



AI 5712000K004

# ASSEMBLY INSTRUCTION

February, 2022

## ATTENTION:

Service Managers / Parts Managers.

## REQUIRED PARTS:

S5712000K004 ACX Single Drive Kit

- (1) 978435 22" Cable tie
- (4) 980464 Cable tie
- (1) A8731082-001 Buzzer
- (4) GE286216BS01 Locknut
- (8) GZ030006-001 Screw
- (1) S5710003-001 Pod Assembly Single Drive
  - (1) A5711034-001 Pod Assembly
- (2) S8731013-002 Primary Harness
- (1) S8731085-001 PCB Adapter

## SAFETY NOTICES:



### WARNING

Allow the vehicle's engine and cooling system to cool to ambient temperature before performing the repair procedure. A hot engine or cooling assembly may cause burns or other personal injury.



### WARNING

To prevent eye injury, always wear eye protection when performing vehicle maintenance, service or inspection.



### WARNING

Before working on a vehicle, set the parking brake, place the transmission in neutral and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.



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## Working on CNG/LNG Trucks

### SAFETY INSTRUCTIONS

If you store or dispense Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG), or if you work on CNG or LNG trucks, your location must be fully compliant with applicable codes, regulations and standards, including National Fire Protection Associate (NFPA) codes, Society of Automotive Engineers (SAE) standards, American National Standards Institute (ANSI) Natural Gas Vehicle (NGV) standards, the United States Code of Federal Regulations (CFR) and your state and local fire and other applicable codes (including, for example, the California Code of Regulations and the Texas Administrative Code).

Contact your local fire department for guidance and additional compliance information.

Technicians working on Autocar trucks with CNG or LNG engines must be trained in the proper repair of CNG and LNG trucks and engines and the safe storage and dispensing of CNG and LNG.

## Working on CNG Fuel Systems



### WARNING

CNG fuel systems include a high pressure (3600 psi) system for fuel storage and a low pressure system (125 psi) for consumption by the engine. Understanding the characteristics of CNG and how the fuel system works will prevent injury and damage to persons and property.

Attempting to operate or maintain any CNG fuel system without proper training is dangerous. Complete training and consult instructional bulletins from the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, *Safely Working on CNG Fuel Systems*.

## Welding and Hot Work Near CNG and LNG Trucks



### WARNING

Welding, grinding, and other "hot work" can be safely performed on or near a CNG or LNG vehicle, but certain precautions must be followed. Understand and perform the necessary precautions provided by the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, *Welding and Hot Work Precautions Near CNG and LNG Vehicles*.



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## CNG Cylinders



### WARNING

CNG fuel containers must meet Federal Motor Vehicle Safety Standard (FMVSS) 304 (Compressed Natural Gas Fuel Container Integrity) and/or ANSI/CSA NGV2 (Basic Requirements for Compressed Natural Gas Vehicle Fuel Containers). Both standards specify a detailed visual examination every three years.

Truck owners are required to complete all necessary inspections, in accordance with the applicable standards and other resources, such as the Clean Vehicle Education Foundation and NGV America's Compressed Natural Gas (CNG) Container Visual Inspection Advisory.

FMVSS 304 also requires that cylinders not be used after the end of life (EOL) date provided on the tank label. The EOL date is also displayed in the engine compartment and at the fueling connection of each truck. If there are any question as to proper decommissioning of a cylinder, contact the manufacturer, whose name and address is also required to be on the label.

## CNG Fuel Container Pressure Relief Devices (PRDs)



### WARNING

PRDs must be properly maintained and positioned for safe operation of a CNG fuel system. Missing vent caps can allow moisture into PRDs and vent lines, which can freeze and damage these safety components. Debris which clogs the PRDs and/or vent lines can prevent proper function.

PRDs must be positioned to vent upward, not outward, from a vehicle.

Ensure that every truck owner completes periodic inspections of the PRDs and vent lines and systems, in accordance with guidance provided by the system component suppliers.

## Alert First Responders to CNG and LNG



### DANGER

In the event of a fire or other emergency, alert first responders to the presence and location of CNG fuel systems, tanks and dispensers. Ensure that emergency personnel are aware of proper precautions, such as those provided in Agility's *First Responder Guide: CNG and LNG Vehicle Fuel Systems*.



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## LOCKOUT/TAGOUT PROCEDURES:



## CAUTION

Before entering the vehicle or vehicle body, read and follow OSHA regulations concerning entry and working in “CONFINED SPACE” OSHA 1910.146 and “LOCKOUT/TAGOUT” OSHA 1910.147. Follow OSHA regulations while performing any work on the vehicle. The vehicle must be disabled by the following steps before performing any work on the vehicle:

1. Place the transmission in NEUTRAL.
2. Set the parking brake.
3. Shut the engine OFF.
4. Lock cab doors, keep the key in your pocket. Block the wheels before entering the body or performing any work on the vehicle.
5. Turn the battery disconnect switch OFF, if equipped.
6. Completely drain the air from the primary/A system and secondary/B system by opening the drain valves on the air tanks themselves or by using the drain manifold if supplied. When draining the air tanks, do not look into the area where air is draining. Dirt or sludge particles may be expelled in the air stream and can cause eye injury.
7. Place magnetic “DANGER” signs on both cab doors before entering the body or performing any work on the vehicle.
8. Take proper precautions before working under the vehicle. Use ramps approved for the weight of your vehicle, or use floor jacks and stands. Never work under a vehicle supported by jacks alone. Always use jack stands to support the vehicle.

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## WORK INSTRUCTIONS FOR SINGLE DRIVE VEHICLES.

1. With the truck ignition on, truck off. Press the MENU button on the rotary encoder. Navigate to “Settings” and to “Vehicle Configuration”. If no password has been set, press the rotary encoder when prompted for a password, otherwise enter password now. Record all options in Vehicle Configuration and save for later use (see Figures 1 and 2).

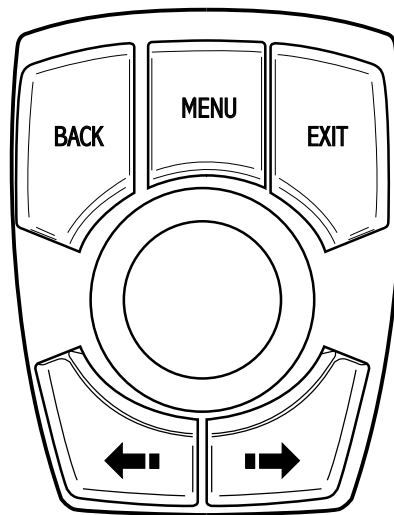


Figure 1, Rotary Encoder

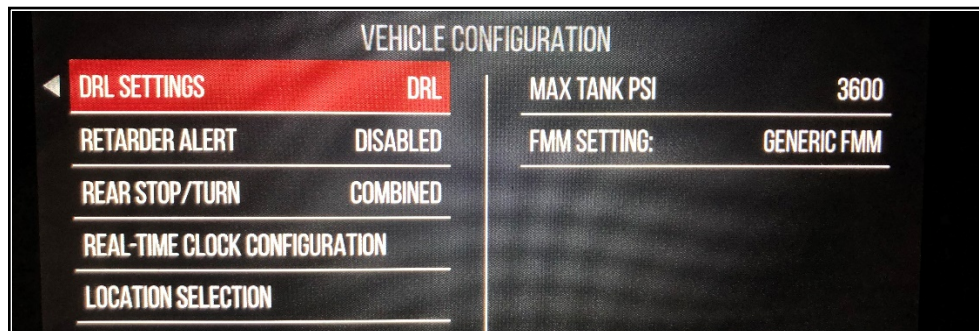


Figure 2, Vehicle Configuration Display

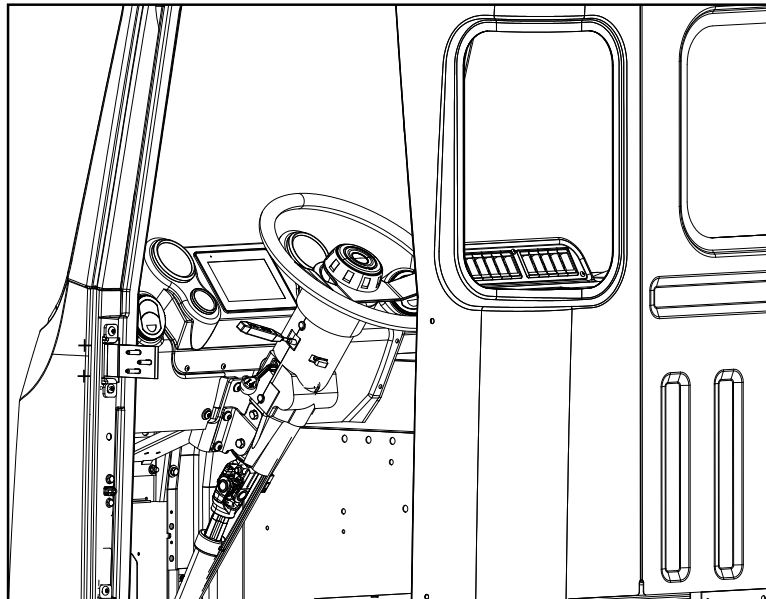


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2. Follow all lockout/tagout procedures and verify the battery disconnect switch is in the “OFF” position. If the unit is not equipped with a battery disconnect switch, disconnect the battery cables beginning with the negative cables, followed by the positive cables.
3. Unlock and open the drivers side door and locate the primary display pod (see *Figure 3*).



***Figure 3***

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4. Remove the 6 mounting screws from the primary display pod assembly and discard (see Figure 4).

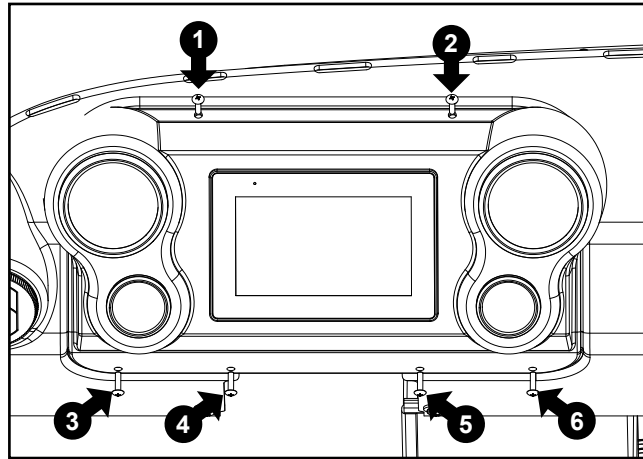


Figure 4

**Note:** Before disengaging the connectors from the gauges verify they are properly marked for each respective gauge.

5. Working from the backside of the display pod assembly, disengage all connectors (see Figure 5).

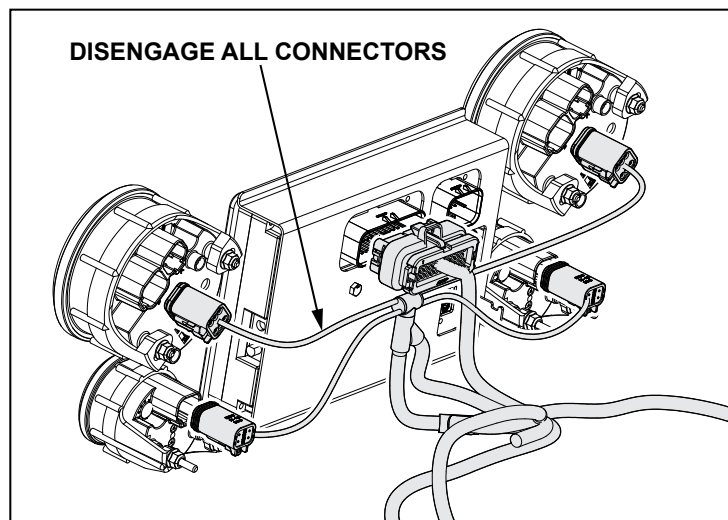


Figure 5

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6. Remove the 8 locknuts from the four gauges and set aside for reinstallation. Record the four gauge locations, remove gauges, set aside for reinstallation, and discard the gauge pod (see Figure 6).

**Note:** There are 4 GZ030006-001 spare locknut included in the parts kit to account for loss or damage, additional parts may be discarded.

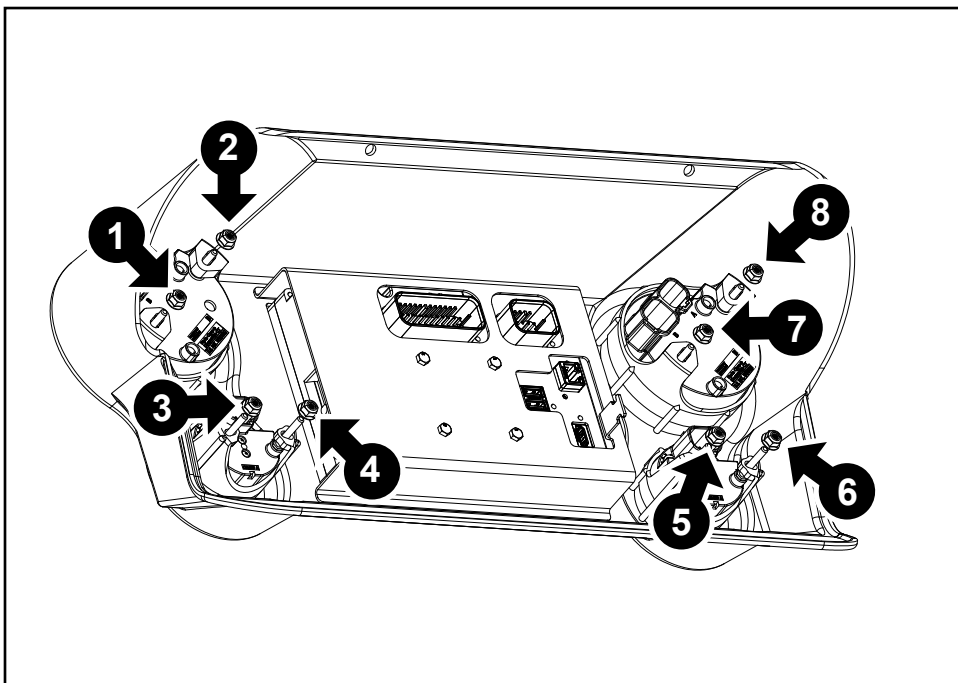


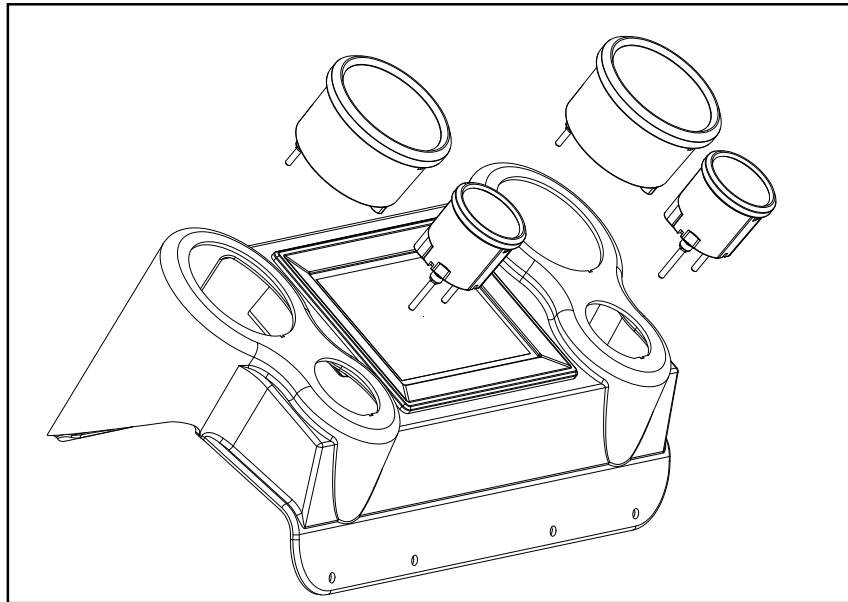
Figure 6

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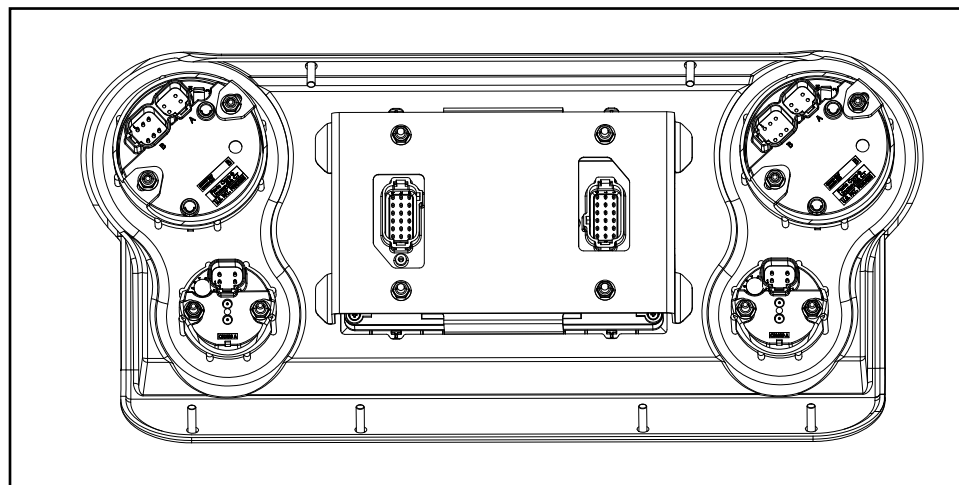
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7. Using the 8 locknuts that were set aside in step 6, install the gauges into the A5711034-001 Pod Assembly in the exact location as recorded in step 6 and tighten to 24 Lb. In. of torque. Set the display pod assembly aside for reinstallation (see *Figures 7 and 8*).



**Figure 7**



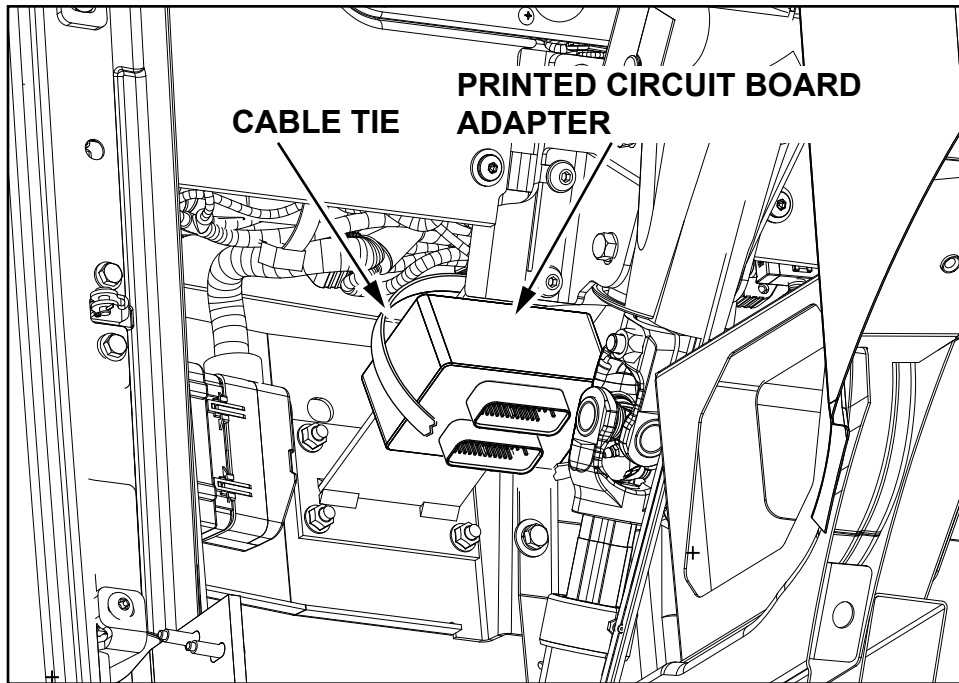
**Figure 8**

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8. Install the S8731085-001 printed circuit board (PCB) adapter using the 978435 22" cable tie and secure the PCB adapter to the steering wheel brace. Install the cable tie between the two connectors and verify it does not interfere with the plugs (see *Figure 9*).



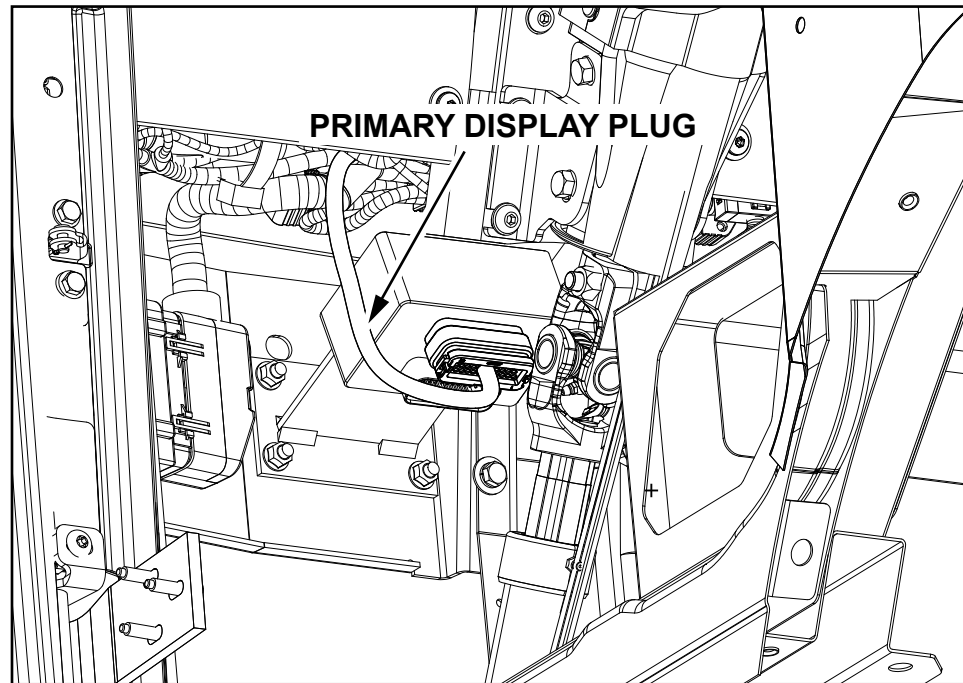
**Figure 9**

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9. Reconnect the primary display plug into the PCB adapter (see *Figure 10*).



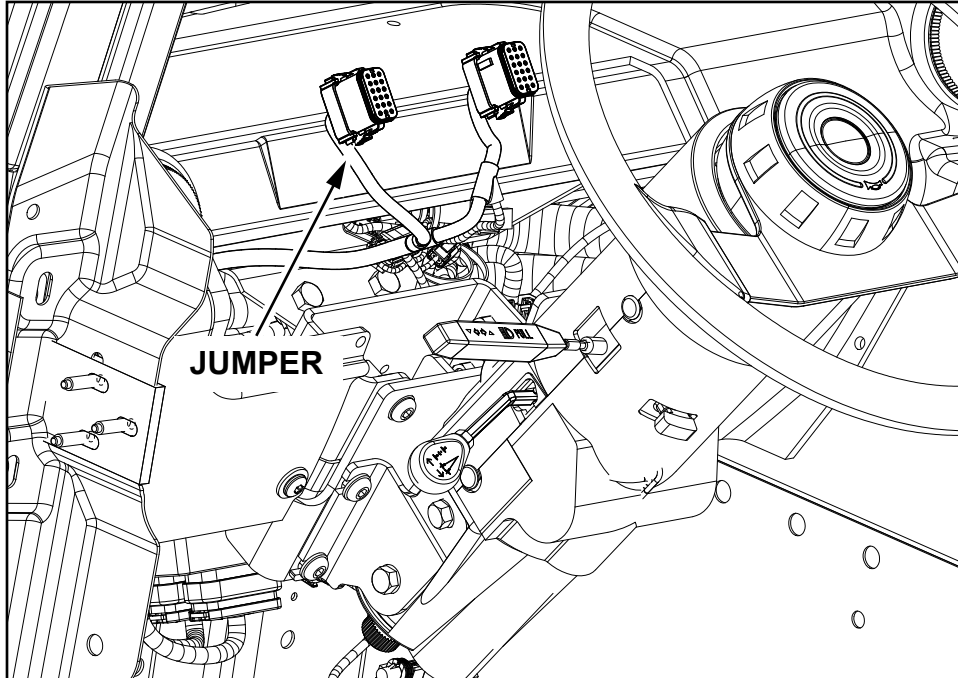
*Figure 10*

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10. Route the S8731013-002 primary harness through the dash so that the connector labeled "TO ADAPTER" is routed to the PCB adapter (see *Figure 11*).



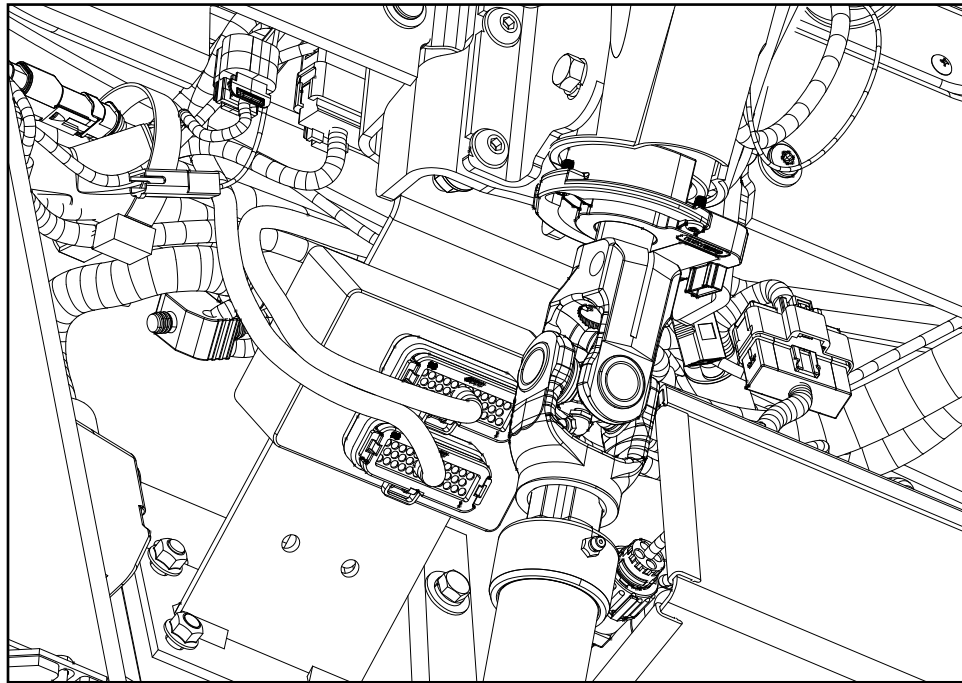
**Figure 11**

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11. Plug the connector labeled "TO ADAPTER" into the PCB adapter (see *Figure 12*).



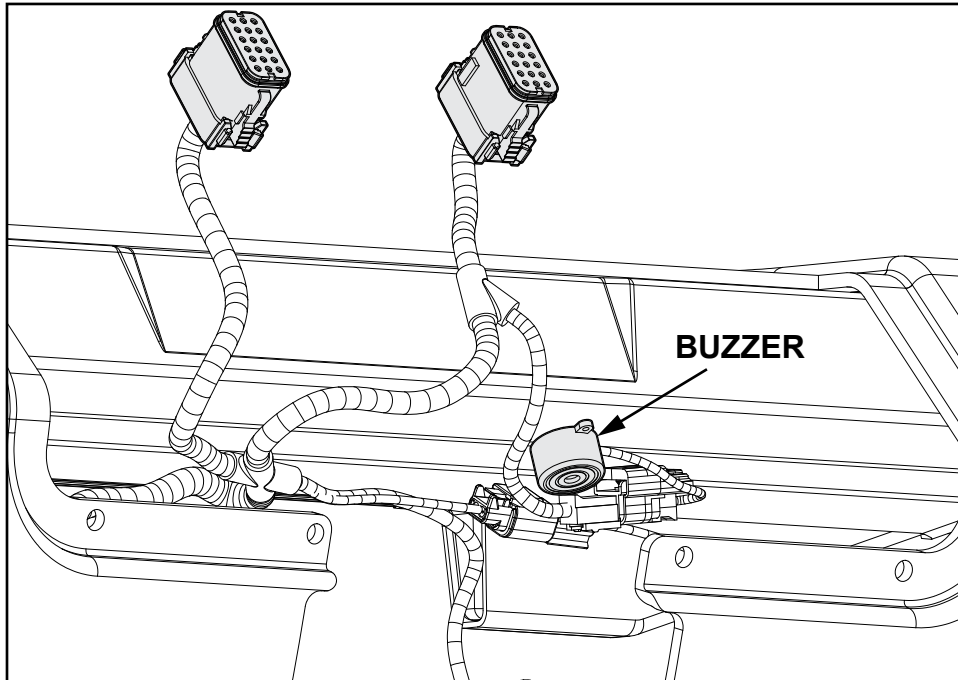
**Figure 12**

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12. Install the A8731082-001 buzzer into the primary harness connector labeled “Buzzer” (see Figure 13).



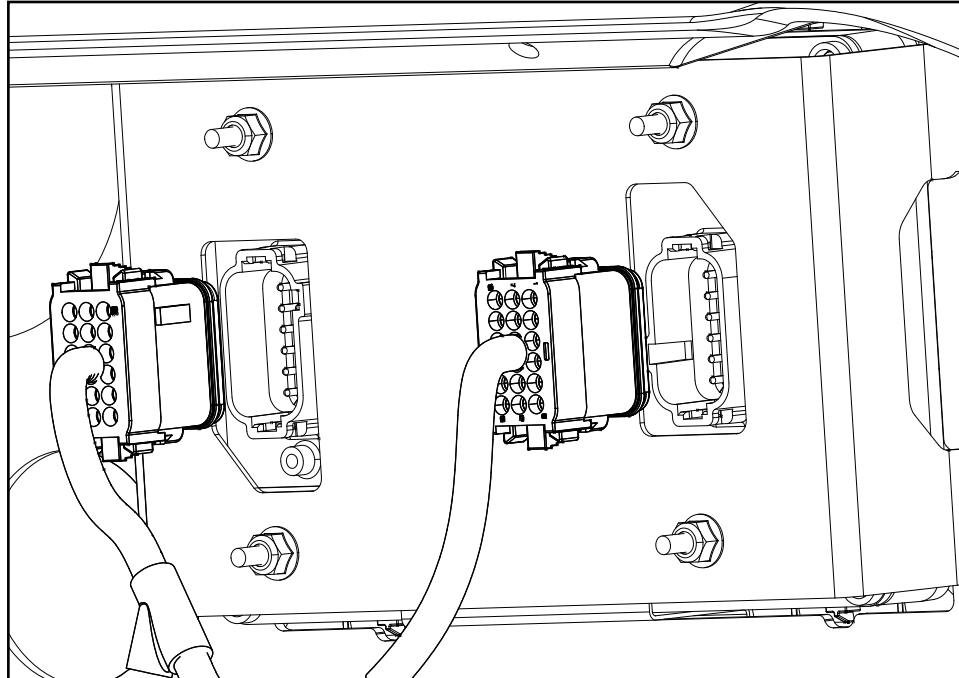
**Figure 13**

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13. Reconnect all gauges appropriately and plug the primary harness into the display (see Figure 14).



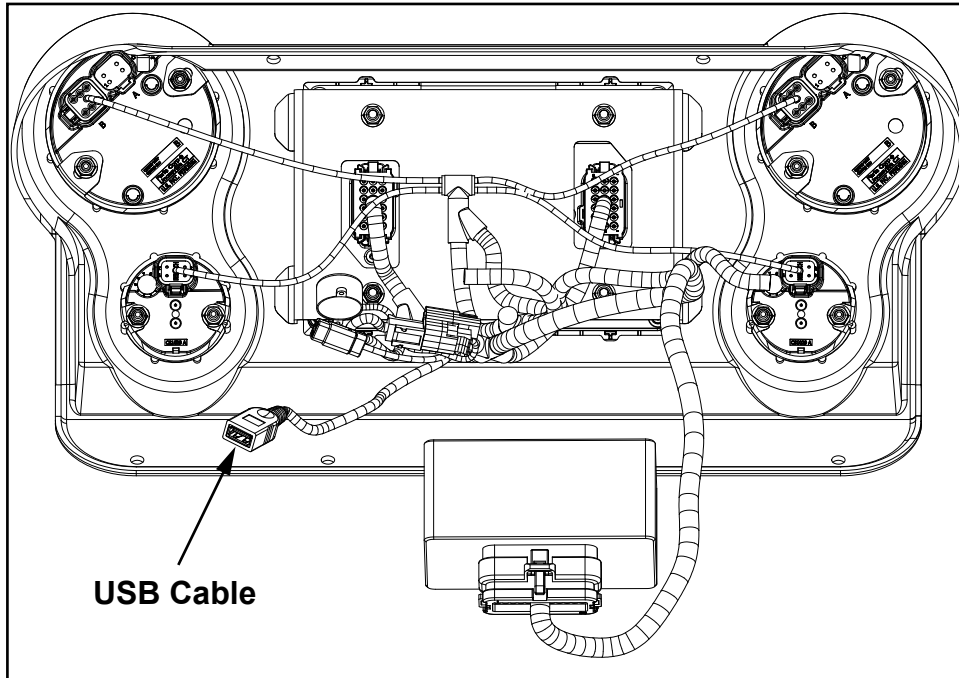
**Figure 14**

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14. Using 980464 cable ties where necessary, route harnesses away from brackets and moving parts, Route the USB cable under the dash for ease of access (see *Figure 15*).



*Figure 15*

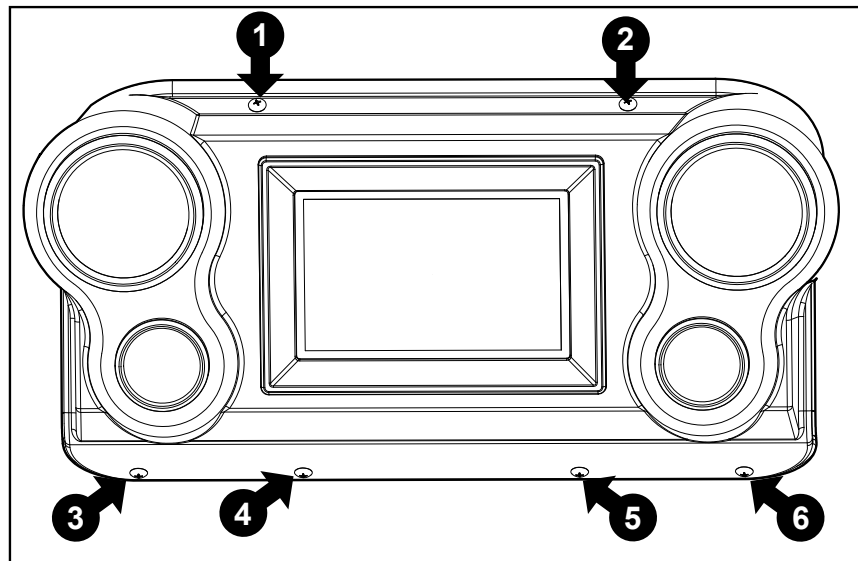
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15. Reinstall the display pod assembly using 6 GZ030006-001 screws (see Figure 16).

**Note: There are 8 GZ030006-001 screws provided in the parts kit to account for potential loss or damage, additional screws may be discarded.**



**Figure 16**

16. Turn on the battery disconnect switch or re-connect all battery terminals beginning with the positive connections, followed by the negative connections.

17. Turn ignition switch to on but do not start the truck.

**Note: If the display appears with the error message “Software Incompatible” the VECU must be updated before continuing.**

18. Using the rotary encoder, press Menu. Navigate to Settings then to Vehicle Configuration.

19. Press the rotary encoder again if prompted for a password.

20. Apply all options noted in step 1 and press EXIT on the rotary encoder when finished.

21. Using the rotary encoder, press Menu. Navigate to Vehicle Diagnostics. Verify VECU Logic version. Update if necessary.

22. Installation is complete.