



CNG CONVERSION SYSTEM INSTALLATION MANUAL

2016-2018 FORD TRANSIT 3.7L BI-FUEL

Updated: 10/03/17

PRINT TO SIZE

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NOTE: Disconnect the vehicle battery before install. This includes partial install, servicing, and or maintenance.

- All owner information supplied by Ford must remain with the unit. The incomplete vehicle manual is not owner information and is excluded from this requirement.
- Compressed natural gas is a combustible fuel, flammable and highly explosive.
- CNG is stored under high pressure (maximum of 3,600psi) at 70°F (21°C).
- Tampering with or improperly maintaining the high pressure fuel system can result in fatality or serious injury.
- Never attempt to modify the fuel system and always have the fuel system maintenance performed at an authorized dealership by qualified technicians.
- Exercise extreme caution and follow all related safety guidelines.
- Always leave 1/4 tank of gasoline in the tank as not to damage the OEM fuel pump.

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!! WARNING !! Follow instructions as directed in the installation manual and do not attempt shortcuts. Follow proper safety procedures. Failure to do so can lead to bodily harm or fatality. Tampering with or improperly maintaining the high pressure fuel system can also result in bodily harm or fatality.

!! WARNING !! Batteries normally produce explosive gas. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When charging or working near a battery, always shield your face and protect your eyes. Always provide ventilation. Failure to follow these instructions may result in personal injury.

!! CAUTION !! Be aware that this installation requires the use of High Pressure, Flammable, and Highly Explosive compressed natural gas. CNG is stored under at maximum of 3,600psi and at 70°F (21°C).

!! CAUTION !! Failure to complete the pre-installation checklist may result in severe engine damage after installation is complete.

!! CAUTION !! This installation is intended for unmodified vehicles. If the vehicle has been modified, consult Altech-Eco before the beginning install.

DISCLAIMER

Altech-Eco assumes no responsibility for damages occurring from accident, misuse, abuse, improper installation, improper operation, and lack of reasonable care or all previously stated reasons resulting in incompatibility with other manufacturer's products.

Chemicals and Lubricants

1. Silicone lubricant spray is required on all O-rings on fittings.
2. Epoxy primer or equivalent to rust proof any exposed metal.
3. Ford approved coolant liquid to top off the reservoir.

On Bi-Fuel systems gasoline shall not remain uncirculated for extended periods of time (over 60 days).

THIS DOCUMENT CONTAINS PROPRIETARY DATA OF ALTECH-ECO AND SHALL NOT BE USED OR DISCLOSED IN WHOLE OR IN PART TO DESIGN OR FABRICATE ANY PRODUCT FOR ANY PURPOSE, NOR REPRODUCED OR TRANSMITTED TO ANY OTHER ORGANIZATION WITHOUT THE EXPRESS PERMISSION OF ALTECH-ECO.

This manual is subject to change to include upcoming modifications. All updated versions are available on Altech-Eco Installer Portal. Contact Altech-Eco if you are unsure of the latest version.

Check list:

1. Confirm packing slip to insure that you have received all components, assemblies and sub-assemblies.
2. Make sure none of the components and assemblies have been damaged in shipping.
3. Pre-inspect the vehicle following the QVM, Q185, and NFPA 52 regulations (Contact ALTECH-ECO for the inspection check list).
4. Begin your conversion process.
 - Cylinder Installation
 - Regulator assembly installation
 - Fuel fill installation
 - High pressure line installation and routing
 - Low pressure and coolant line installation and routing
 - Underhood installation
 - Wiring (Including Switch and gauge) Installation
 - Decal placement
 - Fill and leak test
 - Begin your QC Process
5. Check Tire Pressure before test driving.
6. Check and fill coolant fluid before starting and test driving.
7. Be sure the rear harness is routed properly and is not loose under vehicle.
8. Be sure all provided parts are installed.
9. Final test drive.

**Disconnect the negative terminal on the battery and place a plastic cap on it to protect from accidental contact.
If the vehicle has two batteries, disconnect both.**



Vehicle battery is located in the back and underneath the driver side seat.

Remember to always lubricate ALL O-rings right before component installation.

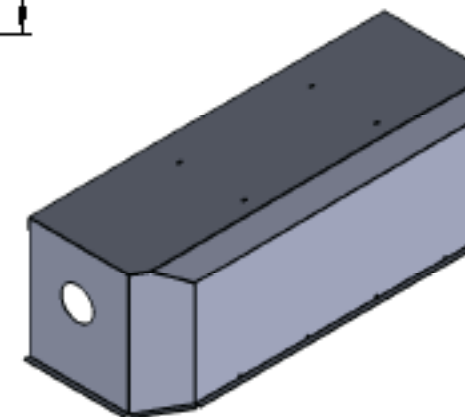
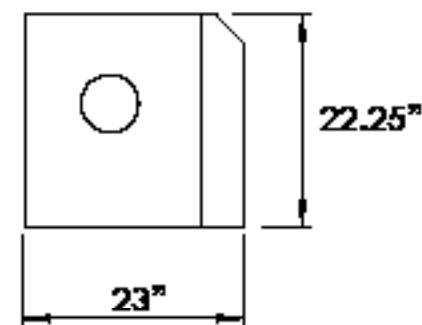
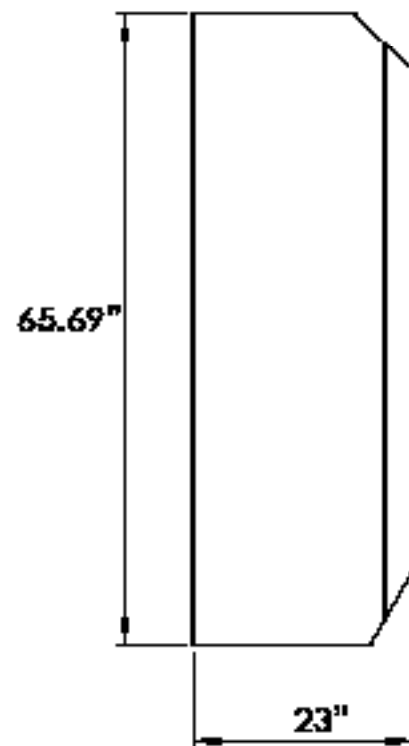
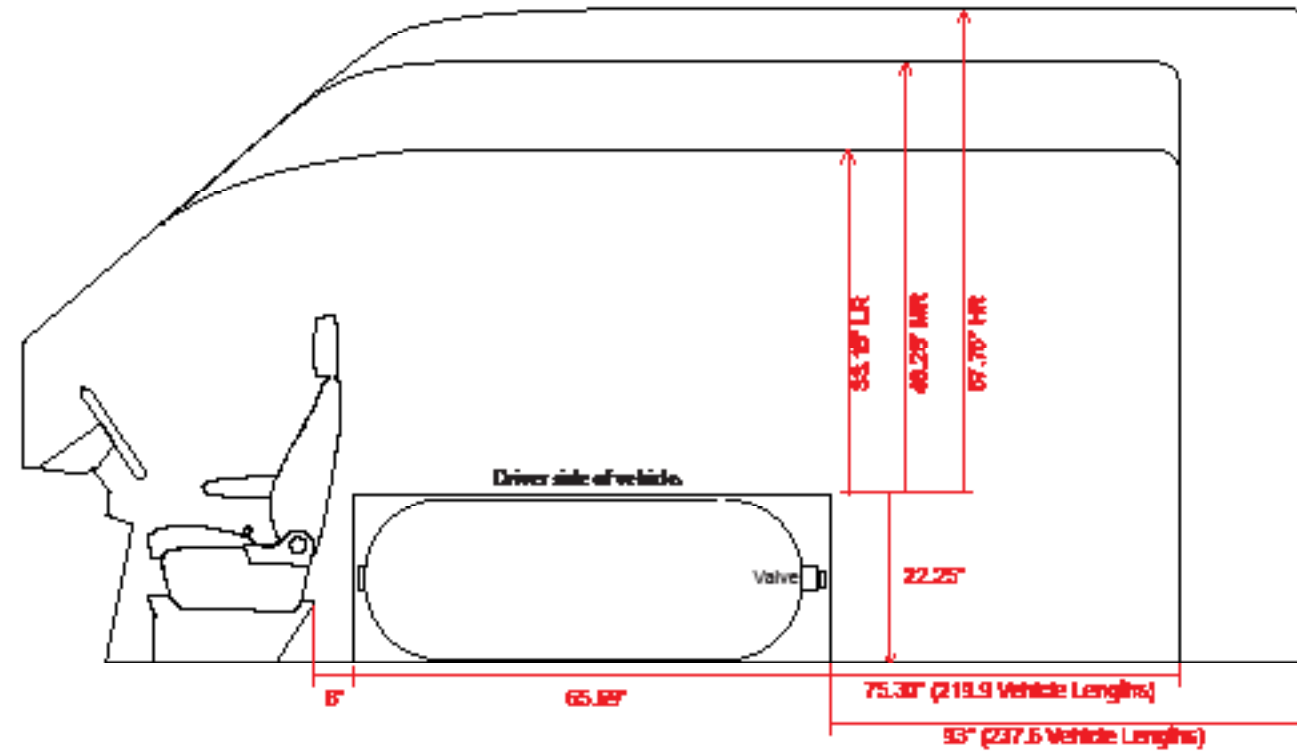
HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

This configuration will not work with the 130" WB version.

VAN (CARGO)

= 24 GGE

One (1) 21" x 60" Type 4



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

1. Remove anchor hooks.
2. Use cylinder plate as a template.

Note: Combining cylinder brackets with plate may be done on next page, step 6.
Line it up with the anchor points towards the back.
Secure plate with OEM anchor bolts towards the wall.

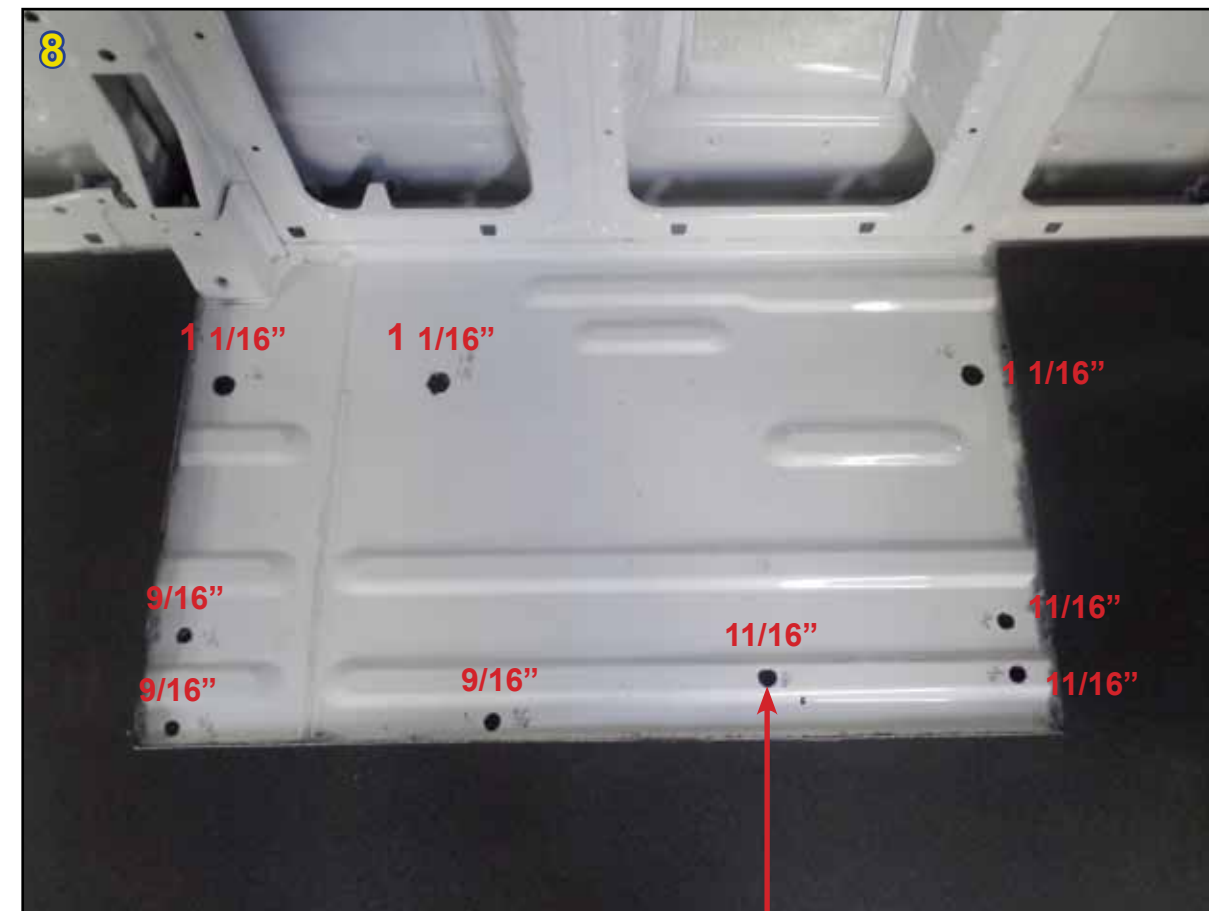
If the vehicle does not have a floor mat, proceed to step 6.

3. Trace around the cylinder plate.
4. Remove cylinder plate.
5. Cut out the traced part on the floor mat.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

6. Place cylinder plate back into location.
Secure with 2 OEM anchor bolts.
7. Mark nine drill point locations.
Be aware that one will need a stopper due to fuel tank below.
8. **NOTE: Always drill pilot holes first to verify measurements.**
Drill the points.
Deburr.
Rust proof.

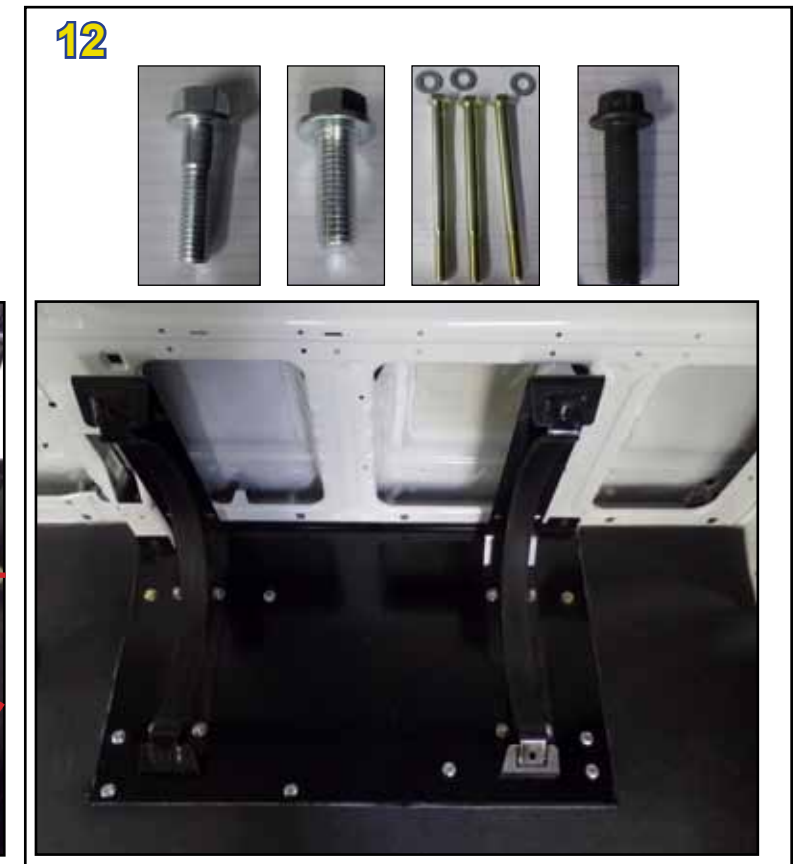
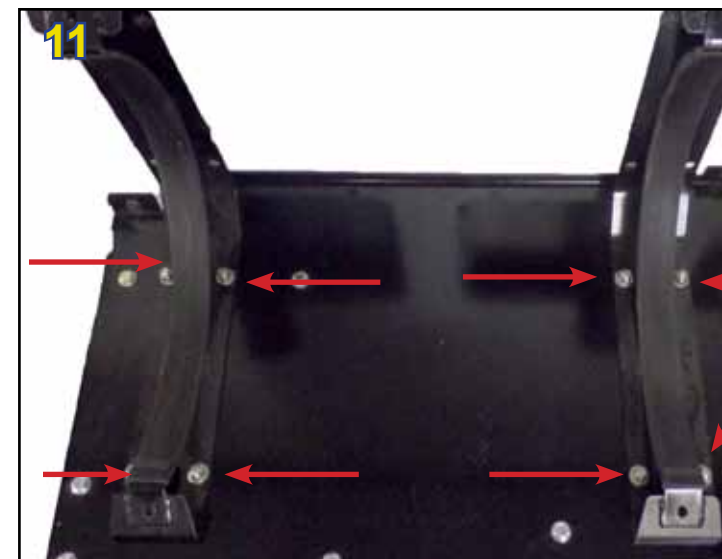


CAUTION: Use a stopper and **do not** go past 1". Fuel tank below.

HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

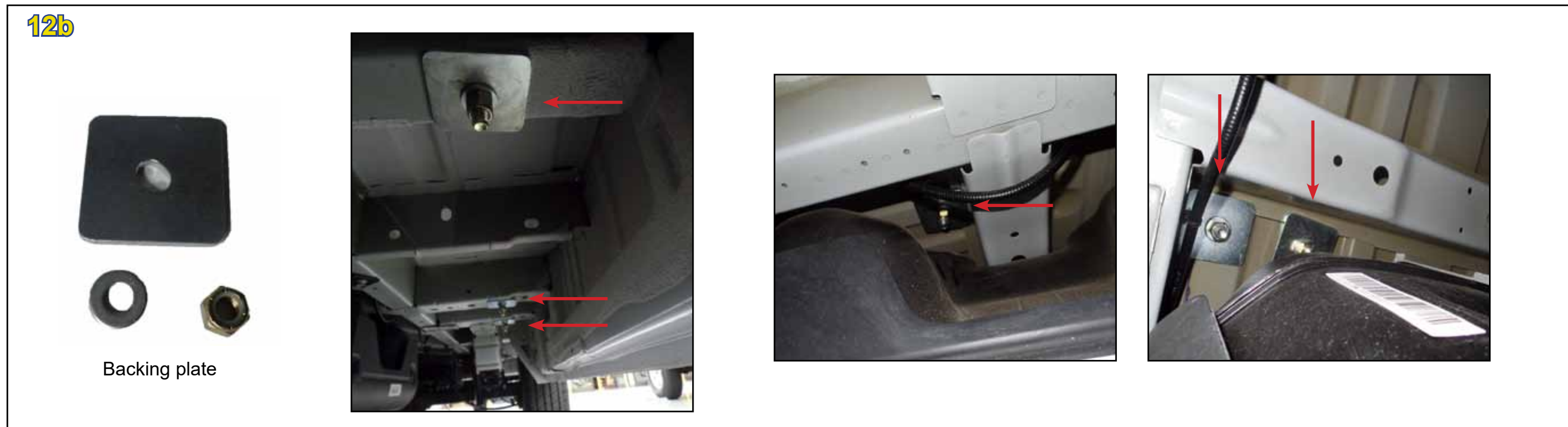
Note: Hand start ALL bolts for all locations before tightening.

9. Place three spacers into 1 1/16" holes.
10. Install three rivet nuts into 11/16" holes. Bottom right corner.
11. (If bottom cylinder brackets have not been installed previously. You may combine them now. Secure with eight 1 1/2-13 x 1 1/4" bolts (thread facing up), 1/2" nuts, and 1/2" flat washers.
12. Install cylinder plate.
Secure with two OEM bolts against the wall.
Secure with three 6 1/2" bolts into the spacers.
Secure with three 2" bolts in bottom left of cylinder plate, 9/16" holes.
Install six backing plates underneath (refer to next page for pictures).
Secure with washer and nut.
Secure with three 1 1/2" bolts into rivet nuts, bottom right corner.
Tighten to 60-65 ft-lbs. Two OEM bolts to 45 ft-lbs.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

Additional pictures for step 12.

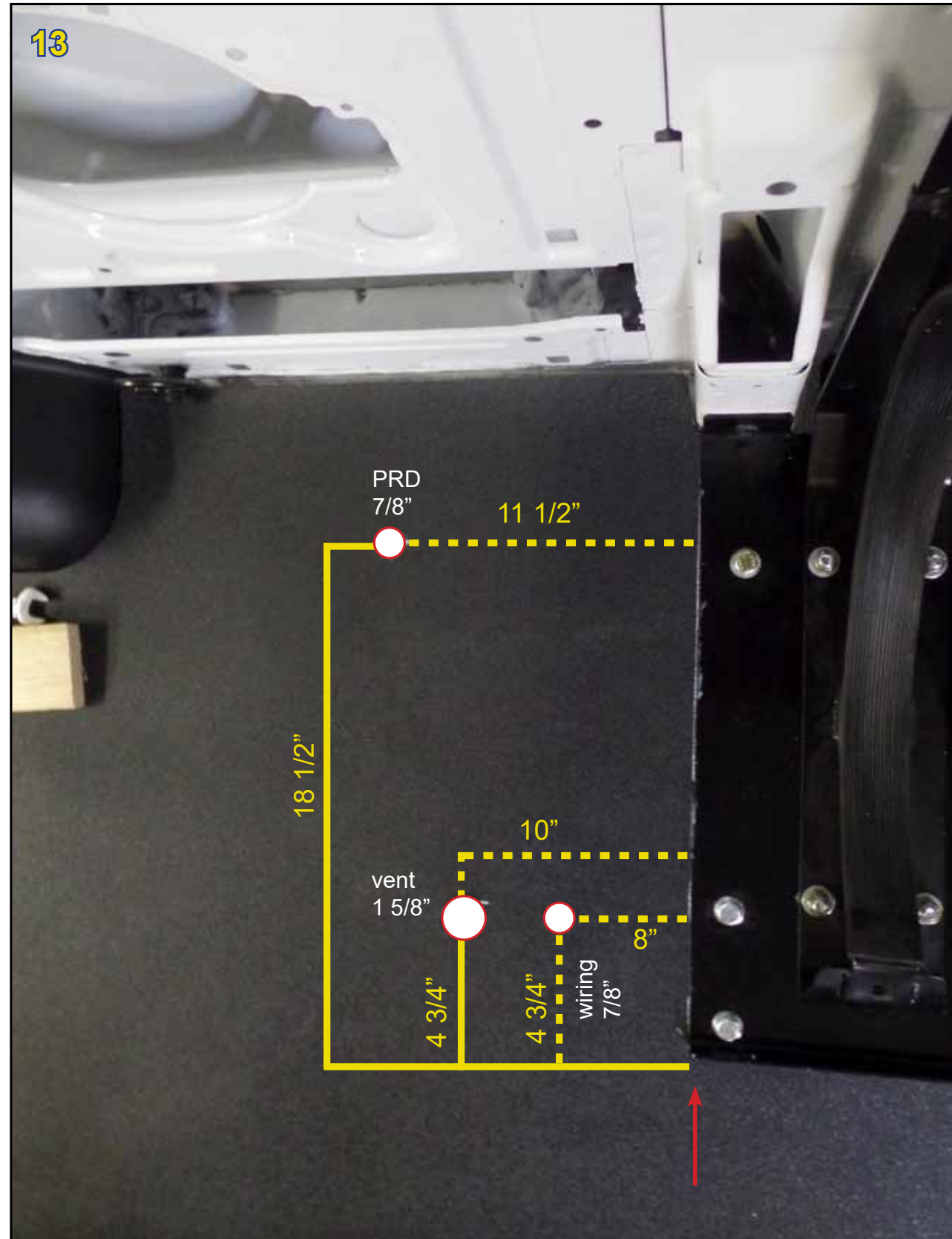


HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

13. Measure out and drill specified size holes in areas shown.

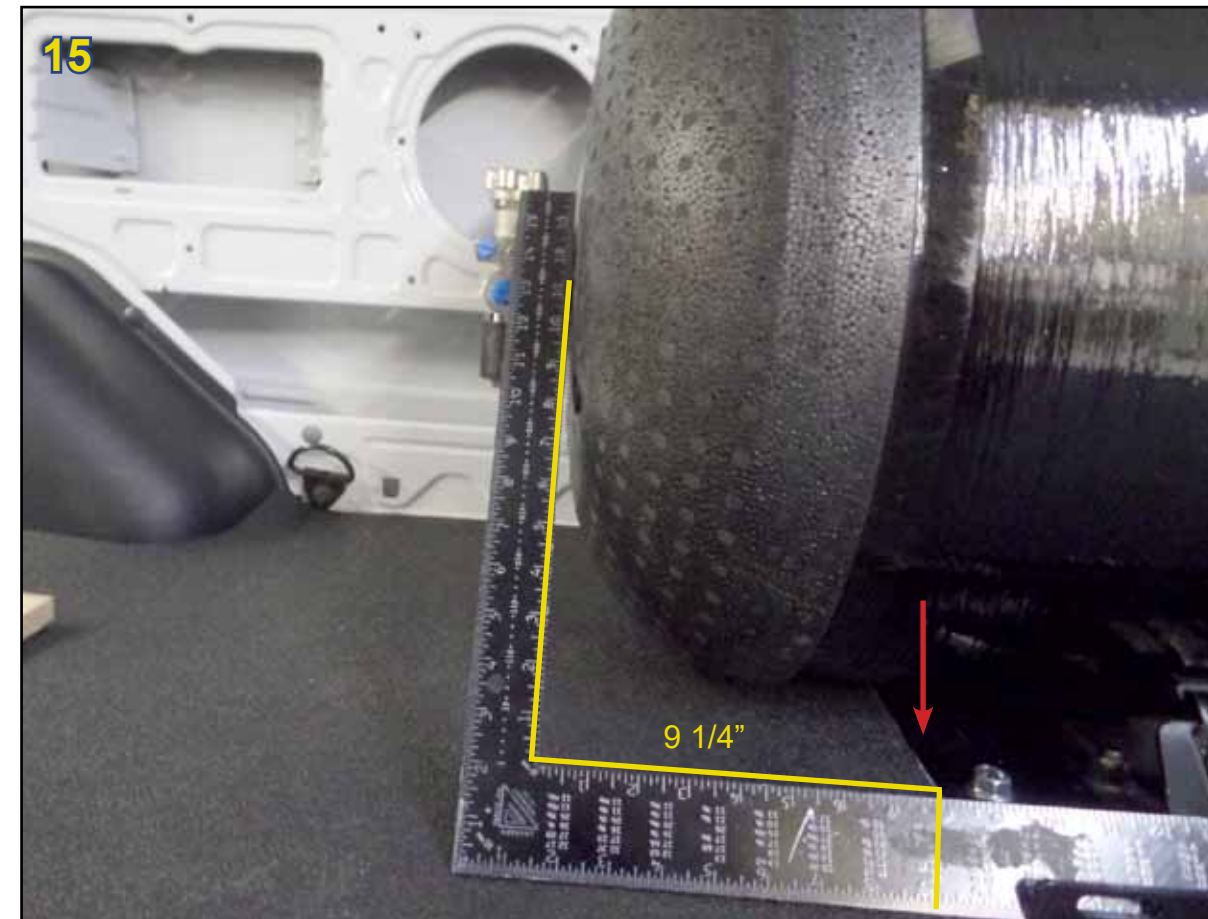
NOTE:

- Always drill pilot holes first and confirm measurements.
- Measure from the edge of the cylinder plate.



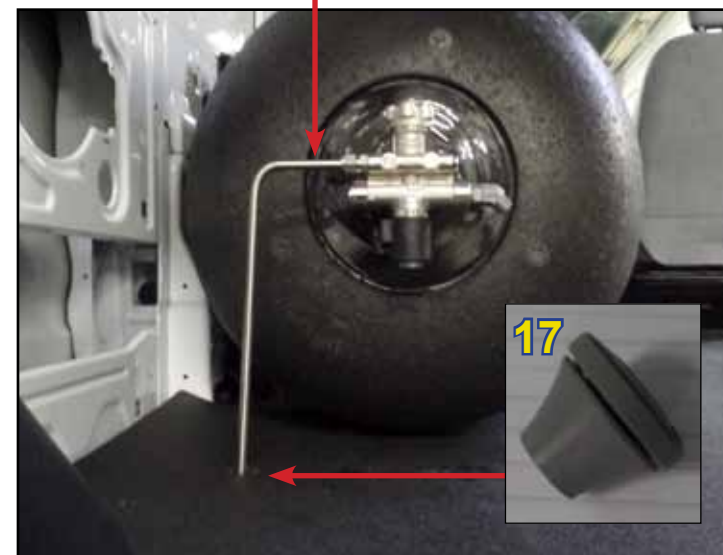
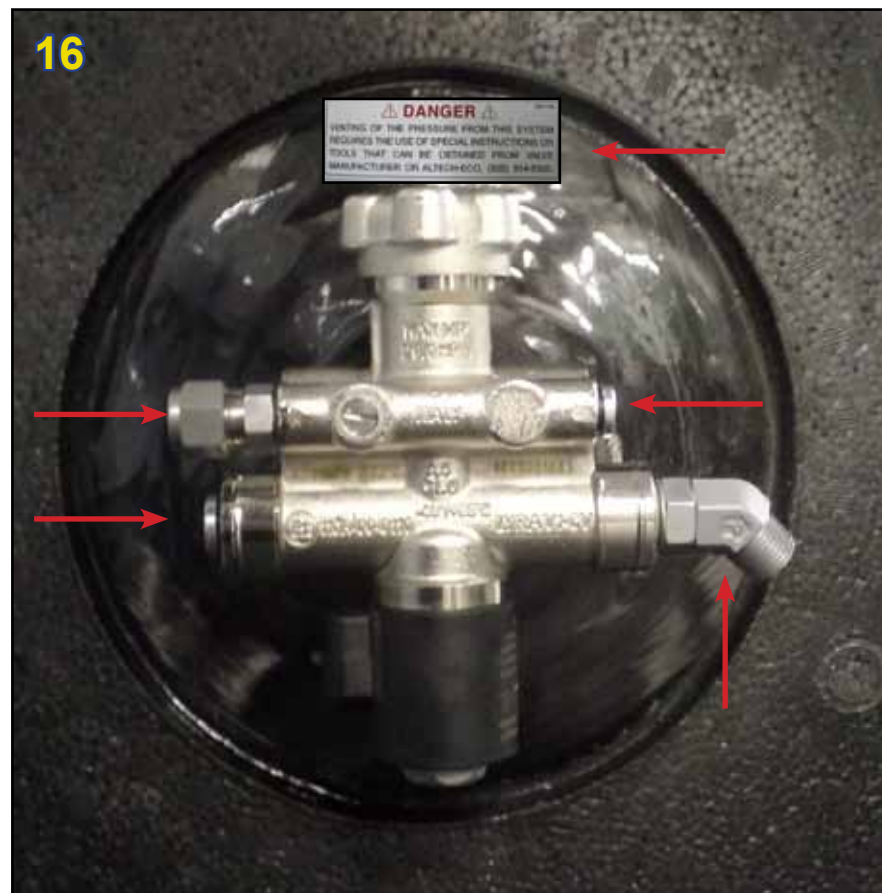
HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

14. Install cylinder.
Solenoid facing down.
15. Using a right angle, space the cylinder 9 1/4" from the edge of the cylinder plate.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

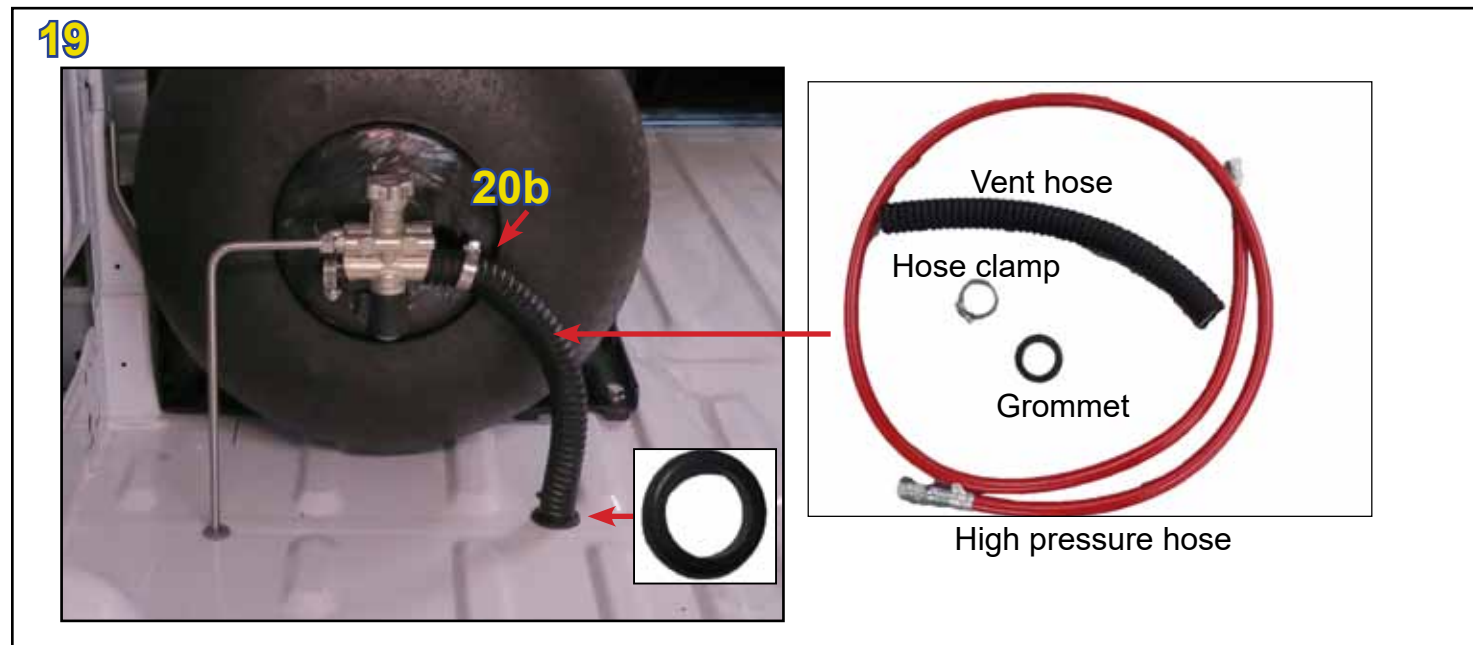
16. Install fittings.
Two plugs. Two fittings. Leave the 45 degree fitting loose until high pressure hose is attached.
Tighten all to 30-35 ft-lbs.
Apply venting decal over the valve and ensure it is clearly visible.
17. Install grommet.
18. Install PRD tube.
To tighten, first hand tighten, then make a full turn plus additional 1/4 turn.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

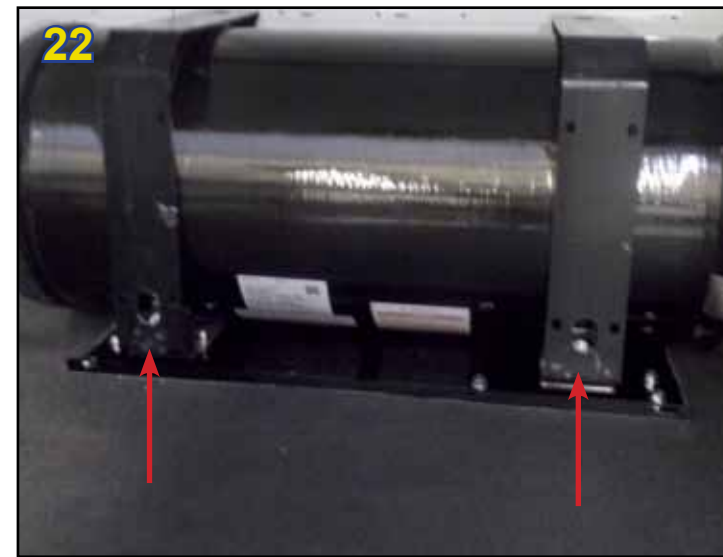
19. Install 1 3/4" grommet into the vehicle floor for the vent tube.
20. Run vent tube and 83" high pressure hose through the grommet.
Tighten high pressure hose to 30-35 ft-lbs on each end when connected.
Cover left plug with a vinyl cap and place hose clamp over it. Leave loose until after the leak test.

NOTE: (20b) Do not tighten hose clamp on vent tube until a leak test has been performed.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

21. Install box top cylinder brackets onto cylinder. Make sure to level each one.
22. Use bracket bolts and secure both connect both parts of the cylinder brackets and tighten to 45 ft-lbs. Thread must be facing up.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

23. Secure high pressure hose with poly nuts and p-clamps underneath the vehicle in locations shown.
Place a high pressure decal onto the hose.

Note: Deburr and rust proof each drill point.



P-clamps, bolts, and poly nuts.

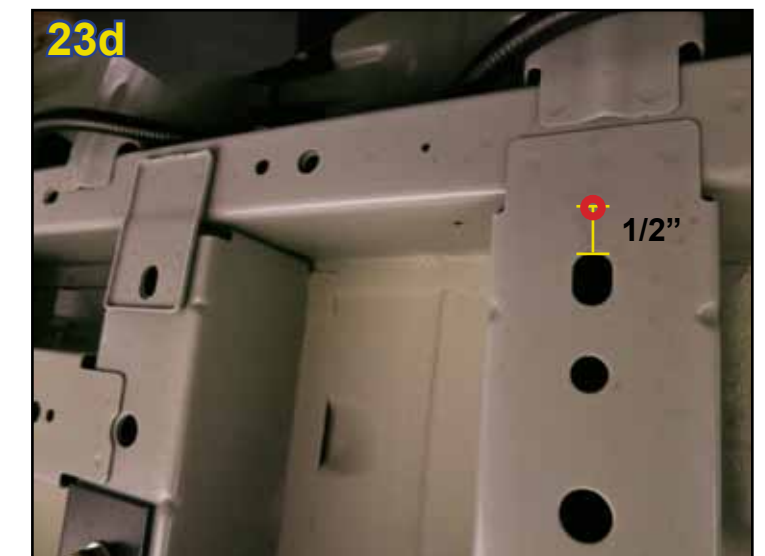
USE OEM Hole, install poly nut.



Open this to 25/64" hole. Install poly nut.



Measure 1/2" from location shown. Drill a hole to 25/64". Install poly nut.

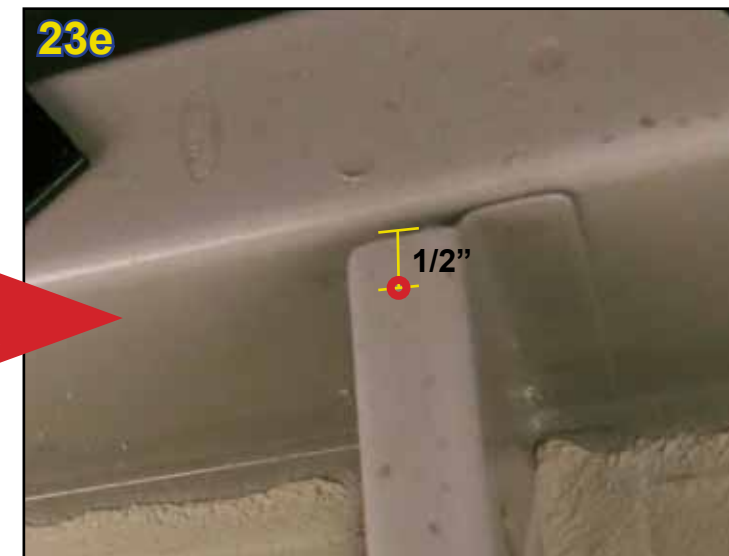


HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

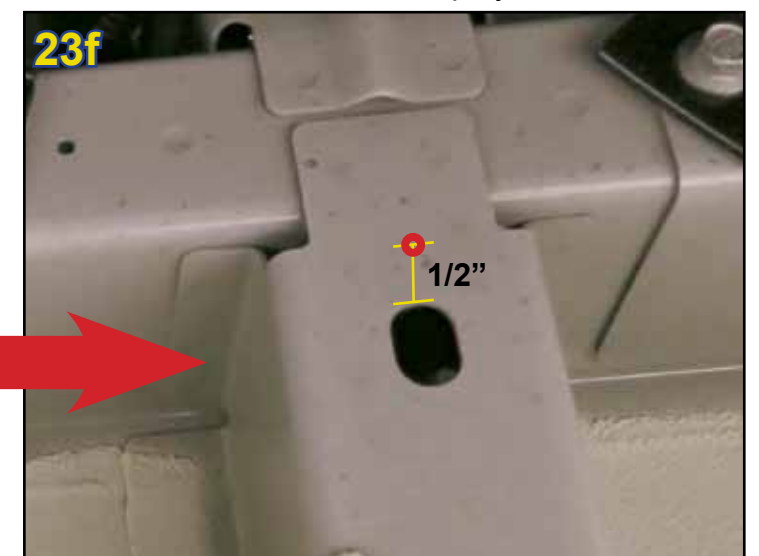
- 23. Continued...
- 24. Cap the PRD tube.



Drill this to 25/64" hole. Install poly nut.



Drill this to 25/64" hole. Install poly nut.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

ADDITIONAL PICTURES

Avoid sharp edges and corners when routing the high pressure hose. Improper routing will cause the hose to leak from friction.

Connect high pressure hose to the cross assembly.
Tighten to 30-35 ft-lbs.



HIGH PRESSURE - CYLINDER INSTALLATION (PARALLEL)

25. Apply cylinder cover decal closest to the valve.

END

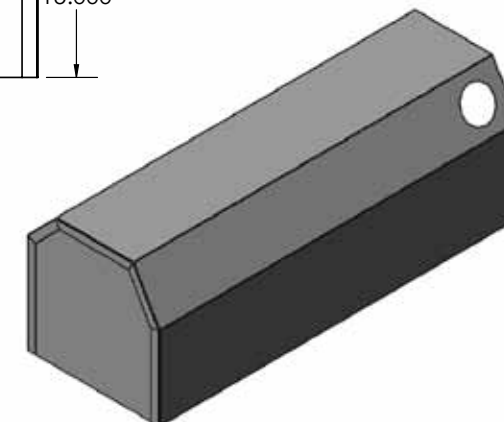
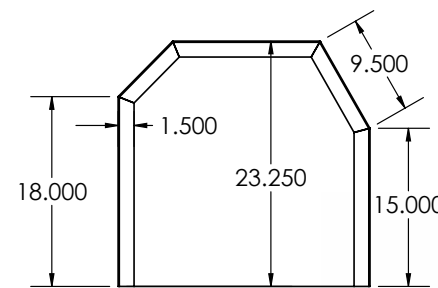
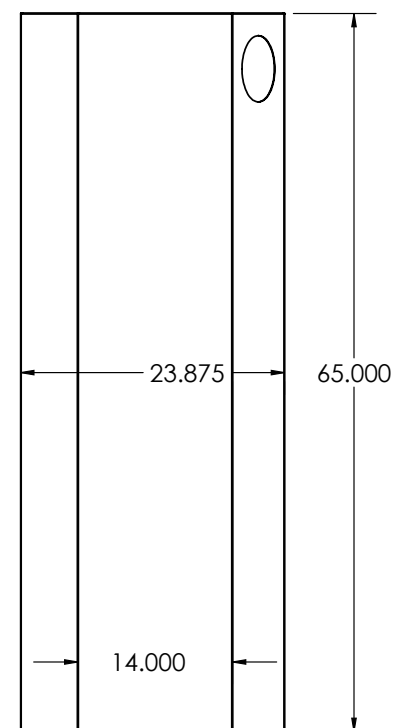
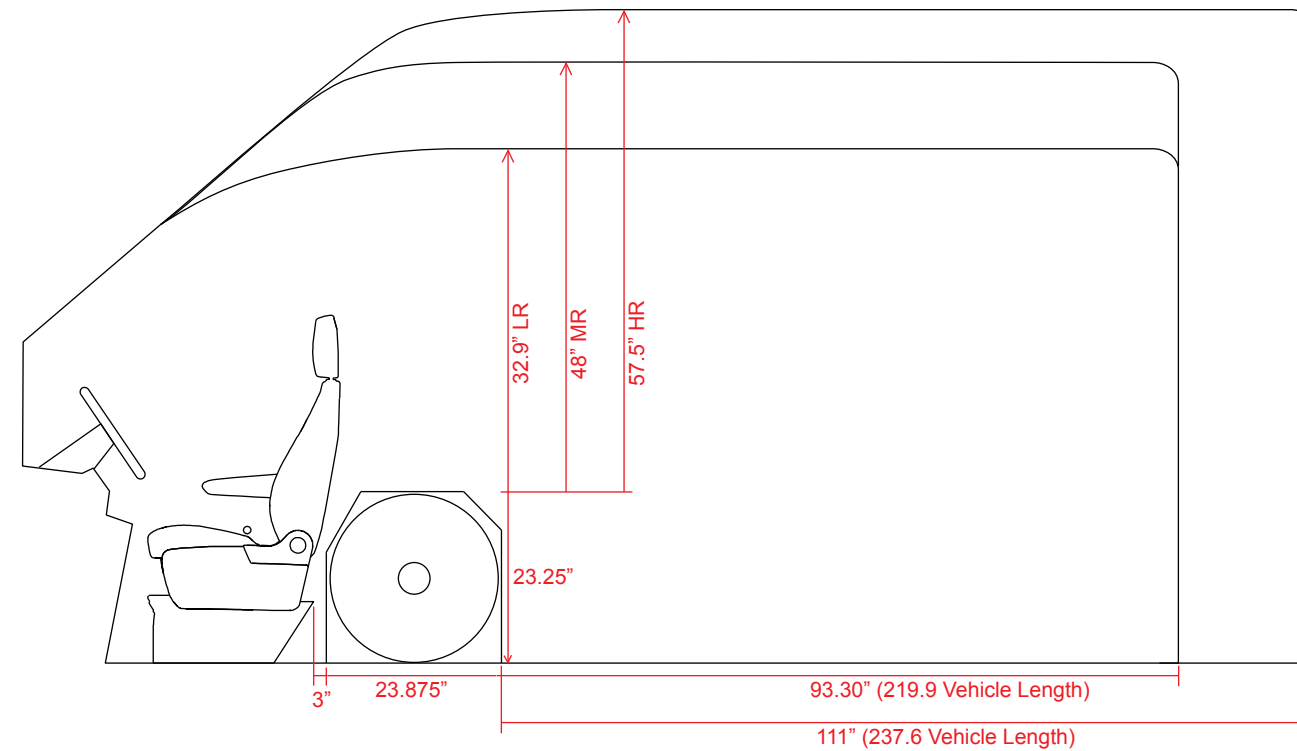


HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

VAN (CARGO) All Vehicle Lengths & Heights

• 24 GGE

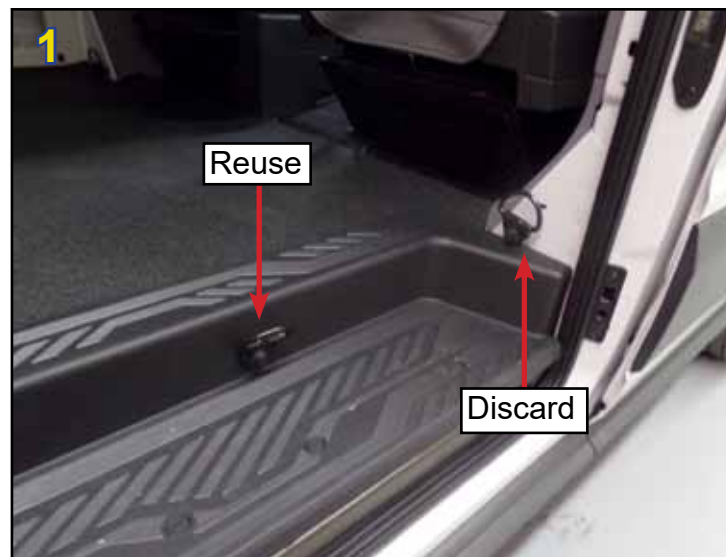
One (1) 21" x 60" Type 4



HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

1. Remove anchor hooks.
Passenger side - Discard the one located behind passenger seat. Save the hook located at step panel for reuse.
Driver side - Discard both hooks.
2. Remove step panel. Four bolts.
3. Modify lining by cutting off 27 7/8" piece. Discard that piece.

NOTE: Some vehicles will NOT have a floor mat. If that is so, move past the steps involving the floor mat.

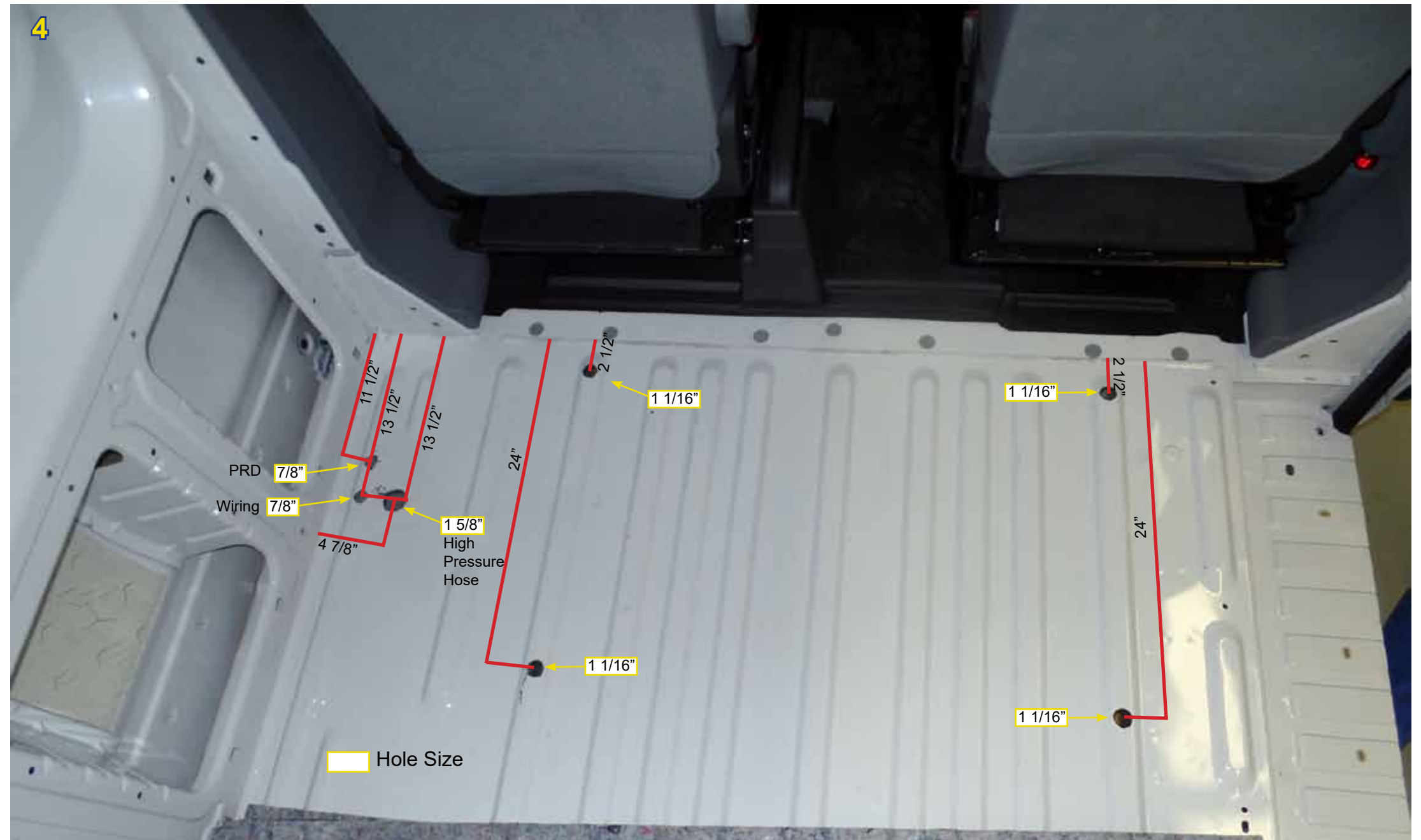


HIGH PRESSURE - CYLINDER (STANDARD)

4. Measure and mark drill point locations.
Verify measurements.
Drill appropriate sized holes.
Deburr and rust proof.

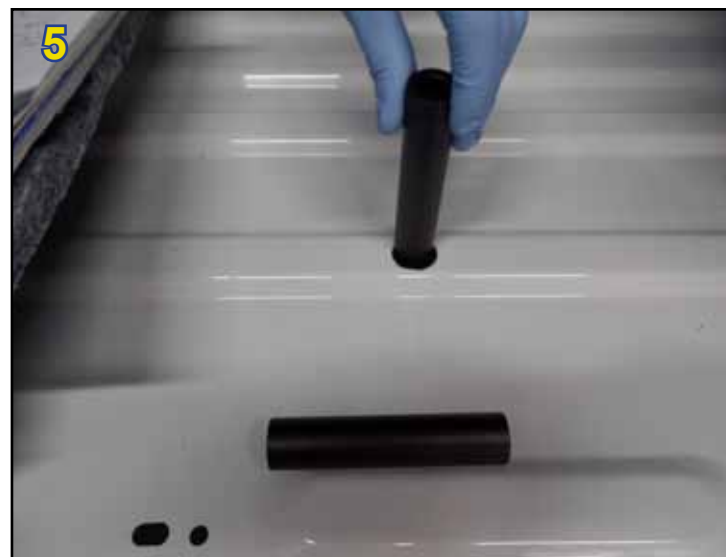
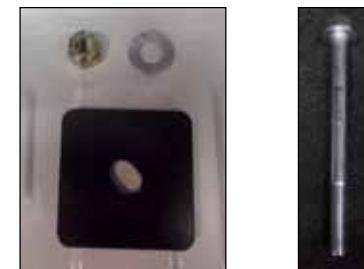


Center PRD and wiring holes on the first rib from the wall.



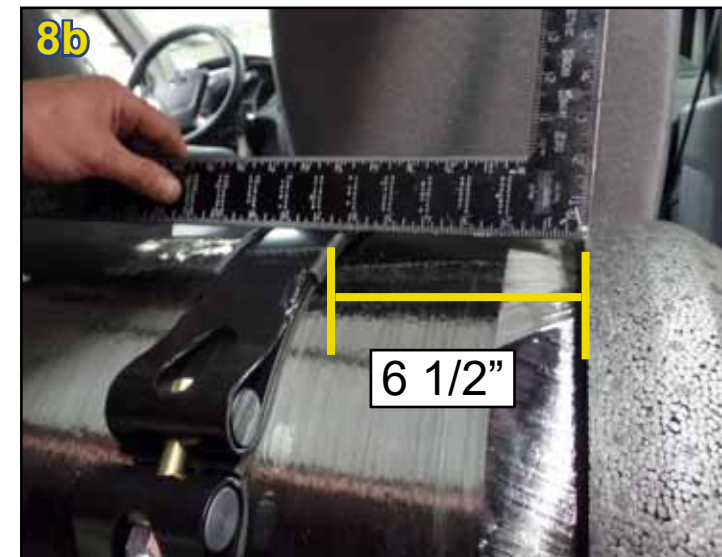
HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

5. Install four tube spacers (TR5TSP).
6. Install cylinder plate assembly (assembled with cylinder base brackets).
Secure with four 6 1/2" bolts (235). Use backing plates underneath (SP3x3x3/16).
Use 1/2-13 nylock nuts (043) and 1/2" washers (040).
Bolt thread facing down.



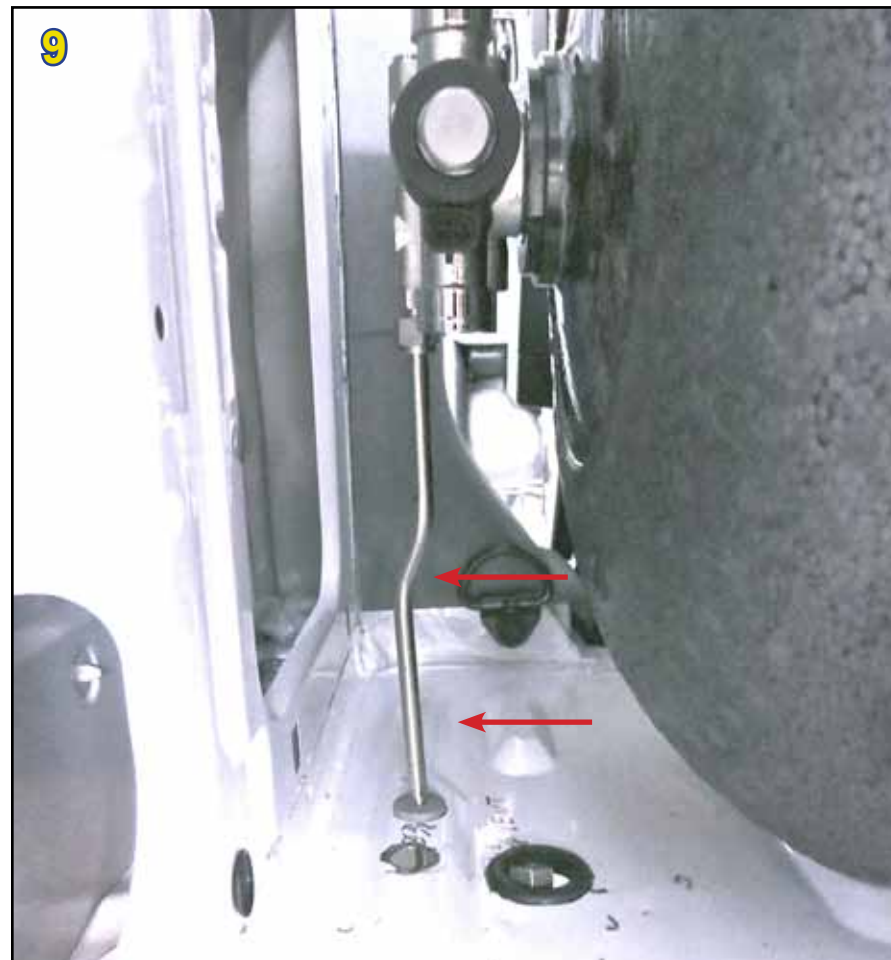
HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

7. Install cylinder straps.
Use ring kit bolts and hand tighten, all four corners.
8. Place cylinder into place. Valve facing the driver side with solenoid facing the rear of the vehicle.
Verify spacing is 6 1/2" from foam edge to cylinder ring.



HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

9. Install grommets and fittings to the valve. Tighten fittings to 30-35 ft-lbs.
Adjust cylinder as needed to ensure PRD tube is completely vertical.
Tighten PRD tube by hand tightening first, then complete a full turn plus additional 1/4 turn.



HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

10. Secure straps using bolts with the included factory cylinder strap kit.
Tighten bolts to 45 ft-lbs.
11. Tighten the bolts connecting cylinder base bracket to rings. All four corners to 45 ft-lbs.
12. Run the vent tube (VT) through the grommet.
Run the 27" high pressure hose through the vent tube. Connect hose to fitting and tighten to 30-35 ft-lbs.
Ensure the 1 1/2" hose clamp is on the vent tube and tighten hose clamp AFTER a leak test has been performed.
13. Place PRD vinyl cap (VCPRD) below onto the PRD tube.
Place vinyl sealing cap (VSVALVE) over plug. Place 1 1/2" hose clamp over the cap and tighten clamp AFTER a leak test has been performed.



HIGH PRESSURE - CYLINDER INSTALLATION (STANDARD)

14. Apply venting decal onto cylinder.
Apply cylinder cover decal onto the strap closest to the valve.
15. Verify all connections tightened to specification.
16. Re-install step panel and anchor hook.

END



DANGER
VENTING OF THE PRESSURE FROM THIS SYSTEM
REQUIRES THE USE OF SPECIAL INSTRUCTIONS OR
TOOLS THAT CAN BE OBTAINED FROM THE
MANUFACTURER OR ALTECH-ECO, INC. 848302



LOW PRESSURE INSTALLATION

1. Disconnect all connections to the air box and remove air box.
2. Move vacuum hoses aside.
3. Remove or set aside OEM fuel rail insulation.
4. Disconnect all connections to the manifold.
Remove manifold.
Remove and discard OEM bolts. Be sure to leave the OEM tube spacers in place.

DO NOT USE POWER TOOLS!



LOW PRESSURE INSTALLATION

5. Install gasket onto CNG fuel rail assembly.
Install CNG fuel rail assembly along with manifold.
Secure manifold using six (231) bolts and one (230) bolt.
Tighten to 89 lb-in (10 Nm).
Refer to order of tightening.
6. Install new bracket and reuse factory bolts to secure.

Fastener Bolt Tightening Order

① 140mm Bolt



5



Replace with kit bracket



LOW PRESSURE INSTALLATION

7. Re-attach vacuum hose to manifold and throttle body.
8. Re-install air box.
Re-attach vacuum hoses to air box.
9. Verify all OEM harnesses and hoses are properly re-attached.



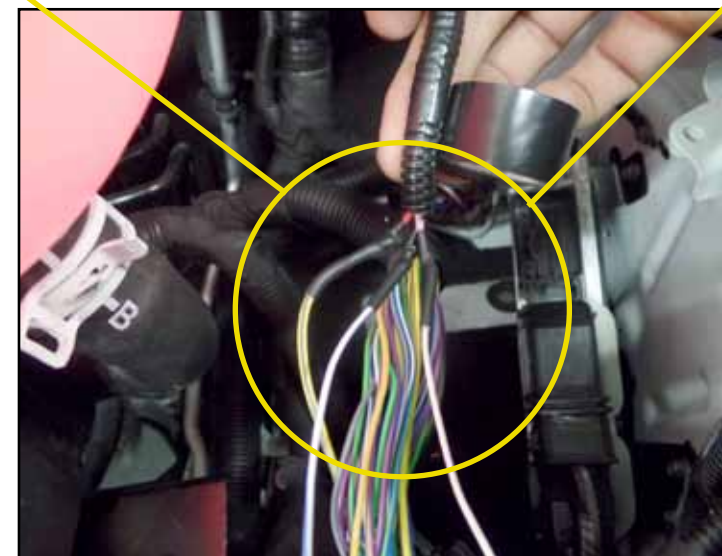
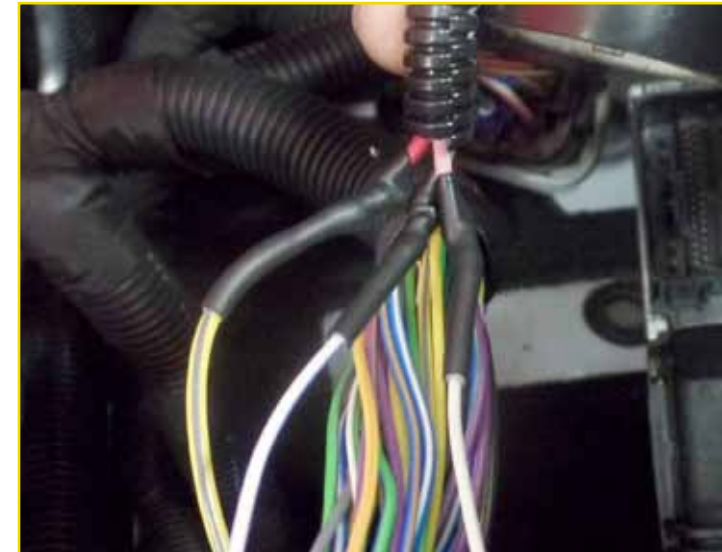
CAN BUS PIG TAIL

Note: It is recommended to de-pin the wire that you are working on for a cleaner installation. Also, de-pin the five wires one at a time to prevent cross-wiring or incorrect connections.

Locate the "Rear harness and Pin out" sheet from your kit to continue.

1. Remove the driver side headlight. (2 OEM screws).
2. Disconnect connectors for better access to the PCM.
3. Remove clip retainers on OEM harness.
4. Remove PCM connector **A** and **B**.
5. Remove protective cover to expose OEM wires.
6. Remove gray locking tabs to gain access to the terminals.
7. Refer to the Bi-Fuel **PIN-OUT** (included with system).
8. Solder to five OEM wires accordingly. Place shrink tube on each end before soldering.
Apply electric tape to cover any exposed wires.
IMPORTANT: Perform this task ONE WIRE AT A TIME!
9. Re-install the protective covers.
10. Re-install gray locking tabs.
11. Re-install PCM connectors.
12. Reconnect all OEM harnesses.
13. Connect CAN Bus harness with CNG Main Harness.

Leave head light off for easy access until all main harness connections have been made.



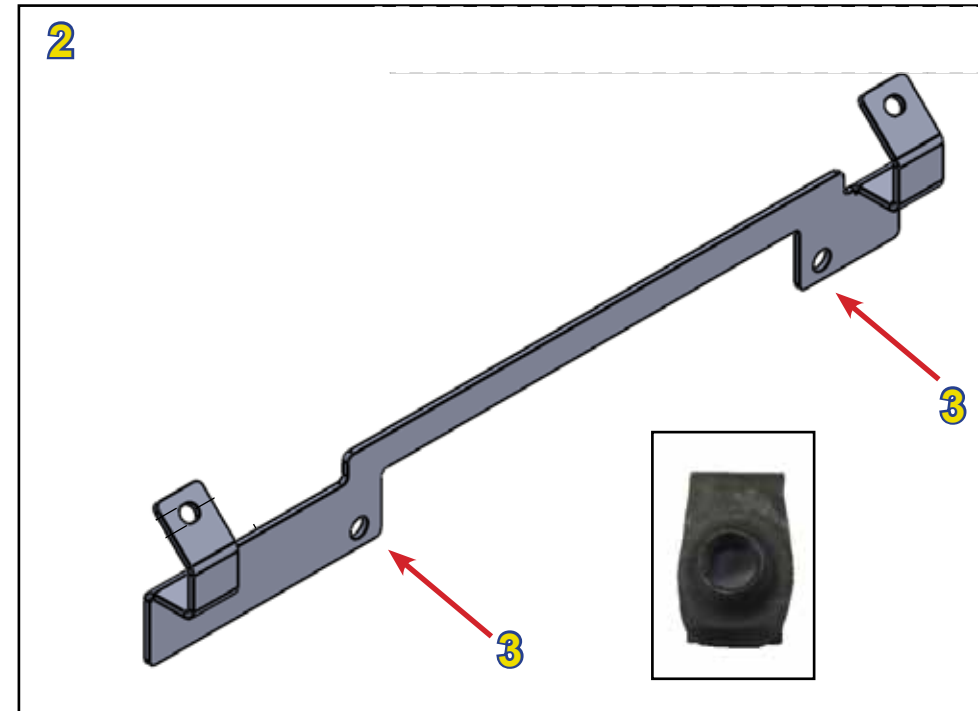
CAN BUS harness



AFCM INSTALLATION

1. Remove two OEM plastic nuts, located behind these two OEM white metal tabs. Gently push the OEM coolant lines away from the area for better access.
2. Install AFCM bracket, secure with kit M6-1 nuts.
3. Place two u-nuts onto the bracket.
4. Install AFCM and secure with two bolts (175-H).
5. Attach CNG harness.

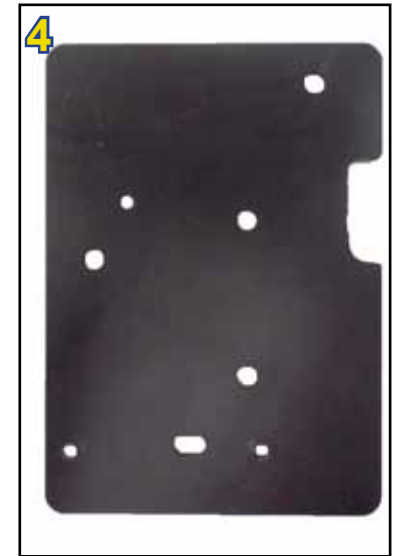
DO NOT USE POWER TOOLS!



FUEL FILL INSTALLATION

1. Loosen OEM fuel neck below.
2. Remove trim.
3. Remove bottom cap panel.
4. Retrieve the Jig (**SOLD SEPARATELY**).

Jig



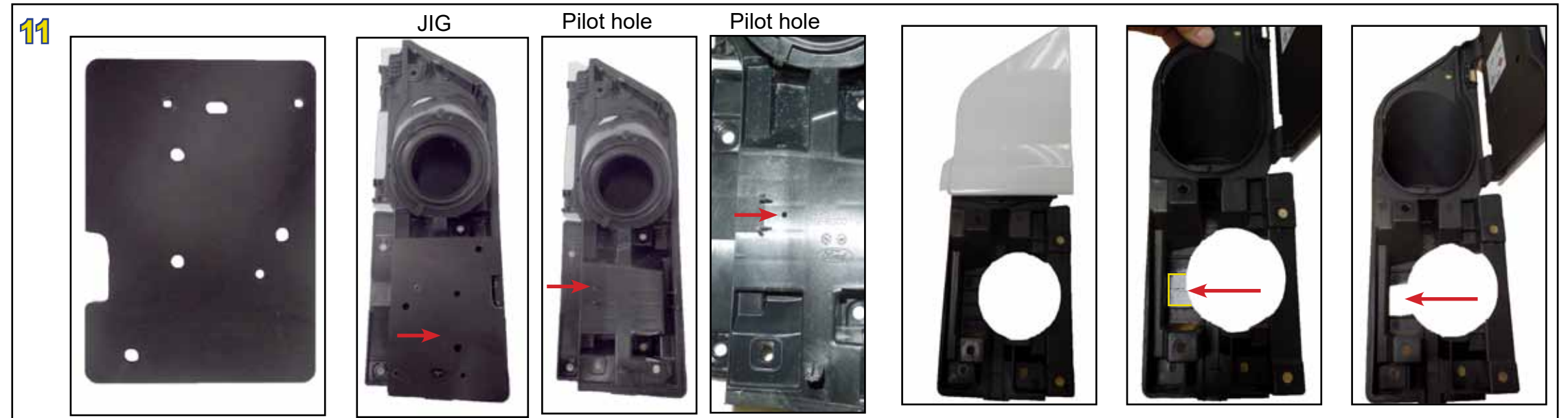
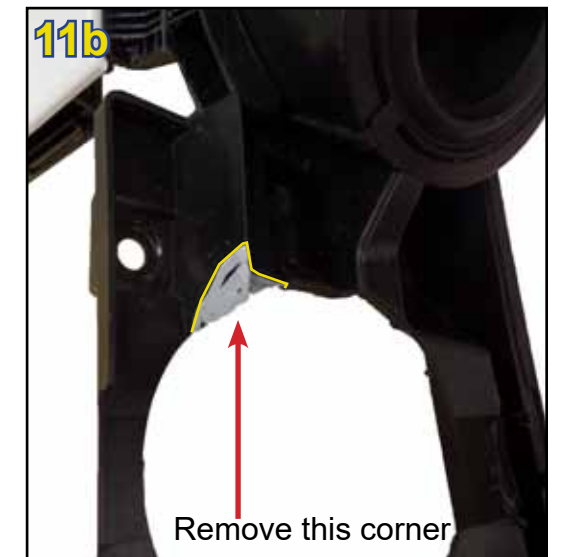
FUEL FILL INSTALLATION

5. MODIFY THE COLUMN.
Attach jig to column where shown with two screws into two OEM holes.
Drill three 17/64" holes.
Remove jig.
Deburr and rust proof.
6. MODIFY COLUMN #2.
Place jig behind wall into column and secure.
Cut out 1 3/4"-2" opening.
Deburr and rust proof.
7. Slightly bend the second layer within the column.
Rust proof any paint chipping.



FUEL FILL INSTALLATION

8. Assemble receptacle with straight fitting and 12 1/2" high pressure hose. Tighten to 30-35 ft-lbs.
9. Combine with CNG fill cup. Secure with CNG fill cup bracket. Slightly tighten.
10. Install assembly into place. Secure with three 1/4-20 x 1 bolt, 1/4-20 nylock nut (008), and 1/4 SAE flat washer (171). Install spacer where shown (bottom left). Tighten all to 5-7 ft-lbs.
11. Modify OEM fill housing by creating a 3 1/2" hole using the jig. Make an additional modification marked in white. Cut corner around 1/2".



FUEL FILL INSTALLATION

12. Install OEM fuel fill housing over the CNG receptacle. Secure with three OEM screws.
13. Modify the gray plastic trim.
Use pilot hole cap and place over receptacle.
Press gray plastic trim hard enough to imprint new pilot hole location.
Drill pilot hole.
Place pilot hole cap back onto receptacle and verify that the cap point is in exact center of the pilot hole.



FUEL FILL INSTALLATION

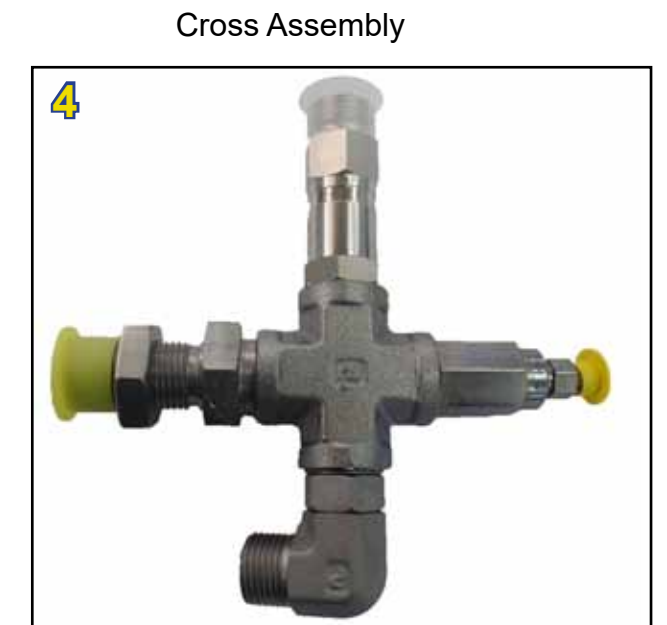
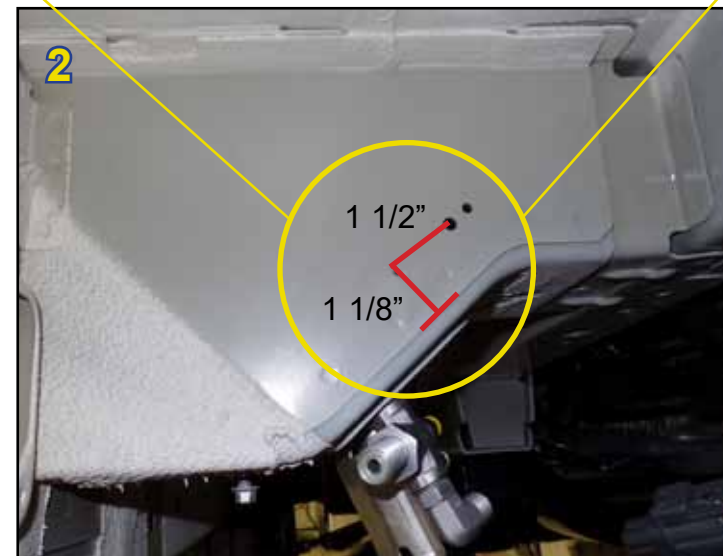
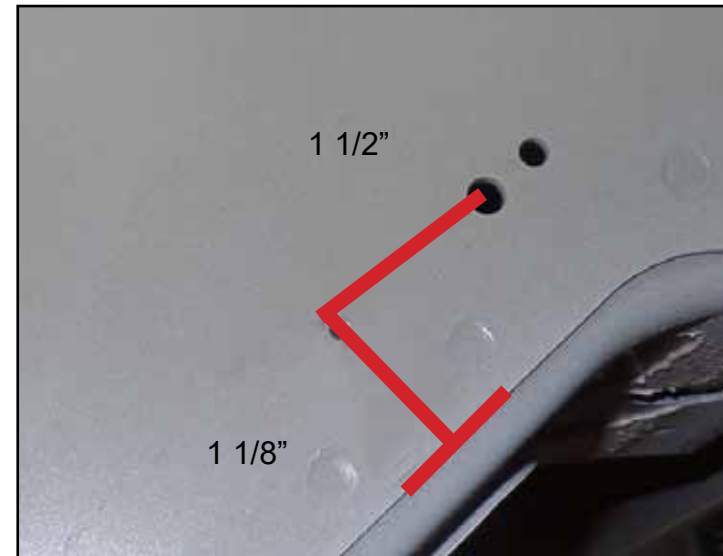
14. Modify the plastic trim by creating 2 9/16" hole. Deburr.
15. Install fuel fill ring. Refer to recommended alignment.
Drill six 3/16" holes.
Remove pilot hole cap.
16. Install plastic trim into place. Secure fuel fill ring to receptacle housing with six screws (182).
17. Tighten receptacle to 35 ft-lbs.
18. Apply decal and place rubber cap over receptacle.
Re-install bottom cap panel.



FUEL FILL INSTALLATION - CROSS ASSEMBLY

1. Move aside OEM harness if present.
2. Measure and verify. Refer to picture.
3. Drill $17/32$ " hole.
Deburr and rust proof.
Install M10 rivet nut.
4. Sub assemble the cross assembly. Tighten to 30-35 ft-lbs. Leave 90 degree fitting loose.
5. Install cross bracket and secure with M10 bolt.

NOTE: For 2018 Transit models, Cross Assembly is included with the regulator.



FUEL FILL INSTALLATION - CROSS ASSEMBLY

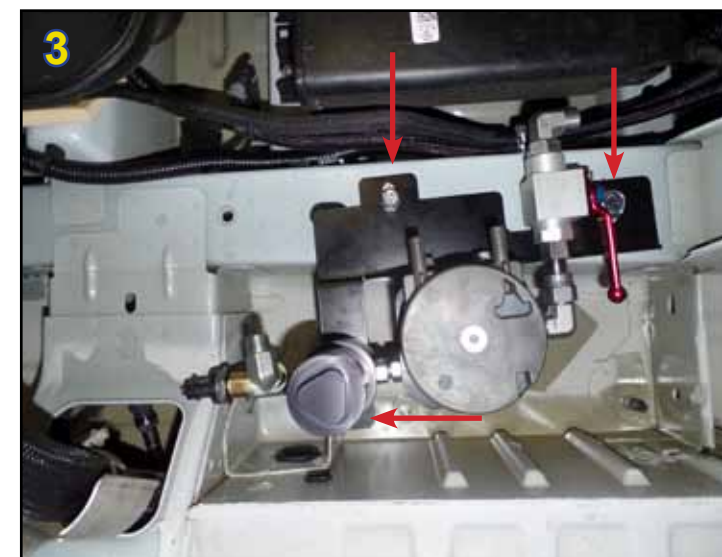
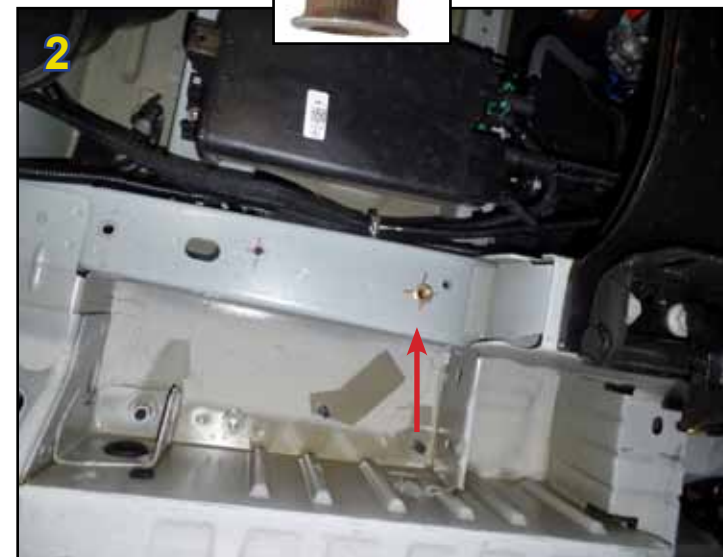
6. Connect fuel fill hose to check valve on cross. Hand tighten.
7. Attach cross to bracket and secure fitting with nut.
Tighten fuel fill hose to 30-35 ft-lbs.
8. Re-attach OEM harness (if present).



REGULATOR INSTALLATION

NOTE: For 2018 Transit models, see next page.

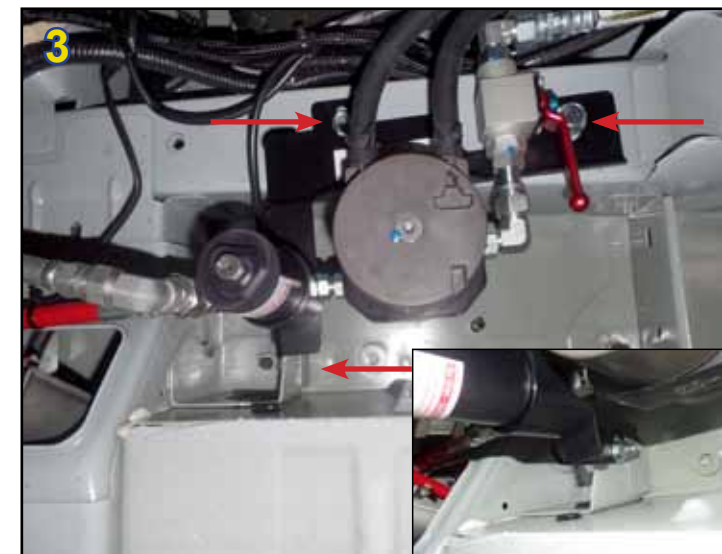
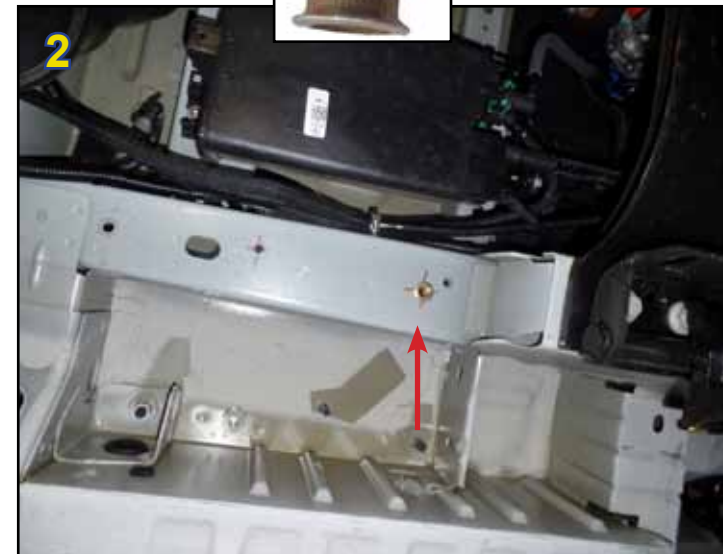
1. Re-thread OEM hole where shown to M8-1.25.
2. Install 1/2 rivet nut where shown.
3. Install Regulator Assembly.
Secure with 1 1/4" bolt (117-H), M8-1.25 25mm (118), and 3/8-16 bolt (158) to OEM bracket.
Tighten 1/2 bolts to 50-55 ft-lbs.
Tighten M8 to 15-18 ft-lbs.
4. Attach 11" high pressure hose to regulator assembly and to the cross assembly. Tighten the adjustable 90 degree elbow to 30-35 ft-lbs.
5. Re-install OEM fuel neck bracket.
6. Place high pressure sticker onto the high pressure hose and a high pressure sticker onto the regulator assembly.



2018 REGULATOR INSTALLATION

Note: The 2018 model version contains bleeder valve on the coalescing filter.

1. Re-thread OEM hole where shown to M8-1.25.
2. Install 1/2 rivet nut where shown.
3. Install Regulator Assembly.
Secure with 1 1/4" bolt (117-H), M8-1.25 25mm (118), and 3/8-16 bolt (158) to OEM bracket.
Tighten 1/2 bolts to 50-55 ft-lbs.
Tighten M8 to 15-18 ft-lbs.
4. Attach high pressure hose(s) and high pressure sensor (when ready) to regulator assembly. Tighten the adjustable 90 degree elbow to 30-35 ft-lbs.
When ready, zip tie rear CNG harness along same path as the high pressure hose.
5. Place high pressure sticker onto the high pressure hose and a high pressure sticker onto the regulator assembly.
Stickers and decals must be clearly visible.



ROUTING - LOW PRESSURE

1. Connect low pressure hose to quarter turn valve.
Tighten to 30-35 ft-lbs.
2. Continue running the low pressure hose on the inside of the frame and into the engine compartment.
Zip to OEM harness.
(You may hold off until this step until coolant hoses and rear harness has been installed and zip tie all three together to the OEM harness).
3. Connect low pressure hose to the CNG fuel rail assembly.
Tighten to 30-35 ft-lbs.
(Ensure a low pressure decal is placed on each end of the hose).



ROUTING - REAR HARNESS

1. Run rear harness along side the low pressure hose path. Continue running the rear harness past the regulator farther back. Zip to OEM harness.
Fit connector end into opening through the grommet and install with grommet.
2. Connect rear harness to CNG main harness.
Refer to diagram.

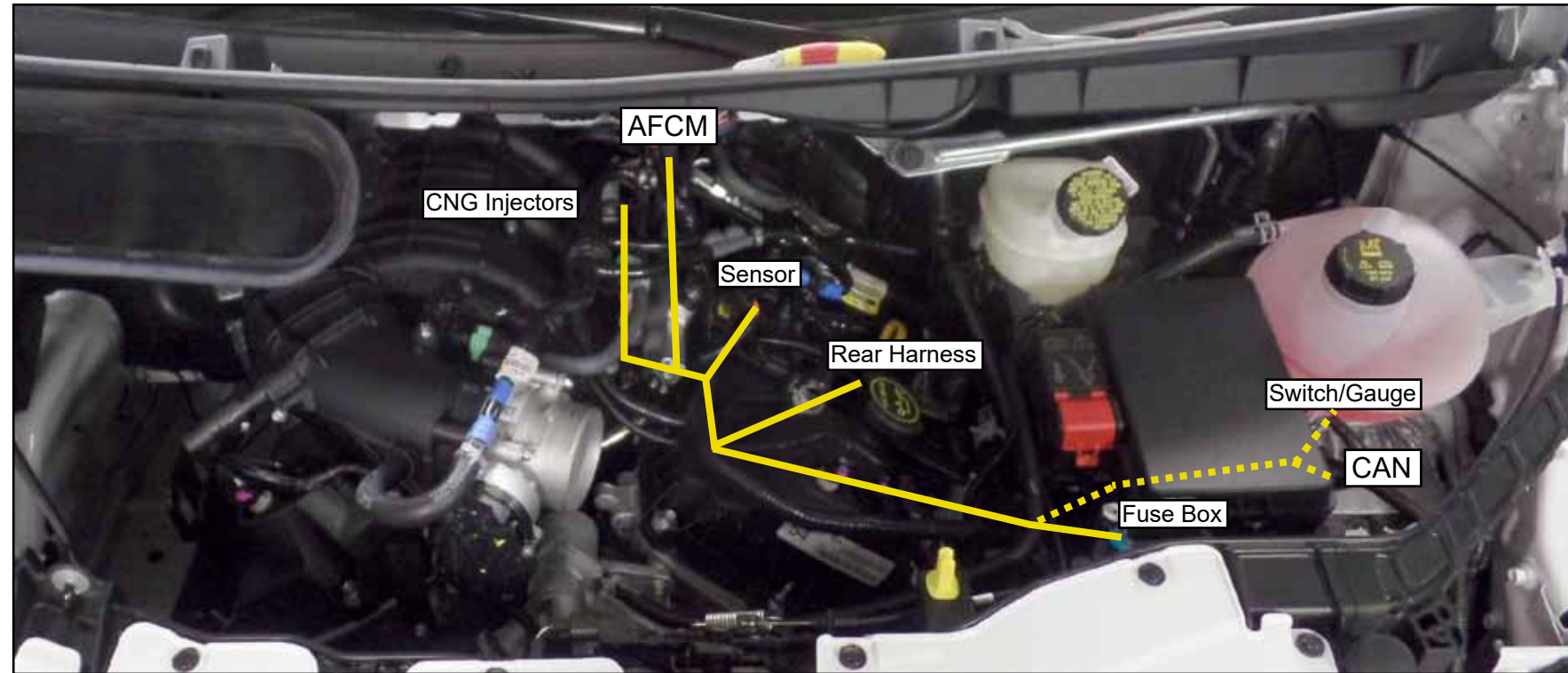
Note: Rear harness location will differ on certain cylinder packages.


Standard Cargo Configuration



ROUTING - CNG MAIN HARNESS

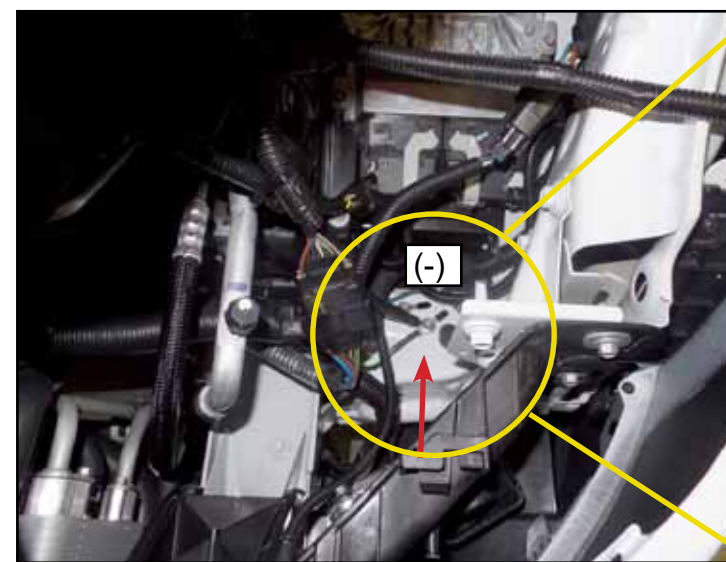
1. Zip tie all slack areas to OEM harness.
2. Refer to diagram.
3. Connect all remaining harnesses to CNG main harness.



 Underneath the OEM fuse box.

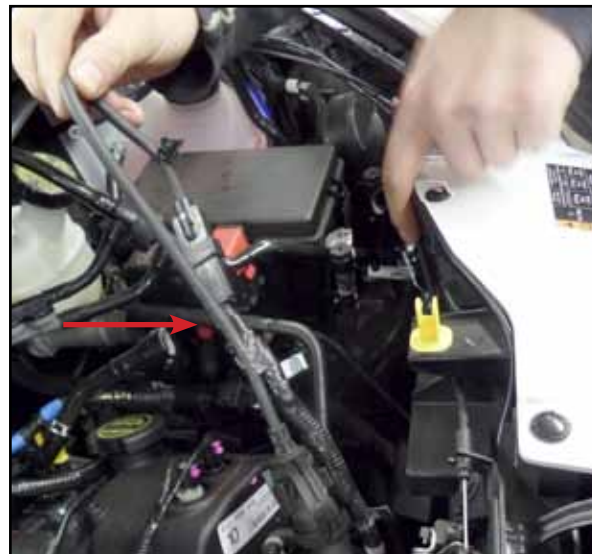


Remove OEM ground, sandwich in the harness (-). Re-secure with same OEM bolt.



MAIN CNG HARNESS/FUSE BOX

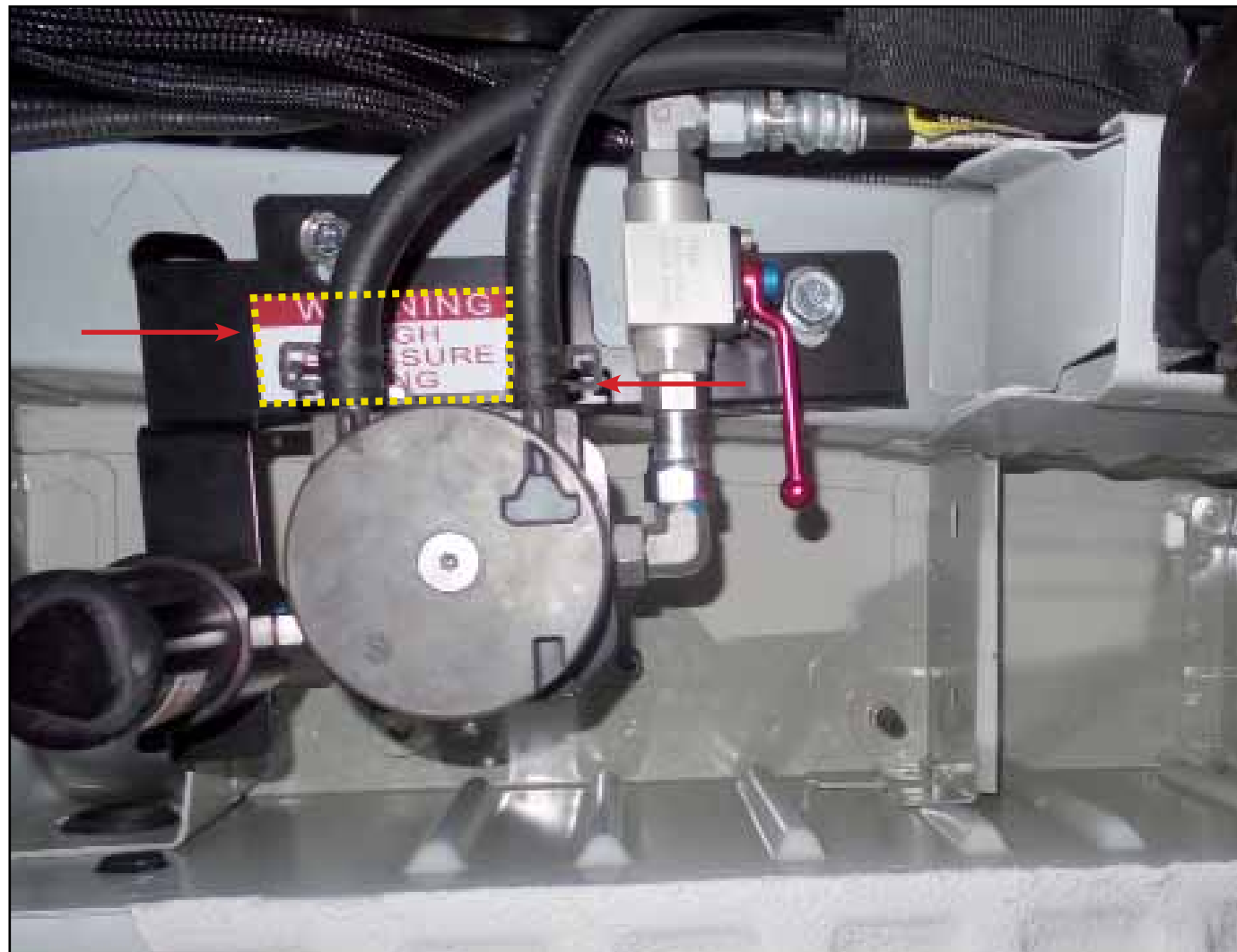
1. Install fuse box in location shown using included bracket and screws.



ROUTING - COOLANT HOSES

1. Run the coolant hoses along the same path as the low pressure hose and rear harness. Lead the coolant hoses routing to the front of the ending compartment. Connect hoses to the regulator using hose clamps. Zip tie coolant hoses to the low pressure hose. Cut away excess zip tie.
2. Tap into OEM coolant hoses where shown (see next page for close up). Cut away some access OEM hoses to comfortably accommodate kit coolant "Y's".
3. **Apply Warning: high pressure decal where shown?**

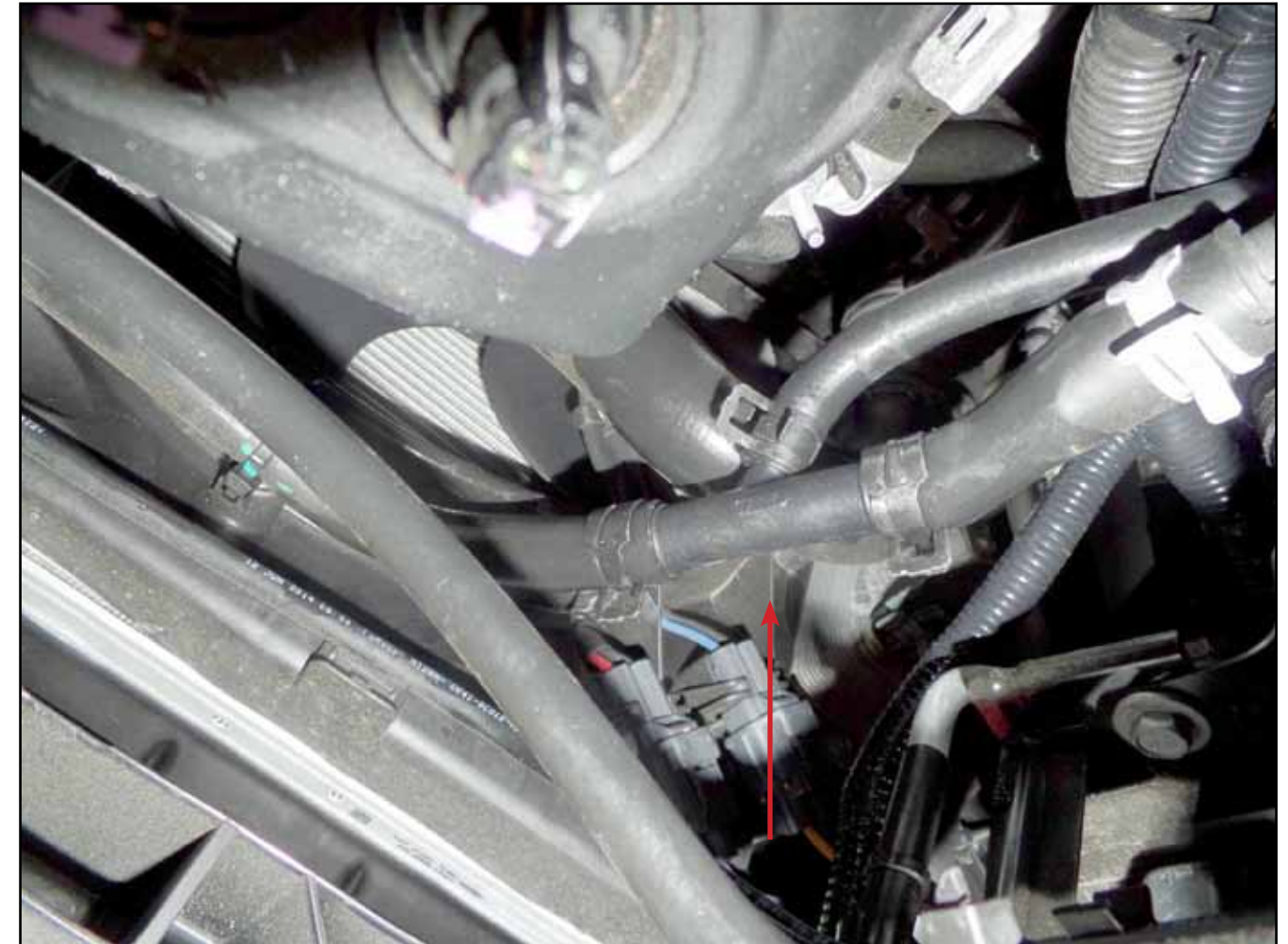
NOTE: Some liquid will spill out of OEM hoses. Use caution when tapping into OEM hoses. Use eye protection.



ROUTING - COOLANT HOSES



Coolant Y facing down towards the engine compartment.



Coolant Y facing towards engine fire wall.

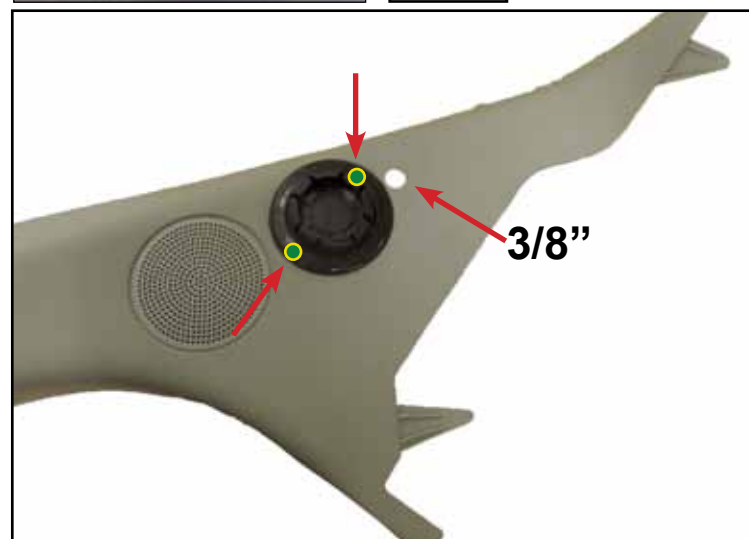
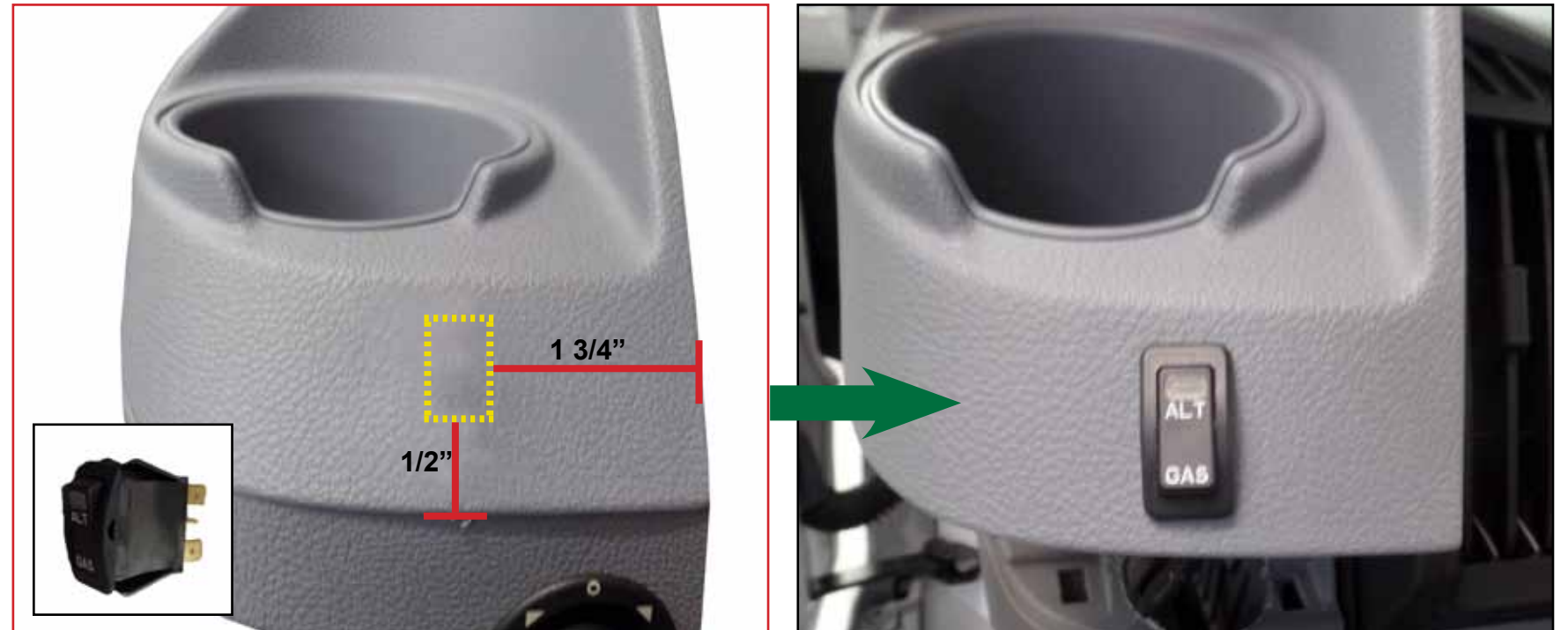
FUEL SWITCH/GAUGE ROUTING

1. Drill a 7/8" hole into the engine fire wall.
Deburr and rustproof.
2. Feed the switch gauge harness through the hole. 6 pin plug facing the engine compartment.
Install the grommet located on the harness.
Connect harness to the main CNG harness.
3. Remove pillar panel, lower panels, and cup holder.
4. Route gauge part of the harness upwards into pillar.
Route the pin connector towards the OBD location.
Route switch part of the harness towards the cup holder.
5. Drill a 2" size hole. Deburr.
6. Cut away access corner.



FUEL SWITCH/GAUGE

7. Modify the pillar panel.
Mount the pod base onto the pillar panel, next to the speaker. Secure with two screws (232). Ensure you install the pod in the approximate location as shown below.
Create a 3/8" hole next to the pod base. This will be used for gauge harness end. Deburr.
8. Measure and cut out a hole for the switch.
Install switch and ensure a snug fit.
9. Run gauge wiring through the 3/8" hole.
Install pillar panel back into place.
10. Fit gauge with the rubber ring. Ring is included with gauge kit.



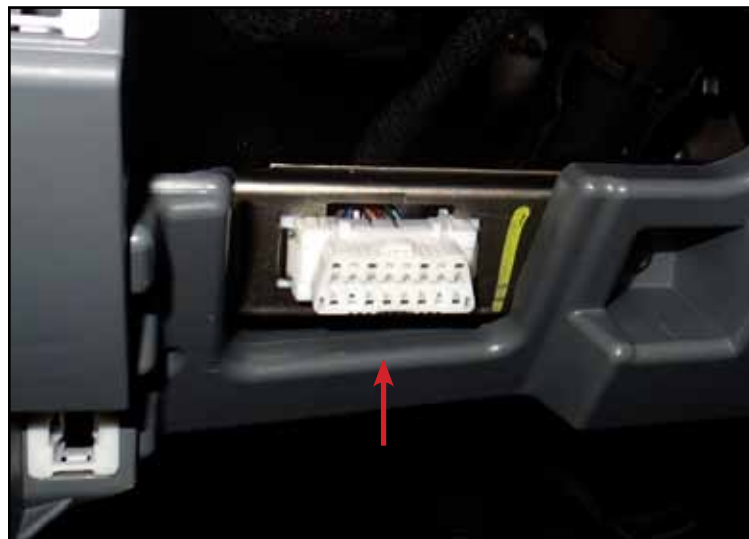
FUEL SWITCH/GAUGE

11. Run gauge wiring into the pod and connect to the gauge. Use supplied pin-out diagram for correct connections.
DO NOT OVERTIGHTEN THE CONNECTIONS. Finger tighten.
12. Fit the gauge into the pod and install pod.
13. Ensure all trims re-installed back into place.



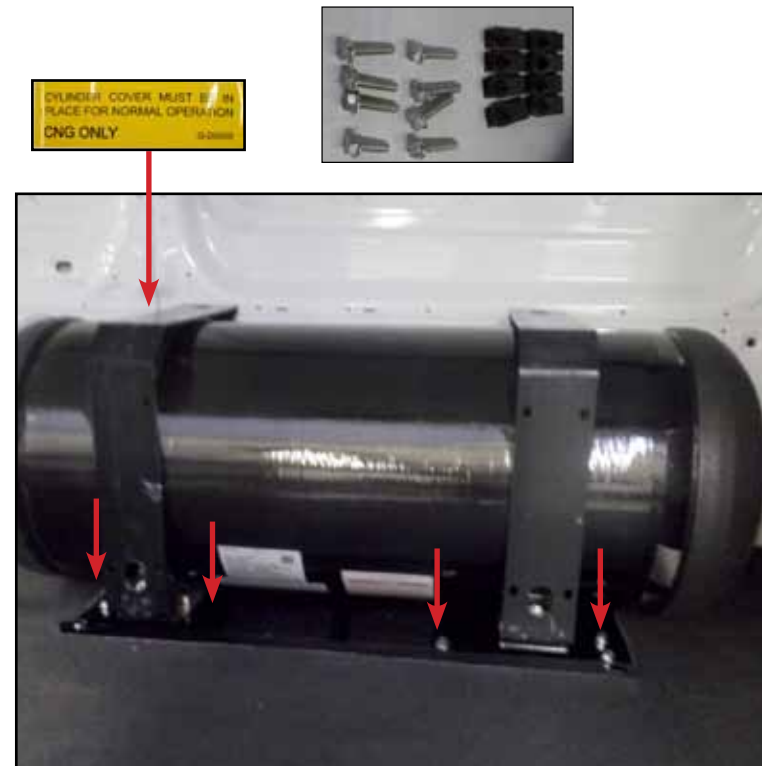
FUEL SWITCH/GAUGE

14. Remove OBD connector from its place.
Loosen the side of the connector.
Insert RED/YELLOW wire into pin 13. Pin 13 is located next to the white OEM wire.
Secure the side of the connector.
Re-install OBD connector.
15. Zip tie any loose switch/gauge wiring.
16. Re-install all panels.



CYLINDER COVER (PARALLEL)

1. Place cover decal inside the cylinder cover and on the box bracket closest to the valve.
2. Place eight u-nuts (333) on front and back cylinder plates.
3. Place cover over cylinder and secure with eight 1/4-20 x 1" bolts (334).



CYLINDER COVER (STANDARD)

1. Place cover decal inside the cylinder cover and one on cylinder strap closest to the valve.
2. Place four u-nuts (333) on front cylinder base plate and four onto rear cylinder base plate.
3. Place cover over cylinder and secure with eight 1/4-20 x 1" bolts (334).

CYLINDER COVER MUST BE IN PLACE FOR NORMAL OPERATION
CNG ONLY



CYLINDER COVER MUST BE IN PLACE FOR NORMAL OPERATION
CNG ONLY



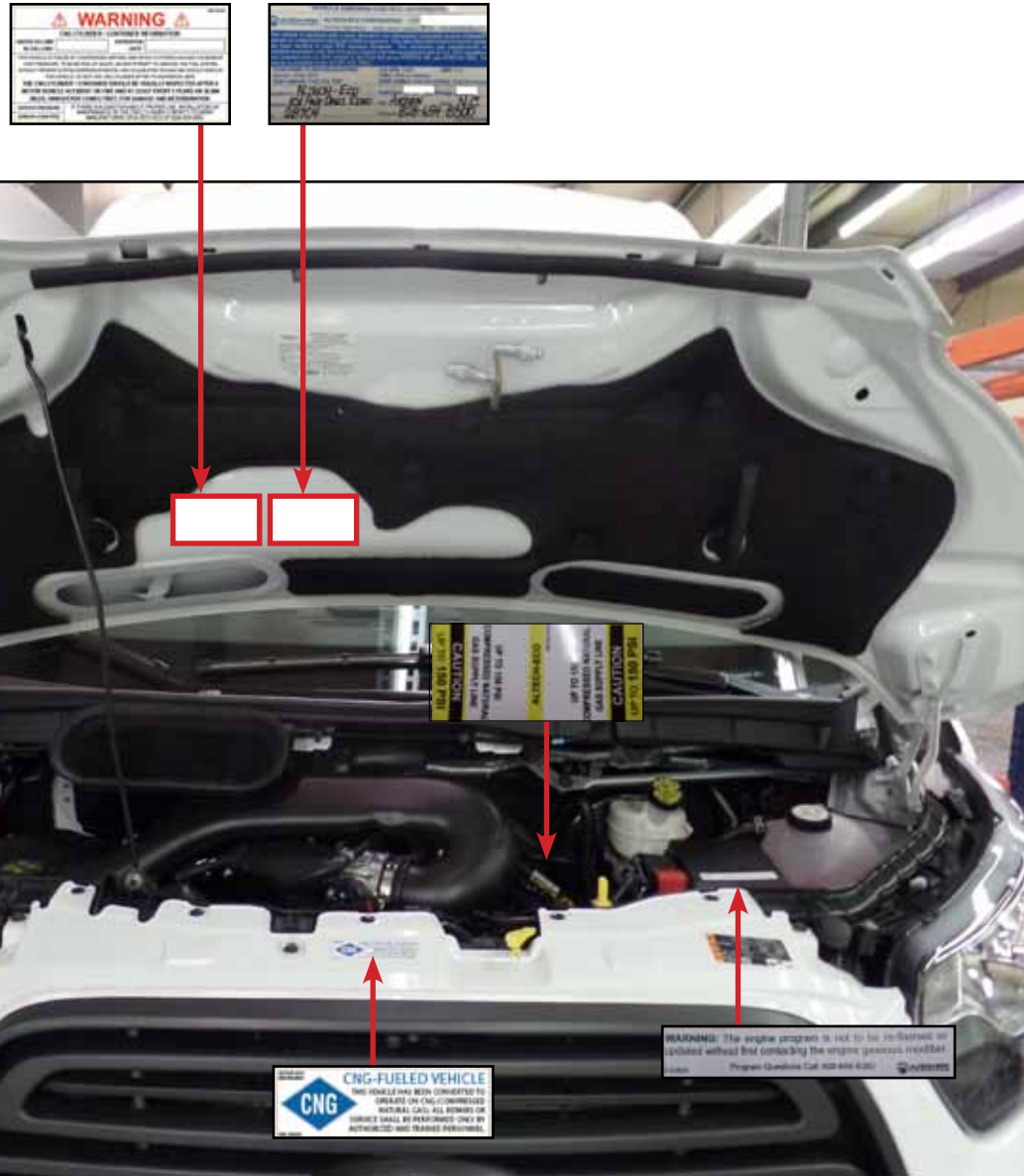
DECAL PLACEMENT



NOTE: All high pressure hoses must be labeled with a high pressure sticker.



DECAL PLACEMENT



WARNING: The engine program is not to be re-written or updated without first contacting the engine program provider.
Program Guidelines Call: 800-894-6300

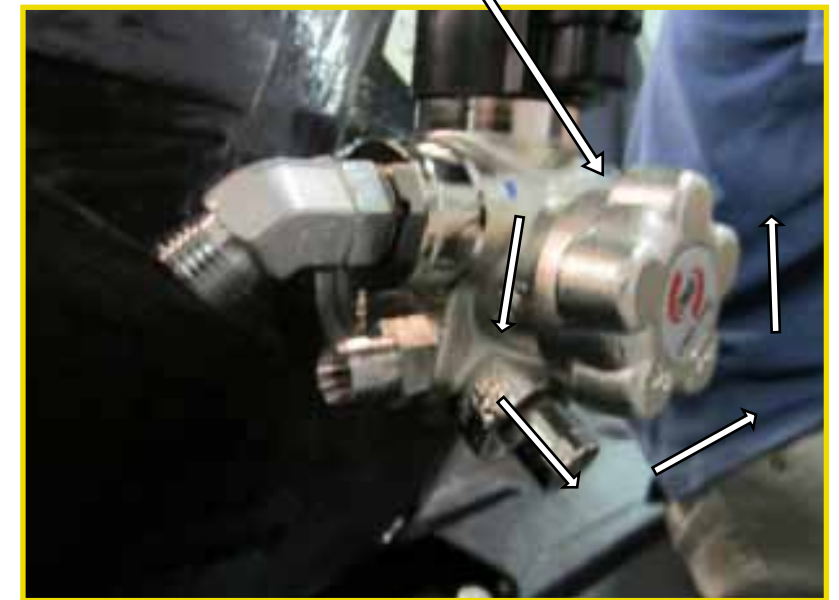
LEAK CHECKING THE SYSTEM

After the Altech-ECO CNG system has been installed on the vehicle, all fuel connections, fuel rails and injectors must be checked for leaks. Also check the overall installation of wiring, zip ties and components to make sure they are not loose or hanging.

Tools:

- Combustible Gas Leak Detector TPI 721 (Davis Instruments)
 - Soapy Water Solution or Liquid Leak Check Solution
-
1. Double check and verify wiring is correct and secure with nothing hanging loose. Check that zip ties are snipped properly to avoid potential injury.
 2. Check and verify that all installed hoses and fittings are not loose and are secure per torque specifications.
 3. Close the valve by turning clockwise and pressurize the system to 3600 psi.
 4. Leak test using a methane detector or bubble soap.
 - a. PASS: Continue to step 5.
 - b. FAIL: Depressurize the system and correct the issue before continuing.
 5. Open the manual valve on the fuel tank. Using your hand, rotate the manual valve counter clockwise until fully open. Then close the valve back 1/4 turn (this is will help avoid the valve sticking in the future).
 6. Fill the tank with CNG.
 7. Pressurize the system by turning the ignition on but do not start the vehicle (3 key cycles). This opens the solenoid and fills the lines.
 8. Turn the ignition off, then back on and start the engine. This is to pressurize the lines again. While the engine is running, perform a leak test by using a methane detector, bubble soap, or other appropriate means.
 - a. PASS: Complete required paper work and notify your supervisor.
 - b. FAIL: Turn off the ignition and manually shut-off on the cylinder (tank) valve. Depressurize the system and correct any issues. After all corrections have been made, open the manual shut-off valve and start the engine. Run the leak test again. For un-repairable issues, notify appropriate personnel for further instructions.
 9. Third party installers: After completing the final checklist, it is required that an original or a copy of the entire completed checklist be sent to Altech-Eco. Failure to do so will void the warranty and may result in suspension of installer's license. For additional information, contact your supervisor.

Open manual valve counter-clockwise until fully open.



NOTE: Then 1/4 turn back.

Contact Information

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