

# Remove and Replace Recreational Trailer Harness

Some customers have experienced turn signal failures on trailers. While pulling a recreation style trailer and activating the right and/or left turn signal, as the foot brake is applied, the brake lights will override the directional signals making the lamp steady burn and the directional signal un-noticeable on the trailer to following vehicles. As the brake pedal is released, the activated directional signal will resume to its flashing electrical state until acted upon.

If you have any questions or concerns with this remedy, contact Pierce Customer Service at 1-888-974-3723





# STANDARDIZED WORK INSTRUCTIONS

# SKETCH / DRAWING OR PHOTO AREA

TITLE: Remove and Replace Recreational Trailer Harness

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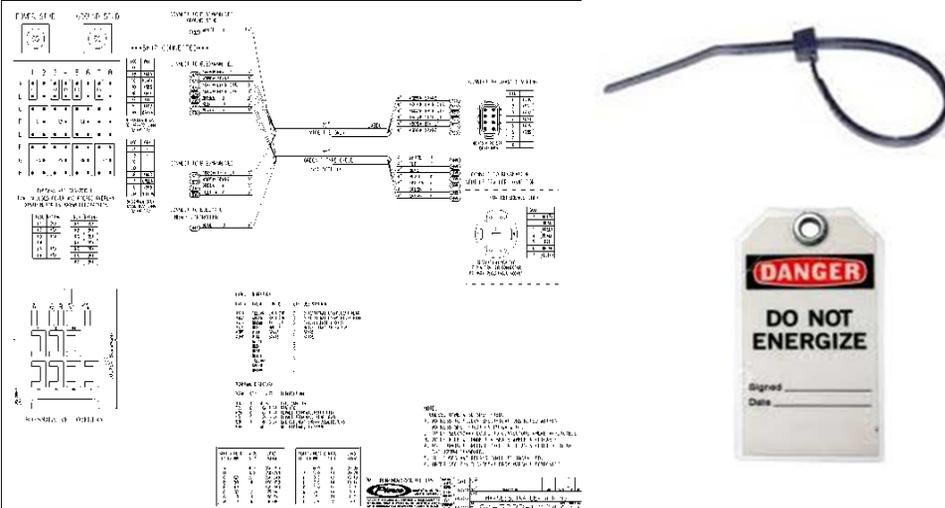
## Tools Required

- Torque wrench-Inch lbs.
- T-30 Torx screw bit
- Flashlight
- Ratchet Socket Wrench
- Extension for Ratchet wrench, 3" (minimum)
- Hex socket -1/2", 9/16"
- Combination wrench - 1/2", 9/16"
- Side Cutters
- Wire Striper
- #2 Flat head screw-driver
- 12VDC Test Light
- Electrical tape - Red
- Electrical tape - Black



## Parts Required

- (1) Harness number 64-5223-H004
- (24) 8" wire ties
- (1) Lock-Out Tag-Out





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3 Park vehicle on a level surface. Set parking brake. Chock wheels.



4 Check Battery switch is in the "OFF" position. **Note:**  
**Install Lock-Out Tag-Out on vehicle battery switch if required.**





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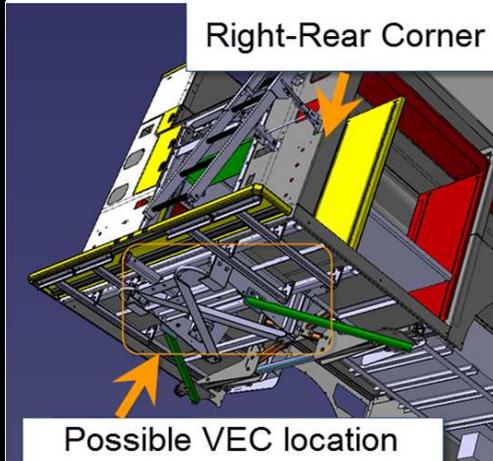
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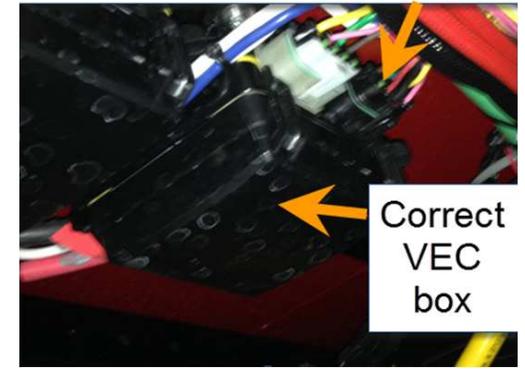
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5

Locate Vehicle Electrical Center (VEC) box, most often located rearward of the rear axle, and right of center chassis. Verify the harness entering VEC box is the recreation trailer harness by checking the metal tag wrapped around the harness. (Harness tag should indicate number 64-5223-H001 or 64-5223-H002).  
**Note: Location of VEC box may vary pending chassis type.**

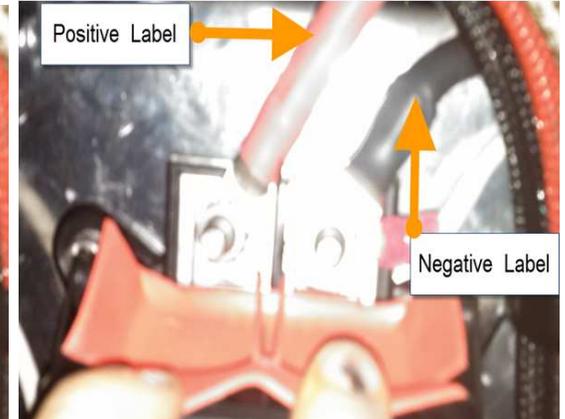
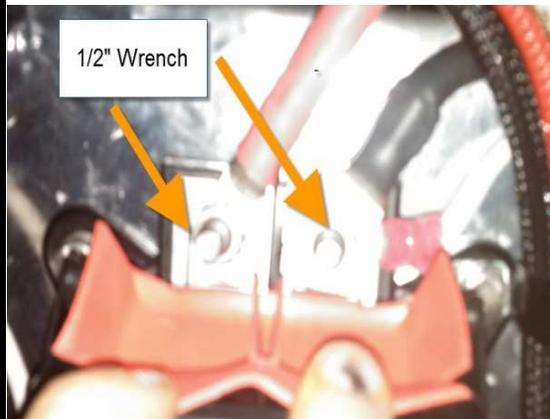


Black plug holds (1) open slot



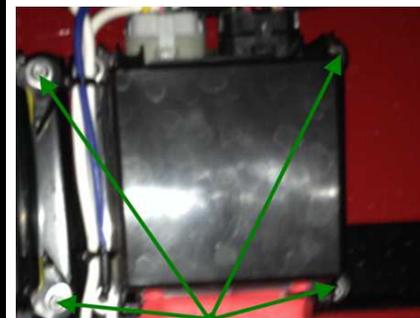
6

Remove 8mm nut for the (+) positive wire cable from the red stud located on the VEC box and wrap with red electrical tape for safety precautions. Temporarily label as "Positive". Remove 8mm nut for the (-) negative wire cable from the black stud located on the VEC box and wrap with black electrical tape for safety precautions. Temporarily label as "Negative"



7

Remove (4) nuts and bolts that retain the VEC box to the mounting plate.  
**NOTE: Keep all hardware for the installation of the new VEC box.**



Remove (4) sets of hardware

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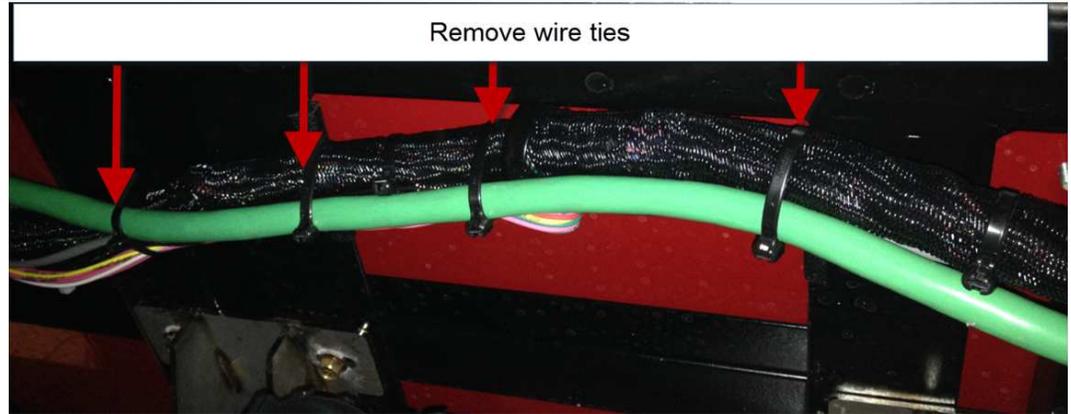
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8 Using a side cutter, remove all wire ties that hold the 72" green F type cable harness in place along the rear sub-structure of the truck.

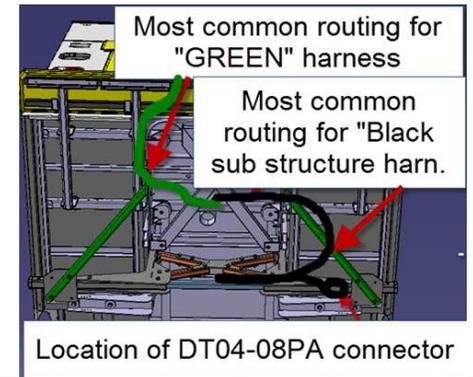
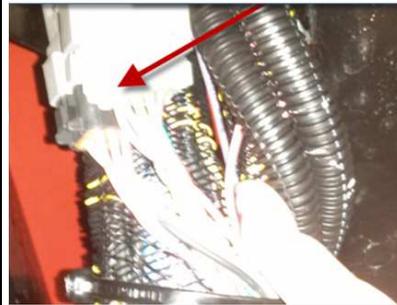


9 Using a side cutter, remove all wire ties that hold the 72" convoluted split tube portion of the harness and follow it to the 8 terminal Deutsch DT04-08PA connector.



10 This generally routes the opposite direction of the green harness, and will end up near the passenger side rear tire and connects to the rear sub-structure harness. Disconnect the 8 terminal Deutsch DT04-08PA connector from the rear substructure harness.

Disconnect connector DT04-08PA from DT06-08SA





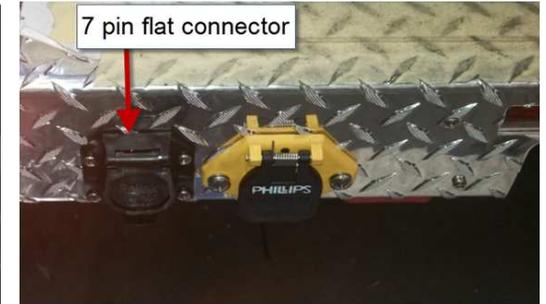
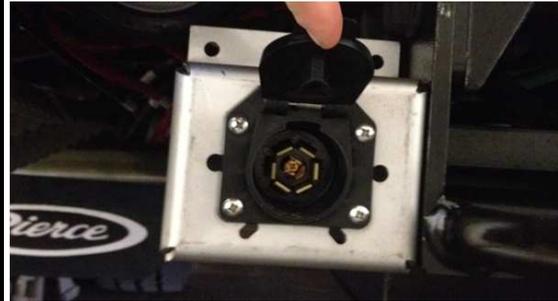
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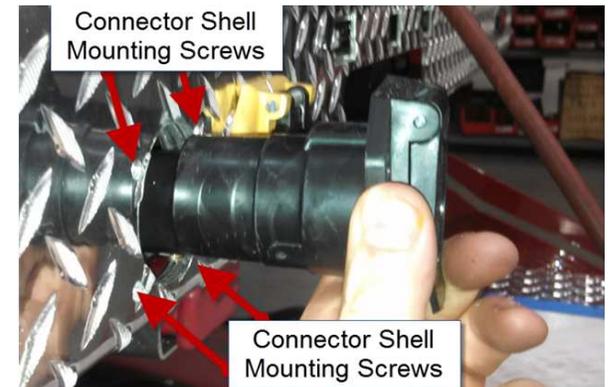
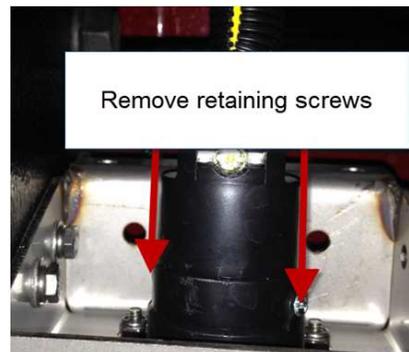
11 Locate recreation trailer plug, (7-blade flat connector) on rear sub-frame of truck. **Note: Exact Location may vary pending chassis type, and customer location request.**



12 Using the Flat head screw driver, loosen the set-screw holding the clam-shell/ harness inward to the plug.



13 Using a flat screw driver, remove screws securing back shell of connector. **Note: It may be necessary to remove (4) screws holding the connector shell in place, in order to remove connector retaining screws.**



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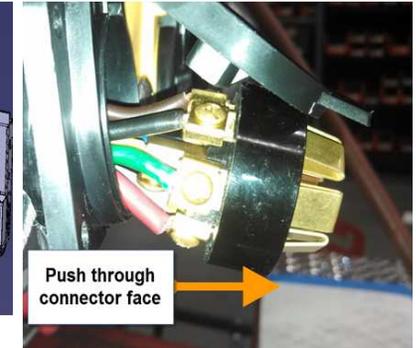
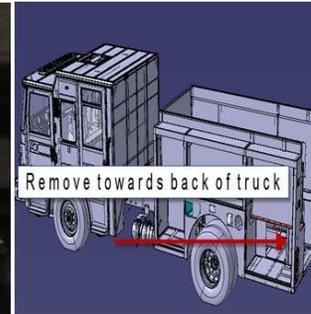
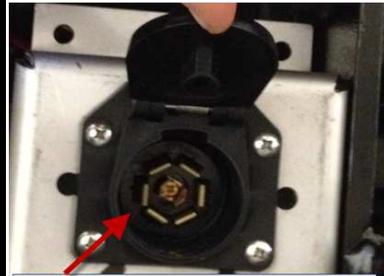
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14 Slide the harness forward of the face of the shell, while lifting the debris cover, until you can easily loosen all "wire" retaining screws located on the back of the 7 pin connector.



15 Loosen all wire retaining screws, removing harness from "7" pin flat connector. Slide harness back through the hole, and remove from truck.



16



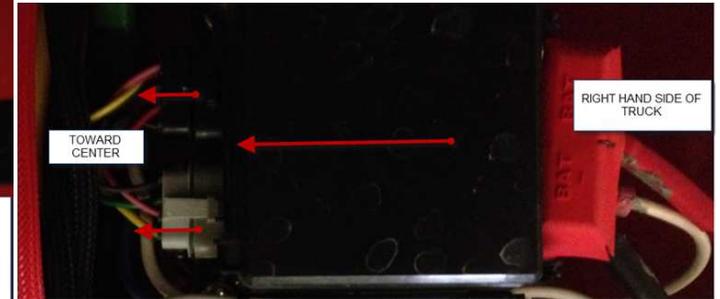
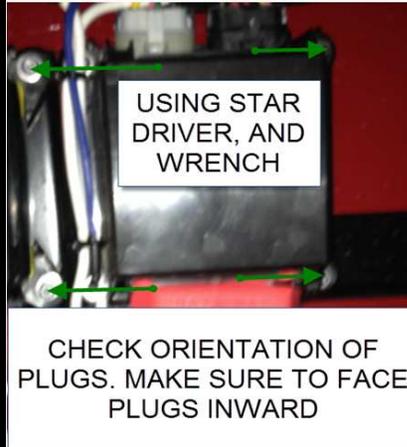
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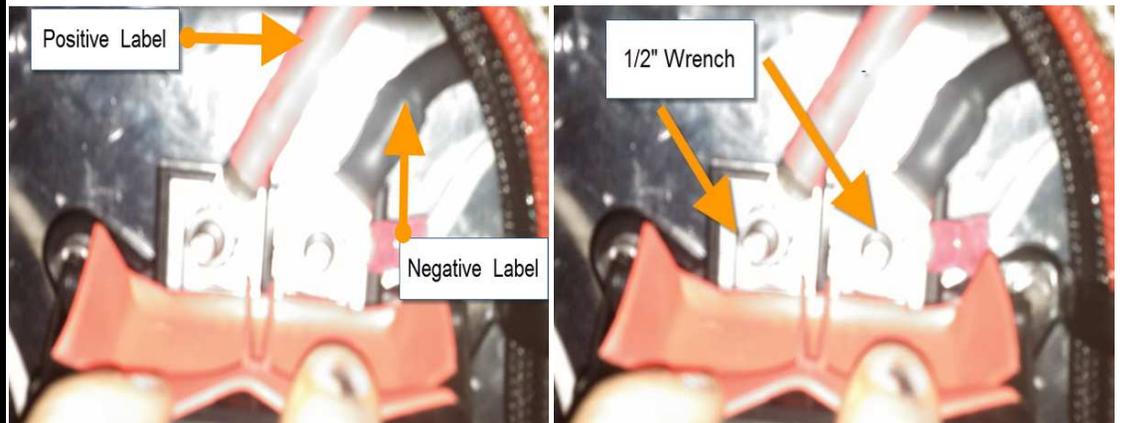
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23 Install new, previously routed VEC box and tighten bolts to 96 inch lbs.



24 Remove electrical tape from the ground cable/wires previously labeled "Negative", and attach to the black stud of the VEC box. Tighten 8mm nut and torque to 180 inch-lbs with 1/2" or 13mm socket.



25 Remove electrical tape from the power cable/wires previously labeled "Positive", and attach to the red stud of the VEC box. Tighten 8mm nut and torque to 180 inch-lbs with 1/2" or 13mm socket.



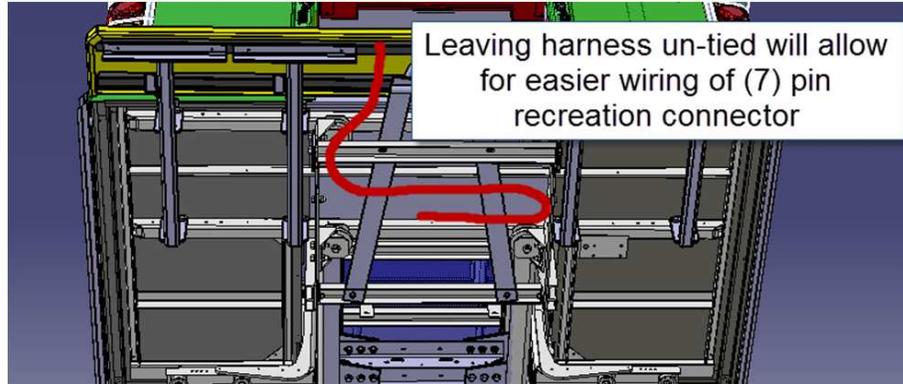
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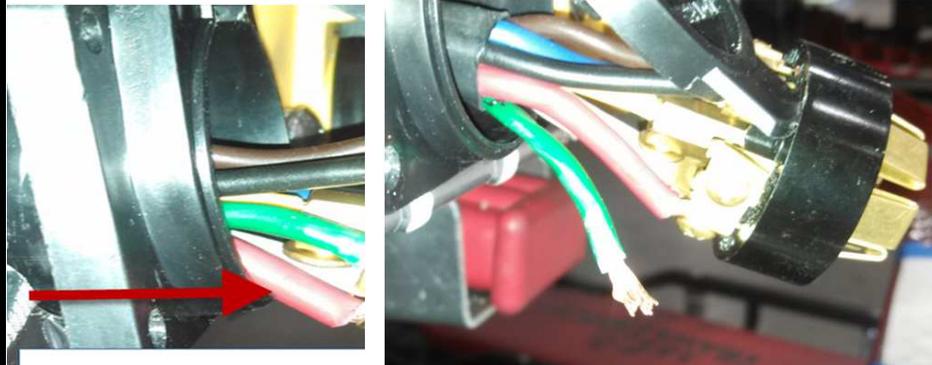
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23 Route harness through sub-structure similar to previously removed harness. **Note: Do not utilize zip ties at this time, as harness will need to move in the following steps.**



24

25 Install "new harness" number 64-5223-H004 by sliding from the front of the connector shell, from the Rear to the face until it can easily be wired to the 7 Pin flat connector.



**Push through  
connector face**



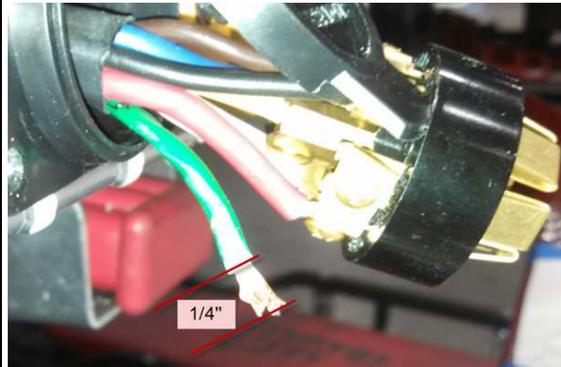
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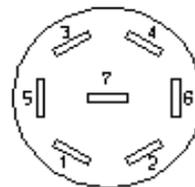
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17 Strip all wires, leaving approximately 1/4" of "bare wire" on the ends of each wire lead.

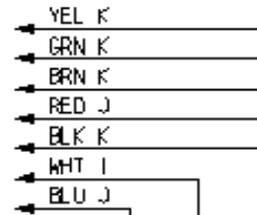


18 Insert wire leads and tighten/torque connector screws to 26 inch lbs. **NOTE: Ensure there are no loose strands of bare wire protruding from connector in any of the (7) locations.**

### 7-PIN TRAILER CONNECTOR



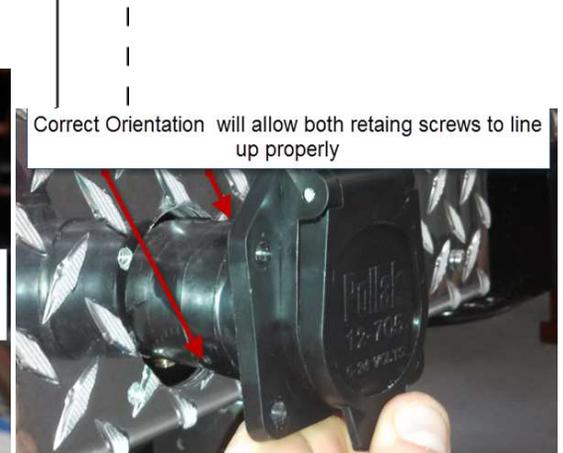
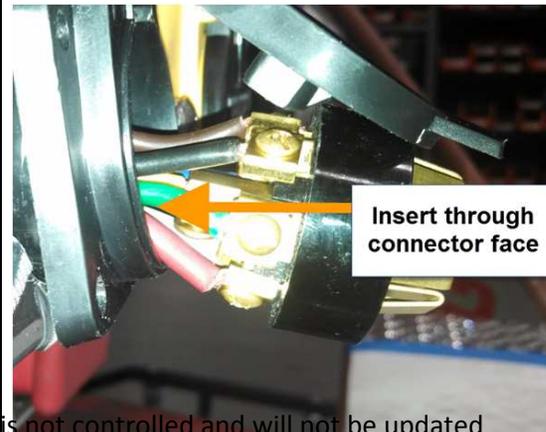
SOCKET	
1	WHITE
2	BLUE
3	GREEN
4	BLACK
5	RED
6	BROWN
7	YELLOW



RECREATION VEHICLE  
7-PIN TRAILER CONNECTOR  
PRIMARY RECEPTACLE SOCKET

TO ELECTRIC BRAKE CONTROLLER ← BLU J

19 Insert cable and connector into connector back-shell face. **NOTE: Ensure the connector is in the correct orientation. The correct orientation will allow you to put the two retaining screws in the correct position.**





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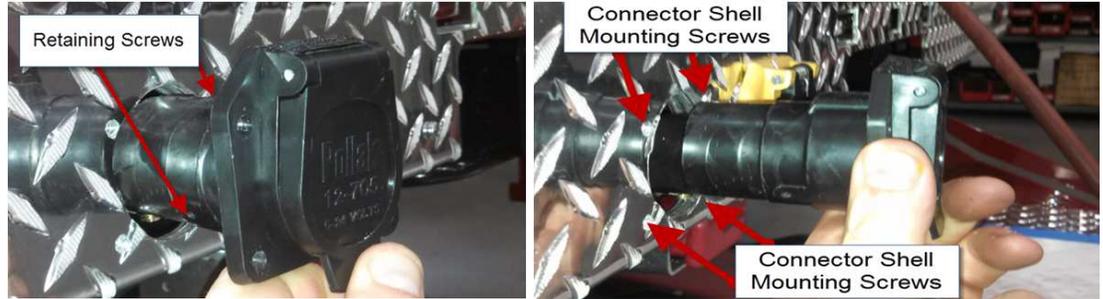
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20

Locate the (2) screws in the back shell of the connector terminal, re-insert and tighten. **Note: If it was previously needed to remove shell from mounting bracket, re-mount connector to mounting location.**



21

Tighten set-screw holding harness clamshell in the back shell of the connector until harness is not able to move forward and backward from position. **Note: If needed, use split tubing from removed harness on the unsheathed wires. (Insulation jacket length may vary).**



22

Wire tie harness in same orientation as previous harness, using zip ties every 4" - 6".





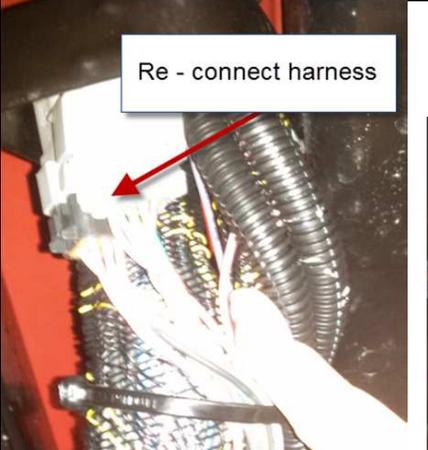
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26 Route new harness with black split tubing, using the same routing path as previously removed harness and re-connect to the sub-structure harness connector 8 terminal Deutsch DT06 - 08SA with the new harness connector DT04-08PA.



27 Wire tie the black split tubing branch using zip ties every 4" to 6".





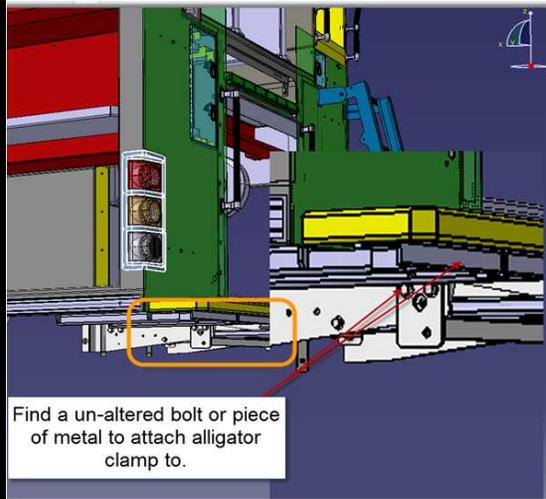
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28 **NOTE: Using two people In these steps will result in easier testing.**  
Using the Test Light, attach the alligator clamp to a grounded bolt, or bare metal area on the rear of the truck.



29 Enter Cab of truck, and remove the Lock out tag from the battery switch.

30 Turn battery switch to the "ON" position. Turn Ignition switch to the "ON" position.





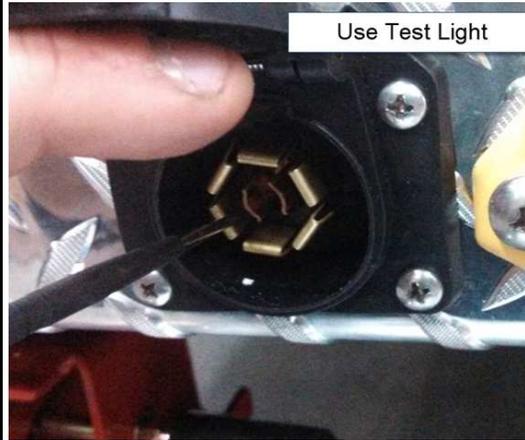
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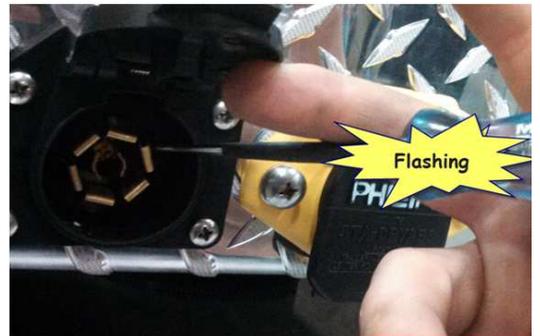
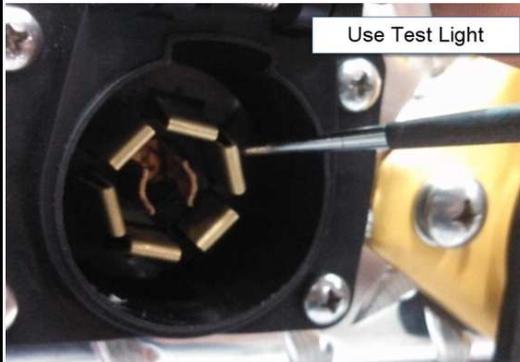
31 Activate the "left directional signal" and check rear of truck for proper operation of light.  
Using the test light, check pin (5) on the connector, making sure it is in a "flashing state".



32 With the turn signal still in the "left turn position" and the test light still on pin (5), apply pressure to the foot brake. The test light should continue to show a "flashing state". Remove pressure from foot brake.



33 Activate the "right directional signal" and check rear of truck for proper operation of light.  
Using test light, check pin (6) on the connector, making sure it is in a "flashing state".





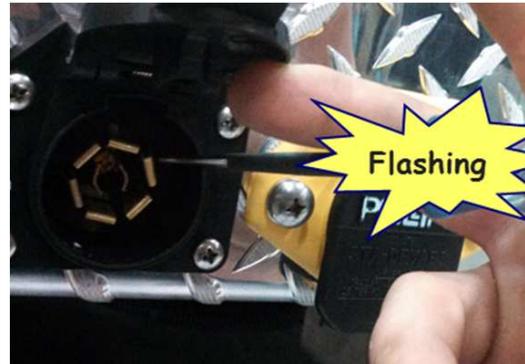
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34 With the turn signal still In the "right turn position" and the test light still on pin (6), apply pressure to the foot brake. The test light should continue to show a "flashing state". Remove pressure from foot brake.



35 Return the turn signal lever to the neutral position.

36 Using the test light, touch the tip of the probe to pin (5) and apply pressure to the brake pedal. The test light should indicate a steady burn light. Using the test light, touch the tip of the probe to pin (6) and apply pressure to the brake pedal. The test light should indicate a steady burn light.

