\frac{1}{4}$ x $1\frac{1}{4}$ " screws, and lock washers. For 1234 controller, use four $\frac{1}{4}$ x $\frac{1}{2}$ " screws, and lock washers. The following picture shows the location of the mounting holes.



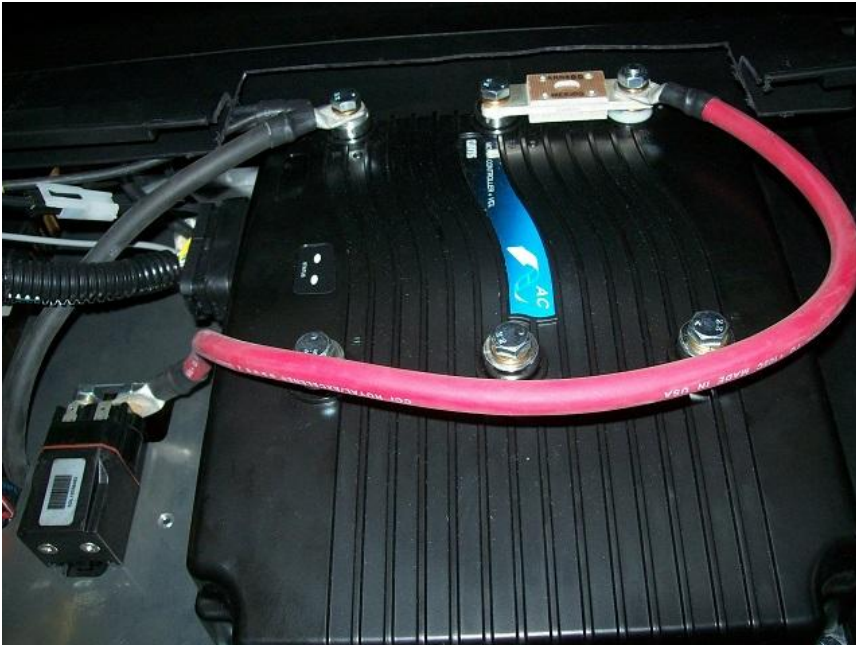


6. Install the AC controller plate in the car. The lower support bracket should insert the battery pack tray. The upper bracket should rest on top of the battery pack tray. Reuse the black screw saved from the removal of the stock controller. Use the supplied two $\frac{1}{4} \times \frac{3}{4}$ " self tapping screws. Once these three screws are secured, proceed to tighten the upper bracket to the plate screws that were loosely installed earlier. See pictures.

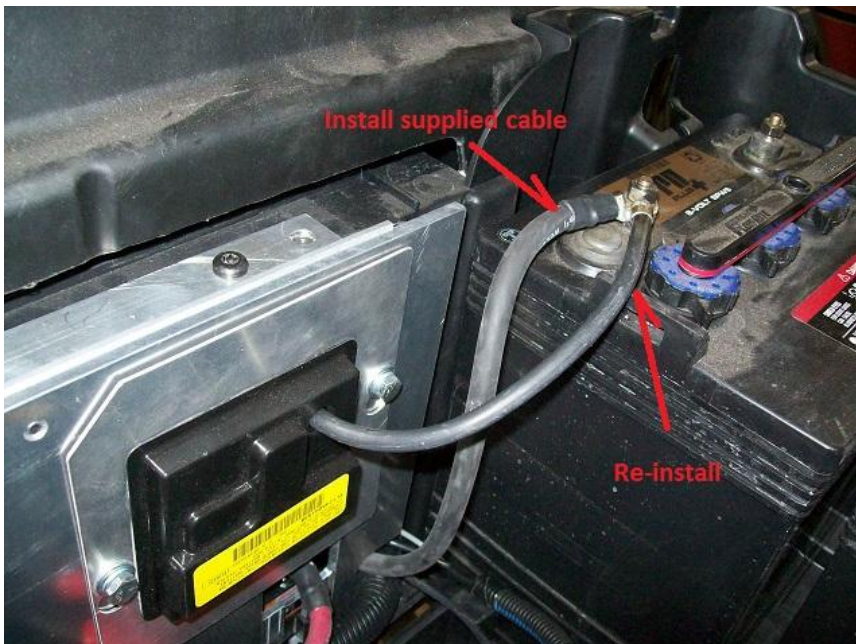


7. Install the supplied red 15" cable from the contactor's switched side to the controller at the fuse end. See picture.

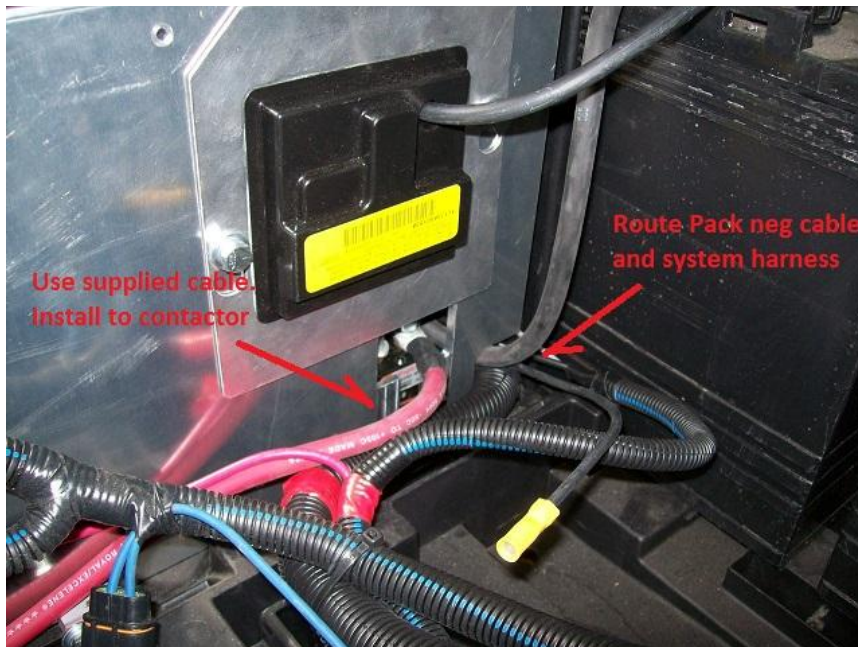
8. Install the supplied 20" black cable from the controller to the negative side of the pack. Also connect the charge computer negative cable from the controller to the negative side of the battery pack. The cable is routed through the plate's side access cutout.



9. Install the red 20 cable from contactor's Hot side to the (+) positive side of the pack. Make sure that the terminal lug does not touch the plate. As an added precaution a cable boot may be used.



10. Route the stock wiring harness through the side access cutout



11. Install the supplied wire system wire harness. Connect the black 35 pin connector to the controller and the white 16 and 4 pin connectors to the stock harness.

12. Install the pink wire from the stock harness that provides power to system components (charge computer, dash, etc.) to the Hot side of the contactor. Cut the stock quick disconnect terminal and install a 5/16" ring terminal.



13. Re-connect the stock contactor coil wires (Light blue and Blue/ white).

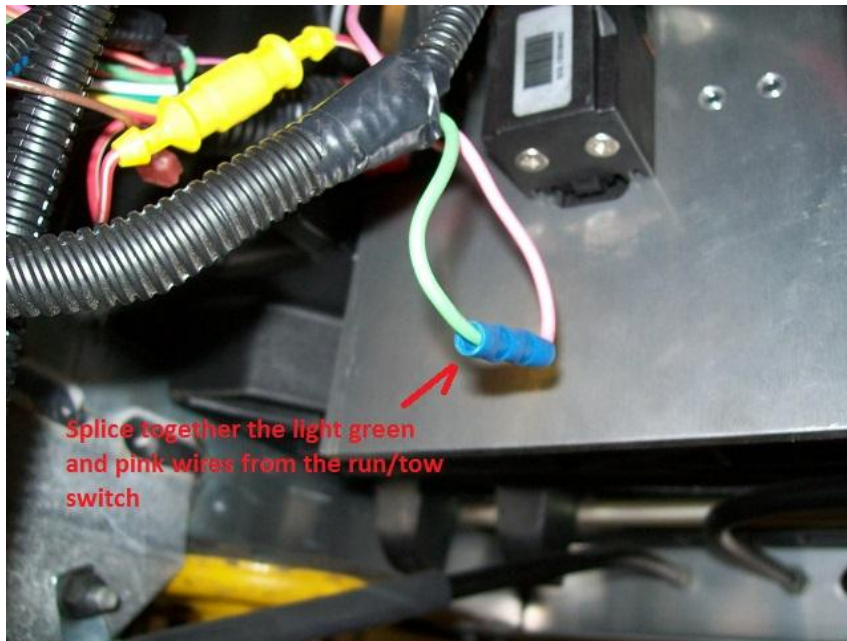


14. Locate the 6 pin grey connector from the stock harness. Locate and cut the brown/ white wire. Install a male ¼" quick disconnect and connect to the brown wire from the new system harness.



15. Reconnect all the charge computer connections.

16. Cut the quick disconnect terminals that were connected to the stock "Run / Tow" switch (Light green and pink wires). Splice these wires together. The "Run/ Tow" switch is no longer needed.

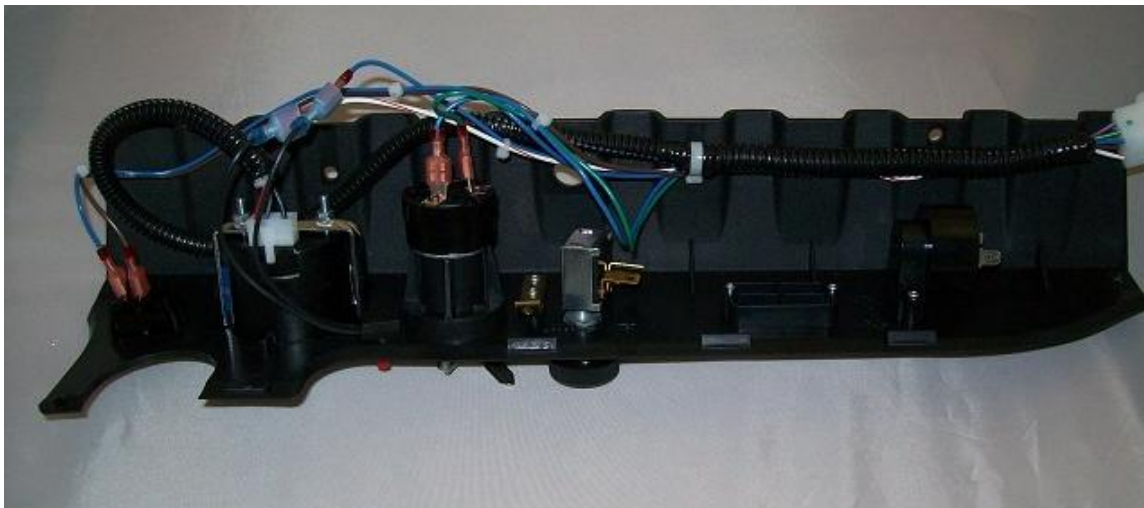


17. Proceed to secure any loose and/or excess wires to avoid any damage.
18. Install the AC motor. Use the supplied three $\frac{1}{4}$ x 2" screws, flat and lock washers. Reuse the stock 5/16" bottom bolt.
19. Install the 14 $\frac{1}{2}$ " motor cables between the motor and controller. Note the connection phase designation i.e. U, V & W.

DASH MODIFICATION

1. Remove the stock harness from the dash.
2. Remove the yellow charge light and install golf street switch in place.
3. Relocate the reverse buzzer to under the seat. Connect the Black/blue wire quick disconnect terminal to the negative and yellow wire to the positive side.
4. Cut a 2 $\frac{1}{16}$ " (52 mm) hole in the dash to install the display. Install the display with the included hardware.
5. Drill a $\frac{3}{8}$ " hole near the display for the menu button. Install the menu button by securing the retainer ring.

6. Install the kit dash harness. The harness has a plastic retainer to secure it to the dash similar as the stock harness.
7. Connect the harness to the dash components. The connections are the following:
 - a. Key Switch: Blue and Green
 - b. Golf-Street Switch: Blue and Brown
 - c. Menu Button: Blue and White/ Red
 - d. Multi function Display: White 8 pin connector



8. Re-install the dash and reconnect the stock lighting system.
9. Re-install the two middle batteries. Reconnect the batteries with the supplied batteries cables.