Service Bulletin

Date:	Affected Models:	Internal or External Use:
9/22/2025	All vehicles	Both

Bulletin Title

6 Gallon Fuel Cell

Reason

Introduction of the 6 Gallon Fuel System

Action

The 6 Gallon Fuel System has officially been approved by NASA and SCCA and will soon be available for dealer orders. This document is intended to give dealers time to study and familiarize themselves with the installation and technical specifics of the system. Availability will be covered during the upcoming dealer meeting (9/24/2025).

Part Replacement

The 6 Gal Fuel System will come complete with everything needed to replace the current fuel system installed on the car including:

Fuel Cell with Container

Fuel Pump, Filter, and Regulator

Bulkhead and Technical Inspection Plate

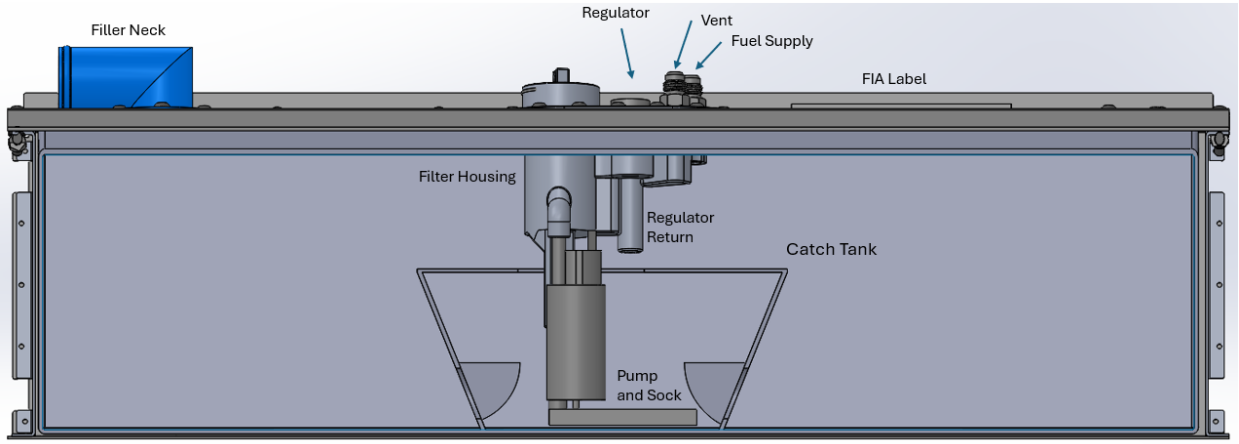
Fuel Lines

Fuel Door and Filler Tubing

Mounting Hardware

New ECU Map

6 Gallon Fuel System Installation Procedures



9/25/2025

Connor Hobby

Version 2

Contents

Foreword

The new behind-the-seat fuel cell is a complete fuel delivery system for the Rush SR. The system encompasses a 6 gallon FIA certified fuel bladder with an integrated surge tank and slosh control foam. The system also includes an in tank mounted TE systems fuel pump and an externally serviceable 10micron filter and Bosh fuel pressure regulator. No return line is necessary, reducing fuel line connections and possible failure points. The system represents a major improvement in performance and safety by moving the entirety of the fuel system within the safety cell.

This Document will outline the procedures for installing the fuel cell in customer cars per NASA, SCCA, and Rush requirements.

An important note: this **must only** be installed by a dealer for it to meet the requirements of NASA and SCCA. You MUST advise your client to bring their invoice to their first tech inspection and ensure the line reference “Installation of The Fuel Cell PER TSB00016” is listed. Failure of the client to present the invoice with this language will result in an extended technical inspection requiring removal of the bladder for inspection.

When your client presents the invoice, they will only have to remove the service panel on the bulkhead for standard inspection.

About the Kit

Read through this procedure completely before beginning the installation. Installing the 6 Gallon Fuel System can be completed by a single person. Take all necessary safety precautions as gasoline can be hazardous when exposed to open flames.

Each 6 Gallon Fuel System is shipped with the parts needed for one kit. A full list of everything needed can be found on Table 1. Before installation of the fuel system, the ECU must be shipped to Rush Auto Works to have the ECU reflashed for the new system. If there are components missing, please contact Rush Auto Works at 713-937-0000.

Table 1: Kit List

Part ID	Item	Quantity
010902000A	6 Gallon Fuel Cell	1
010904004A	Fuel Supply Line	1
010904005A	6 Gallon Vent Line	1
010904002A	Bulkhead	1
01090403A	Tech Plate	1
010104002A	Fill Tube	1
010104001A	Fuel Door	1
010904001A	Fuel Door Mount	1
010806010A	Block Off Plate	2
010102002A	M6 Rivet Nut	8
010102005A	M8 Rivet Nut	4
010101008A	M6x1x18	15
010101007A	M5x.8x10	14
010102003A	M6 Distortion nut	6

Each Fuel Cell (010902000A) will be delivered with a factory installed bladder, bladder container, fuel plate, filler neck, and level sensor. These should only be removed if maintenance is required, a separate document will detail servicing these items.

Part numbers for the fuel pump, regulator, filter, and gaskets are listed below. Please inform your dealer if you would like spares of these when ordering the 6 Gallon Fuel System Kit.

Part ID	Description
010903002A	Fuel Pump
010109008A	Fuel Filter
010905003A	Regulator
010902005A	Filler Neck Gasket
010902023A	Front Access Plate Gasket
010902006A	Fuel Plate Gasket
010902019A	Fuel Level Sender Gasket

Each Fuel Cell

Required Tools and Notes

Below are the tools necessary for installing the 6 Gallon Fuel System. The list has links where you may purchase each item if you do not currently own any listed.

Tool	Link
AN Wrench Set	An Wrench Set
Shop Towels	Shop Towels
Drill	Drill
Rivet Nut Tool	Rivet Nut Tool
Angle Grinder	Angle Grinder
Saw	Saw
Drill Bit Set	Drill Bit Set
Allen Key Set	Allen Key Set
Cresent Wrench Set	Crescent Wrench Set
Squeegee	Squeegee

The kit will require a bonding adhesive for mounting the zip tie holders to the chassis frame, the suggested adhesive is a two piece solution using LOCTITE AA 331 as the adhesive and LOCTITE SF 7387 as the activator.

Figure 1: Adhesive and Activator

Set Up Procedures

1. Power off the car and allow for engine to cool down completely
2. Disconnect the battery
3. Remove the rear clip, both sidepods, and both nerf bars
4. Remove the previous fuel system from the car. This will include the pump, regulator, and fuel lines
5. Dropped the floor from the car
6. Remove both rear side panels from the car, these will be reused
7. Dis-engage the clutch line from the engine and pull it through the firewall
8. Bleed the rear brake line and pull it through the firewall.
9. Remove the air box and nacelle

Fuel System Install Procedures

1. Removing the Rear Weight Plates

For the fuel cell to sit correctly, the rear weight plates need to be removed. It is important to grind down any leftover material to ensure the fuel cell will sit correctly, Figure 2.

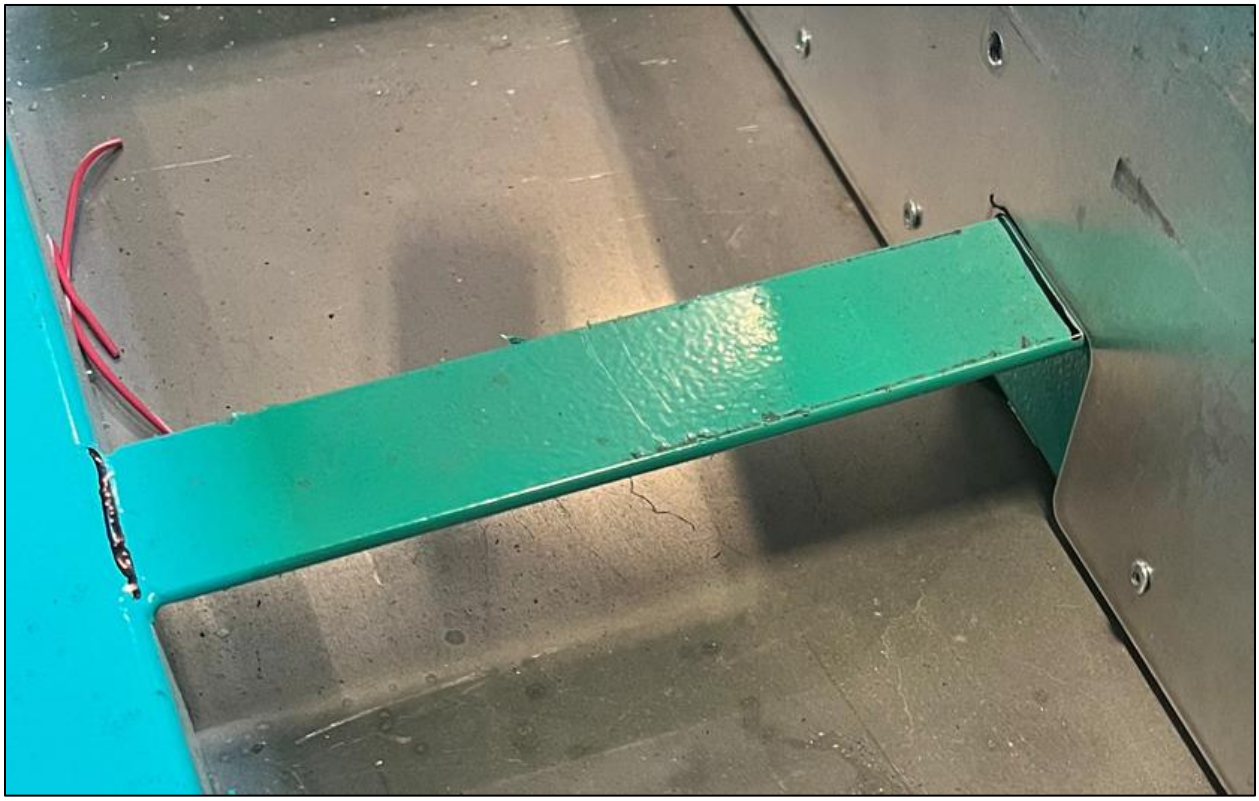


Figure 2: Cut Lines Of Rear Weight Plates

2. Rivet Nuts

The Fuel Cell uses 4 M6 rivet nuts to mount to the bottom of the chassis rails, Figure 3. Using the fuel cell to mark the location of these rivet nuts, drill out the four holes using a 10mm drill bit. Do not use the fuel cell as a drill guide, remove before drilling.

Figure 3: M6 Rivet Nut Install

The fire wall flanges will also get two M6 rivet nuts along the bent flange of the fire. Using a 10mm drill bit, only drill out the middle and lower holes for the rivet nuts. This will be applied to the left and right sides, Figure 4.

Figure 4: Firewall Flange Rivet Nuts

The rear lower nerf bar mounts also require rivet nuts as the back sides of the tubes will not be accessible after the fuel cell has been installed. Using a 13.5mm drill bit (35/64in), drill a larger hole at each rear lower nerf bar mounting location, Figure 5. Install M8 rivet nuts once completed.

Figure 5: Lower Nerf Bar Rivet Nuts

3. Installing the Fuel Cell

Slide the fuel cell through the side of the chassis between the two square tubes and the slanted round tube. Once the cell is in, push it against the fire wall and the bottom tube with the four M6 rivet nuts. Using the upper mounting flange of the fuel well as a guide, drill 6 M6 clearance holes for the bolts to clamp to the fire wall, Figure 6. This will ensure the Fuel Cell is secure in the car.

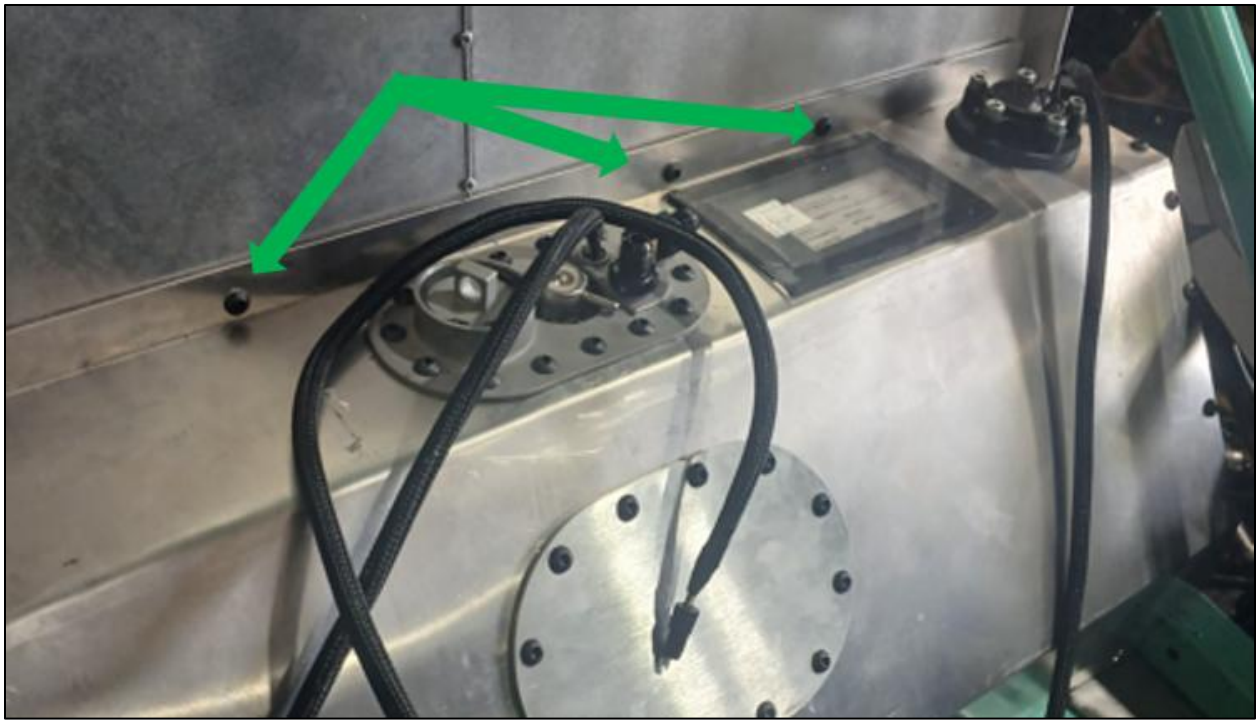


Figure 6: Fuel Cell Mounted in Car

4. Altering the Two Rear Side Panels

Both Rear Side Panels require small alterations to work with the new Fuel Cell. The driver's right-side panel will need a cut out to allow for the two fuel lines, fuel fill, and wires to pass through. Please use the provided measurements to cut the pass-through hole (figure 7).

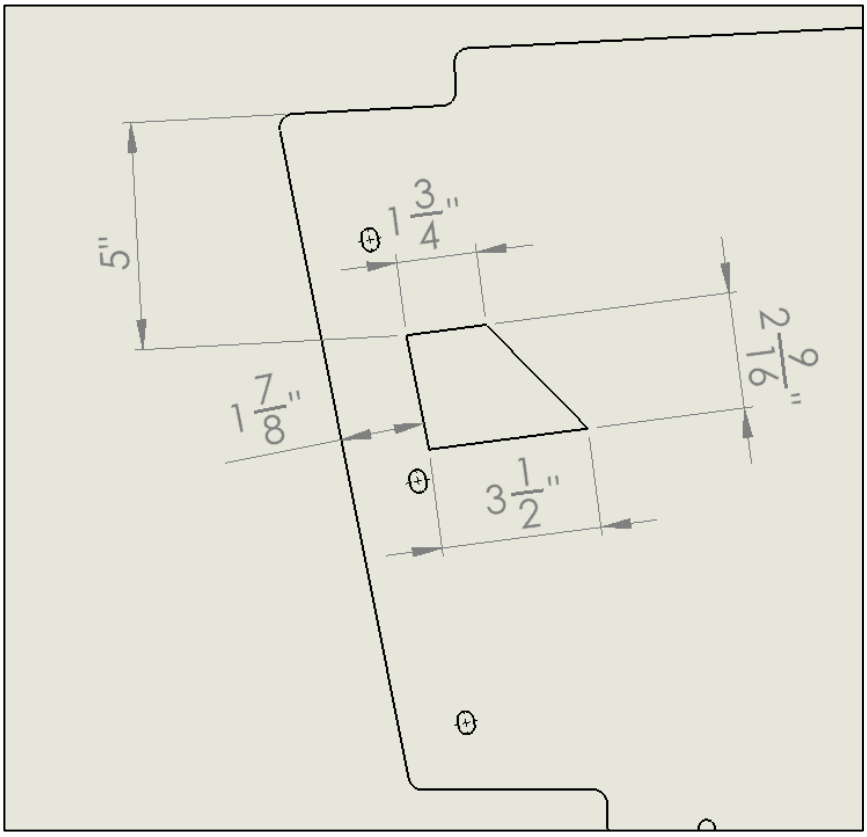


Figure 7: Right-Side Pass-Through Hole

The left side panel will require new holes for the battery box to mount to the panel. Please use the templet included for modifying this panel. Refer to the measurements included, Figure 8, for the hole locations. Once the left side panel is altered, install it onto the car.

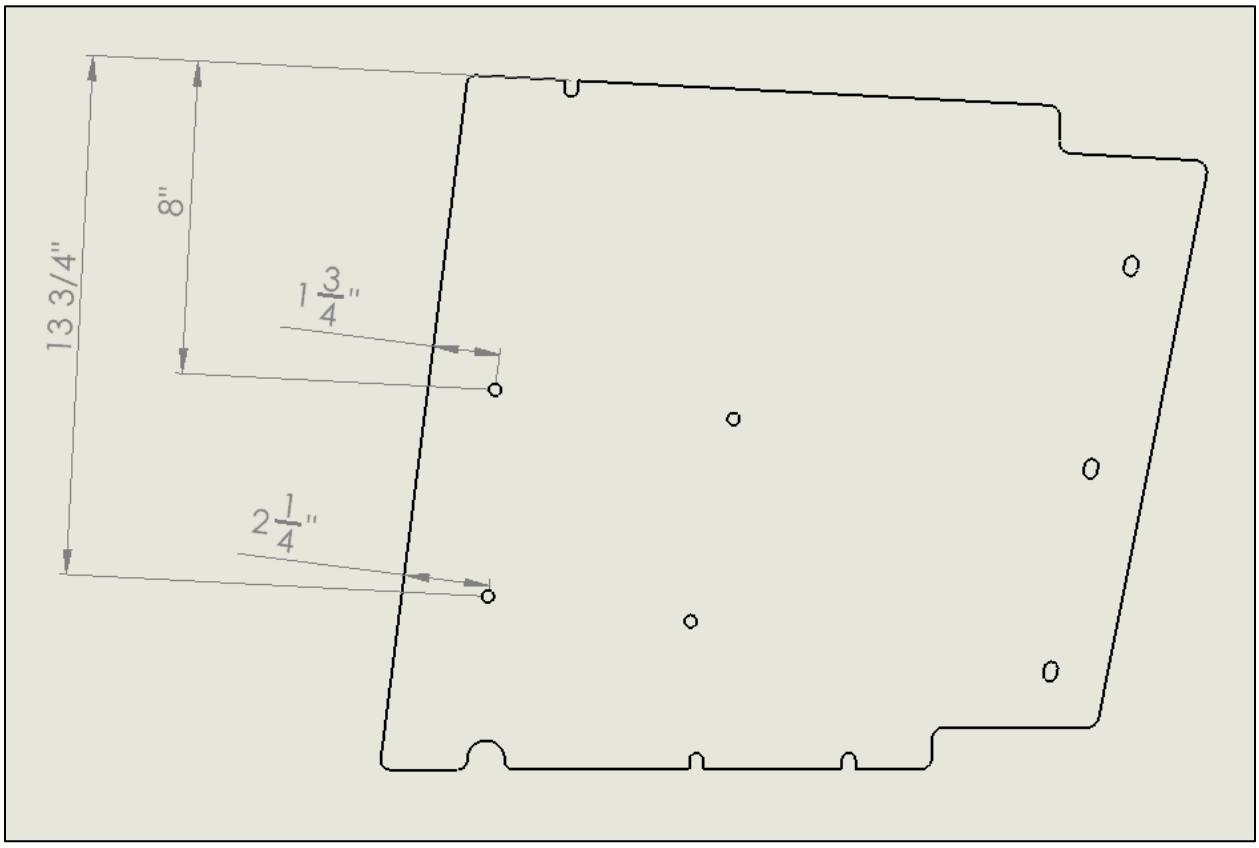


Figure 8: Left side Panel Installed

5. Bulkhead

The Bulkhead is made of two pieces: the Tech Inspection Plate and the Bulkhead. To install, removed the Tech Inspection Plate from the Bulkhead. Slide the Bulkhead through the right side of the car between the fuel cell and the diagonal tube. Once the bulkhead is inside the cockpit, mount the bulkhead to the bottom M6 rivet nuts using the included M6 bolts. These bolts will connect the Bulkhead and Fuel Cell to the chassis, Figure 9.

Figure 9: Bulkhead and Fuel Cell

The top mounting holes for the bulkhead can now be drilled on the firewall using the Bulkhead as a guide. Drill 5 holes for an M6 bolt and install the bolts using an M6 distortion nut on the back side.

6. Attaching Fuel Lines

The Fuel Supply Line and the Vent Line will be attached according to the diagram below, Figure 10.

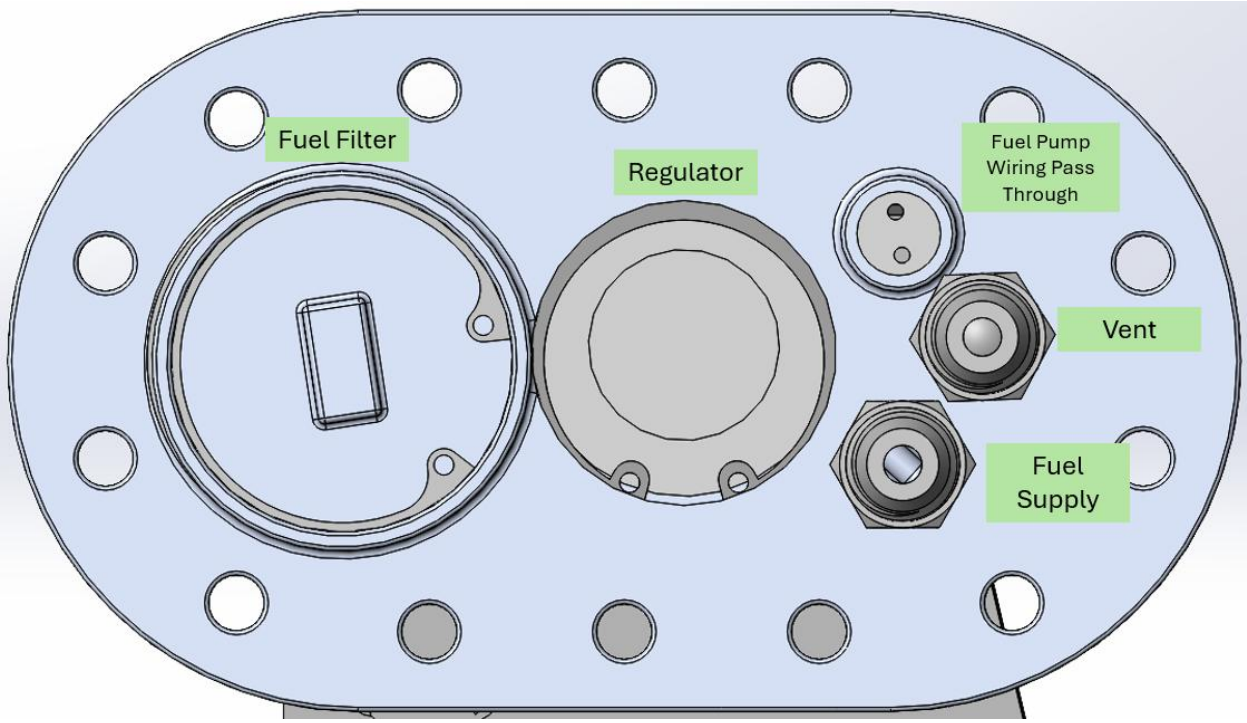


Figure 10: Line Install Location

The clear fill tube will also be installed here. The fill tube must have two hose clamps at each connection point, Figure 11.

Figure 11: Fill Tube Clamp

7. Close up

Reinstall the right side panel onto the chassis. The two fuel lines, wiring, and fill tube will run through the hole previously cut into the side panel, Figure 12. Ensure that the hole aligns with the fill tube, the hole can be enlarged as needed but must not extend farther than the bulkhead.

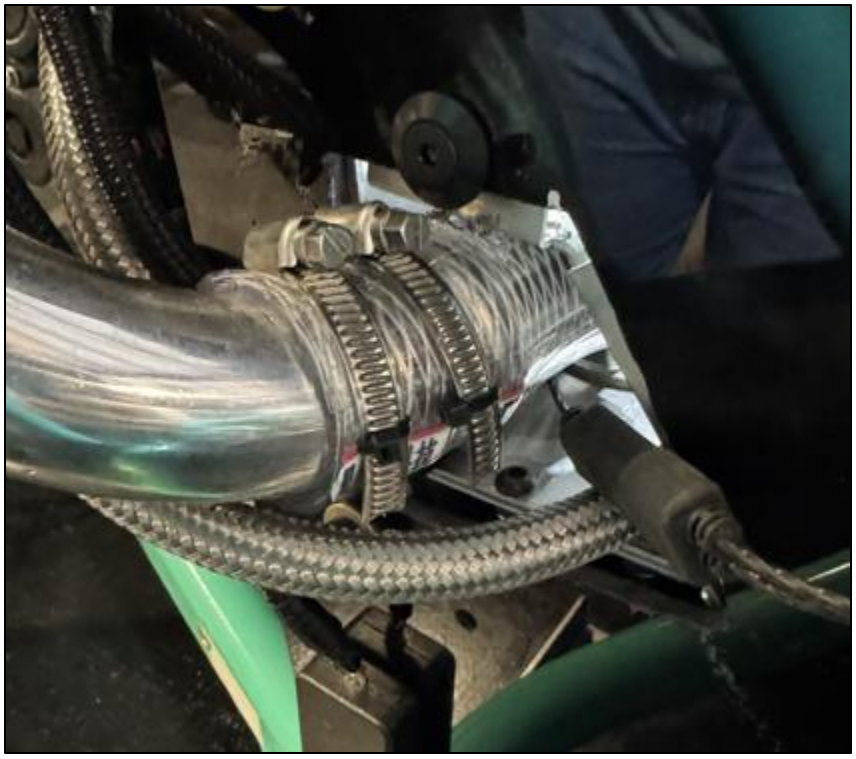


Figure 12: Right Side Panel Installed

After the right-side panel is installed, connect the rest of the clear fill tube to the fuel door. Ensure that 2 hose clamps are used at each connection. The floor can now be connected back to the bottom of the chassis.

For the Vent Line, it must be routed above the driver's head along the inside of the roll hoop cover, Figure 13.

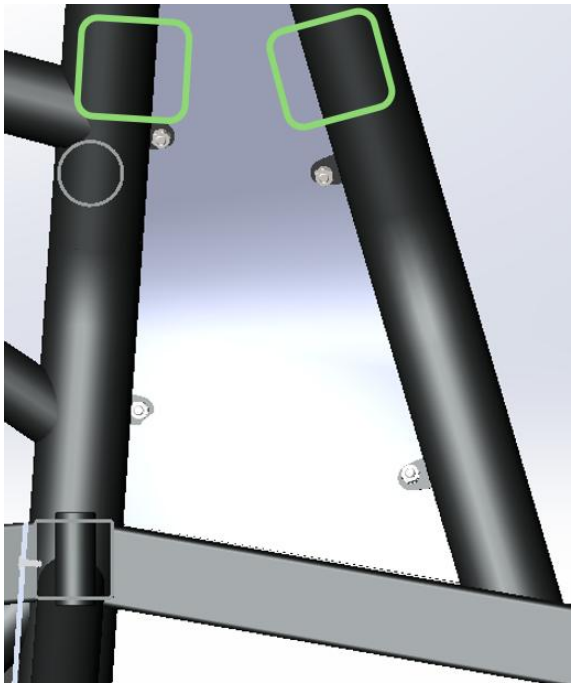


Figure 13: Vent Line Location

The vent line loops back down to the floor of the car and to the cutout for the vent. There will be an additional zip tie holder on the floor for the the vent line to attach to. Ensure the exit of the vent line is completely covered by the floor, Figure 14.

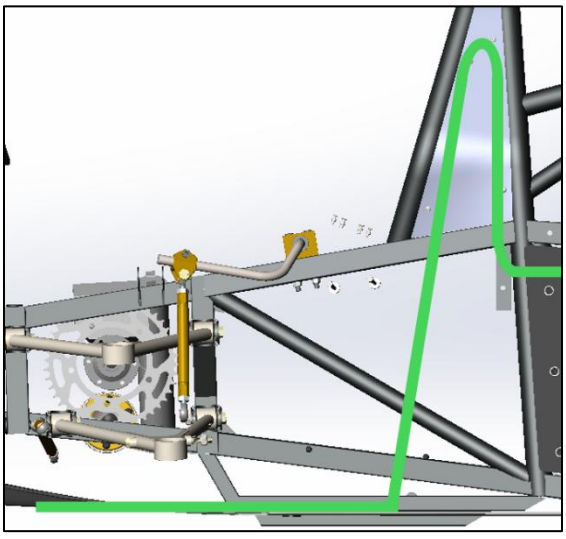


Figure 14: Route of the Vent Line

The Tech Inspection Plate is installed onto the Bulkhead using 10 M5 bolts Figure 15. These bolts do not need to be over torqued, as this could risk the rivet nut rotating inside the hole of the bulkhead.

Figure 15: Inspection Plate

If a rivet nut needs to be replaced on the bulkhead for the tech inspection plate, the hole size for the M5 rivet nut is 7.6mm (Letter N). The replacement rivet nut part number is 010102004A. The foam seal around the edge of the hole is also necessary. If it is damaged, please contact Rush for a replacement, part ID is 010106001A.

The pass-through holes for the clutch and rear brake lines are stacked vertically above the bulkhead. Using an 11/64in drill bit, drill two holes 2 inches apart, with the bottom hole 1 inch above the bulkhead, Figure 16.

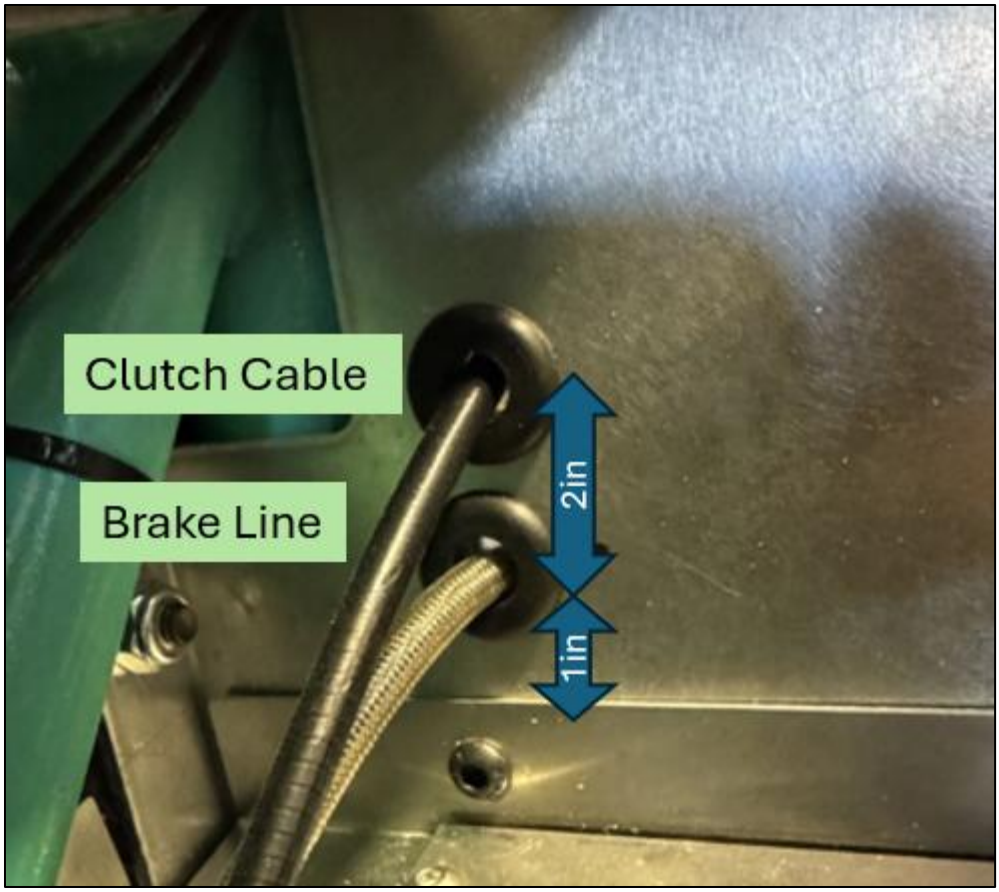


Figure 16: Pass Through Holes for the Clutch and Brake Lines

The new fuel pump will need to connect to the wires from the original location. Connect these using the included pig tail, Figure 17. There will be a ground and a positive wire that will need to be connected to the original fuel pump connection.

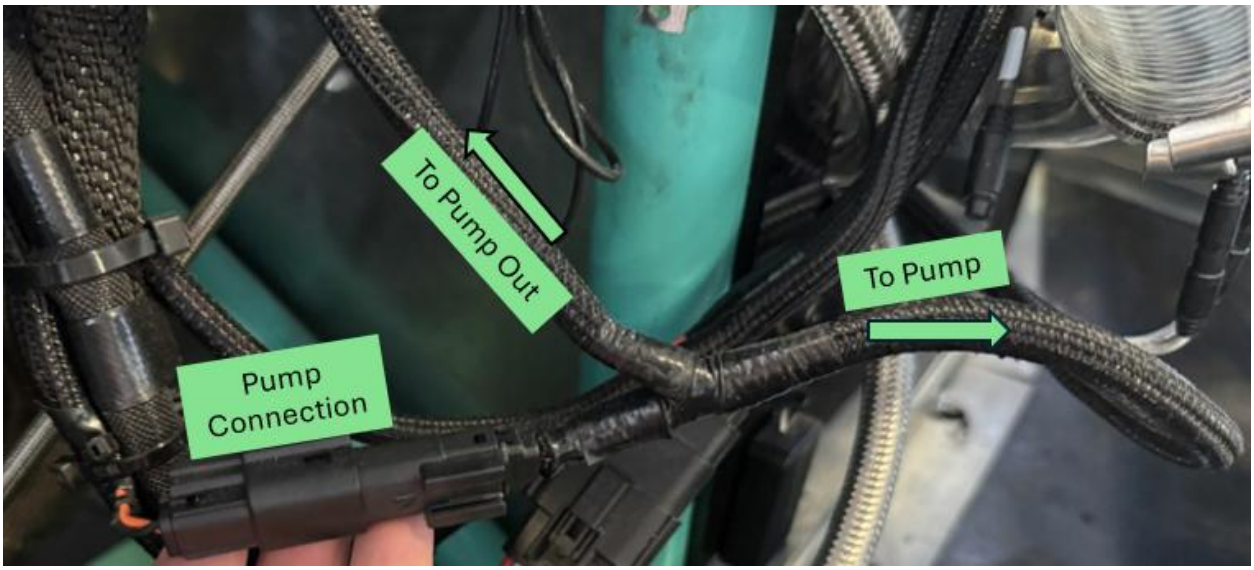


Figure 17: Fuel Pump Connection

Attached to the pig tail is a connection for an external power source for the pump out function. The pump out function can be done by disconnecting the fuel supply line from the fuel rail and connecting an external power source to the pump out connector, Figure 18. This connector is mounted on the bottom surface of the fuel door bracket.

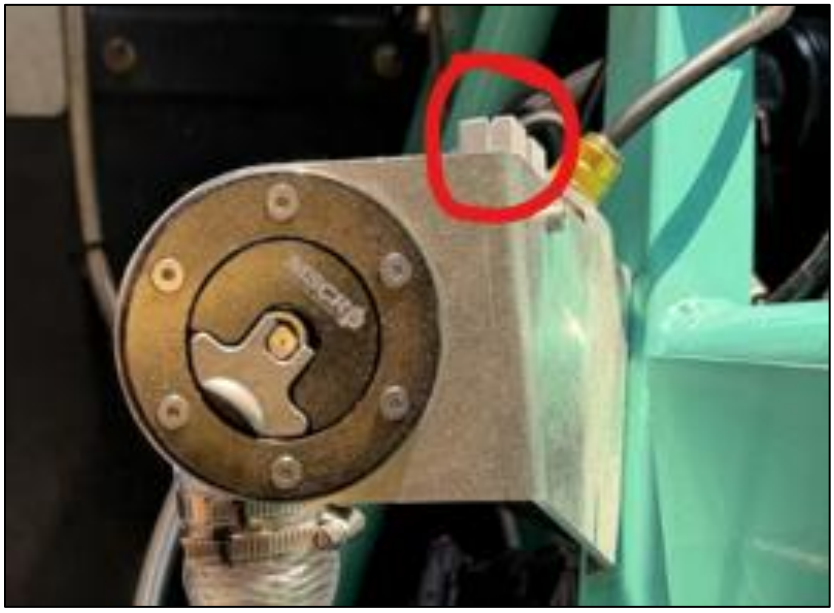


Figure 18: Pump Out Power Connection

The fuel system will have an available option with a dry break connection integrated into the fuel supply line.

Using the bulkhead as a guide, drill 3 holes with a .25in drill bit each on the right and left side panels for an M6 bolt. The head of the bolt can be located on the outside of the cockpit, Figure 19. There will be a top, bottom, and middle hole on each side of the bulkhead.

Figure 19: Bottom Bulkhead Connection to Side Panels

Remove the recirculation caps from the top of the engine, Figure 20, remove the reed valve from the cylinder cap Figure 21.

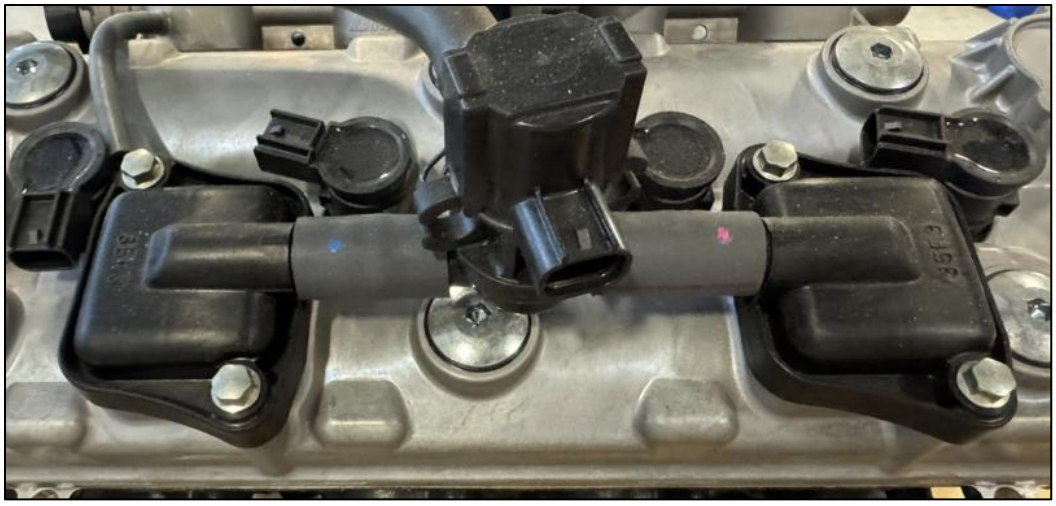


Figure 20: Recirculation Caps

Figure 21: Recirculation Caps Removed

Place a block off plate in each location ensuring the rubber seal is in place and tighten the block of plate bolts, Figure 22.

Figure 22: Block Off Plates

Disconnect the recirculation tubing from the airbox and place a cap on the recirculation opening, Figure 23. This opening must be capped. The Nacelle must be reinstalled before the air box.

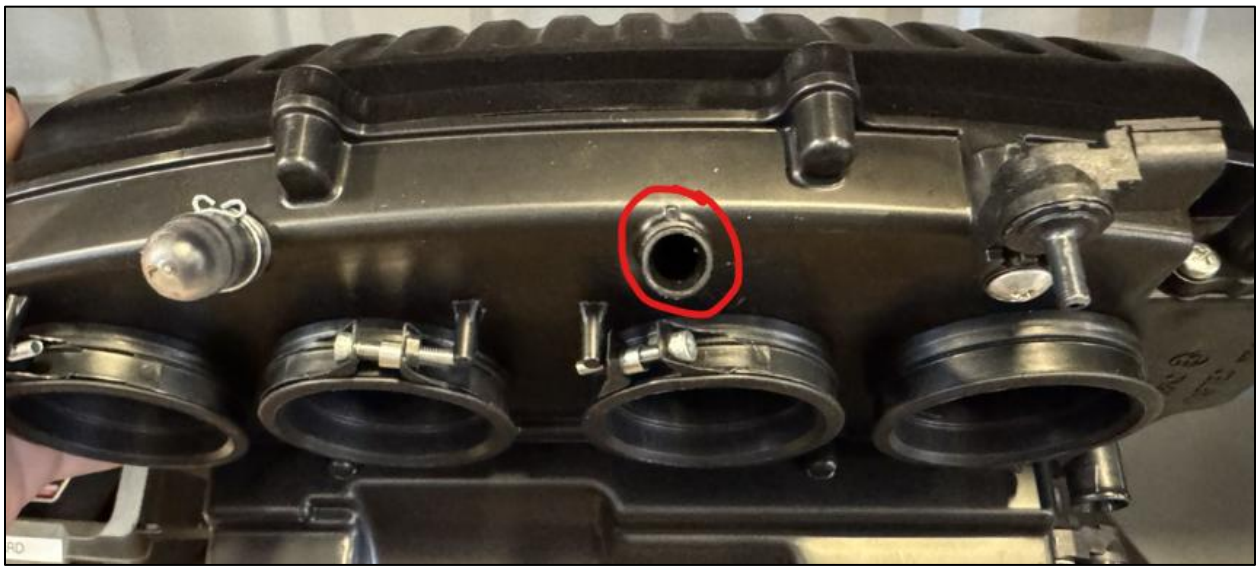


Figure 23: Port to Cap on Airbox