



FUEL TANK PUMP MODULES
INSTALLATION INSTRUCTIONS: 080310DS/080311DS/080312DS/080313DS

WELCOME TO DETROIT SPEED & ENGINEERING!

OUR COMMITMENT

Congratulations on your purchase of this high-quality Detroit Speed & Engineering Fuel Tank Pump Module. It is engineered to the highest standards, utilizes the finest materials, and is built with exceptional craftsmanship and attention to detail.

While we understand your eagerness to start your build, please remember that your safety is our utmost priority. Take all necessary safety precautions to ensure the job is completed safely and correctly.

Before you start, read and understand all instructions thoroughly. With hand tools and essential equipment, you can do the main assembly and setup of your new pump module in your home garage, but if you feel unsure of your abilities during the assembly or installation and need some help or have any uncertainties, please seek the assistance of a qualified mechanic or automotive repair shop.

If you have any product questions or need guidance, please don't hesitate to call and speak with DSE technical support at 704-662-3272.

Remember, we're here to support you every step of the way and are committed to ensuring your assembly and installation process is successful and enjoyable. We wish you all the best!

BEFORE INSTALLATION

Before you begin the DSE Fuel Tank Pump Module installation, read and understand these instructions carefully. If instructions are not correctly followed, personal injury, equipment, or product damage can result.

Products that have been installed are not eligible for returns. To prevent mistakes, thoroughly read these instructions before you begin installation.

Check your order as soon as possible upon delivery. DSE has provided parts list tables and images, as shown on pages 4 through 7. Compare your order's contents against the tables. Call your authorized dealer immediately if you discover anything missing from your order.

This kit requires no welding to assemble and install.

It is important to wear the appropriate personal protective equipment (PPE). However, the responsibility does not end there. Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work. Make sure to ventilate combustible vapors and remove any nearby flammable materials.

ABOUT THIS MANUAL

PURPOSE

These instructions detail the installation of the DSE Fuel Tank Pump Module.

ITS CONTENTS

The information that follows is described in this instruction set:

- Required tools and supplies.
- Safety, hazard, and warning rules.
- Product overview and included parts.
- Installation and the setup procedures required for use.

Pages with images will have paragraphs and sentences with callout numbers that refer to their respective images, steps, and parts.

Procedures, once described in the text, are generally not repeated. When it is necessary to refer to another procedure, the page and step reference will be given.

REQUIRED TOOLS AND SUPPLIES

- Lock Ring Tool or Flat Blade Screwdriver
- Wire Stripper/Crimp Tool
- Shrink Tubing
- Gas-Rated PTFE Tape (Yellow)
- Optional Vapor Trapper Charcoal Canister
- Vent System Plumbing
- Standalone PWM Speed Controller or PWM Control-Capable Engine ECU

SAFETY FIRST

- Work on your vehicle in an appropriate location.
- Park your car on a level surface.
- Wear personal protection like safety glasses, gloves, and a fine particle respirator mask (if grinding).
- Never use compressed air to clean brake or metal grinding dust from the frame, or body panels.
- Grind metal only in a well-ventilated area, and wear a respirator until the dust has settled and the work area air has been cleared.
- Dispose of damaged or old parts in accordance with local laws. Do not throw any hazardous waste in the trash.
- Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work.



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EFI 250 LPH PUMP MODULES
080312DS ("SS") and 080313DS ("ZL1")





EFI FUEL PUMP MODULE, 250 LPH, 080312DS/080313DS

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
1	99080030	FUEL PUMP MODULE, SS 250 LPH	1	—
2	99080031	FUEL PUMP MODULE, ZL1 250 LPH PWM	1	—
3	99080034	GM FUEL PUMP MODULE PIGTAIL - 4 WIRE	1	—
4	99080038	STAINLESS FUEL TANK PLUG/VENT KIT, 3/8"	1	—
5	99080039	FUEL LINE QUICK CONNECT, 3/8" TO -6 AN	1	—

Note: The part positions listed above will be called out in this installation manual as a visual reference to their respective positions during the installation procedure. Refer to these pages during the installation. Count and compare all parts and fasteners to the list above. If parts are missing, contact Detroit Speed at Sales@detroitsspeed.com.



CARBURETED MODULES
080310DS and 080311DS





CARBURETED MODULE 080310DS

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
6	99080032	FUEL TANK CARBURETED ADAPTER, -6 AN ORB	1	—
7	99080038	STAINLESS FUEL TANK PLUG/VENT KIT, 3/8"	1	—
8	99080040	AN ADAPTER, 90° -6 AN TO -6 ORB	2	—
9	99080042	AN PLUG, -6 ORB INVERTED HEX	1	—

CARBURETED MODULE 080311DS

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
10	99080029	FUEL TANK CARBURETED ADAPTER, -8 AN ORB	1	—
7	99080038	STAINLESS FUEL TANK PLUG/VENT KIT, 3/8"	1	—
11	99080041	AN ADAPTER, 90° -8 AN TO -8 ORB	2	—
12	99080043	AN PLUG, -8 ORB INVERTED HEX	1	—

Note: The part positions listed above will be called out in this installation manual as a visual reference to their respective positions during the installation procedure. Refer to these pages during the installation. Count and compare all parts and fasteners to the list above. If parts are missing, contact Detroit Speed at Sales@detroitsspeed.com.



Installer's Note: All configurations use a USCAR mounting ring, used by modern OEMs, that provides a good seal and serviceability.

1 **080312DS:** First, remove the float lever (A) from the "SS" fuel pump (1) assembly (not shown).
Discard it as it will not be used.

080313DS: First, remove the float lever (A) from the "ZL1" fuel pump (2) assembly (shown).
Discard it as it will not be used.

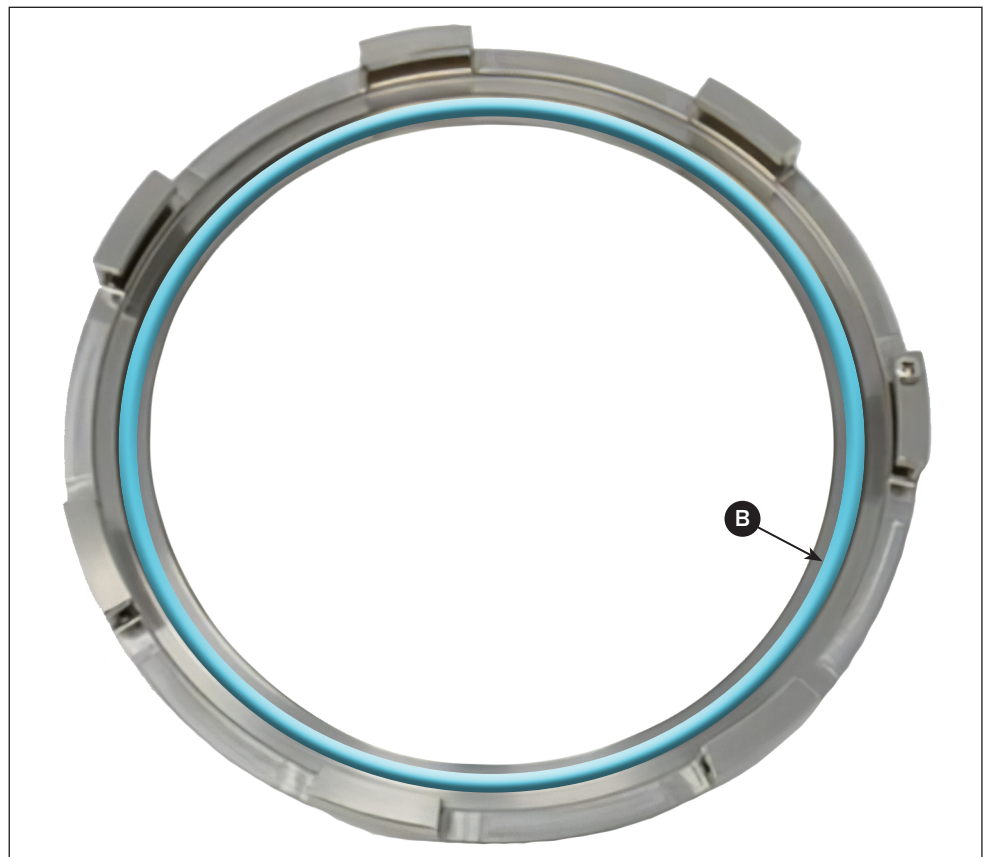
Note: The 080313DS EFI fuel pump requires a separately sourced, standalone PWM speed controller or an engine ECU capable of PWM control.

After the fuel pump installation is complete, refer to the electrical harness guidelines provided by the controller manufacturer.

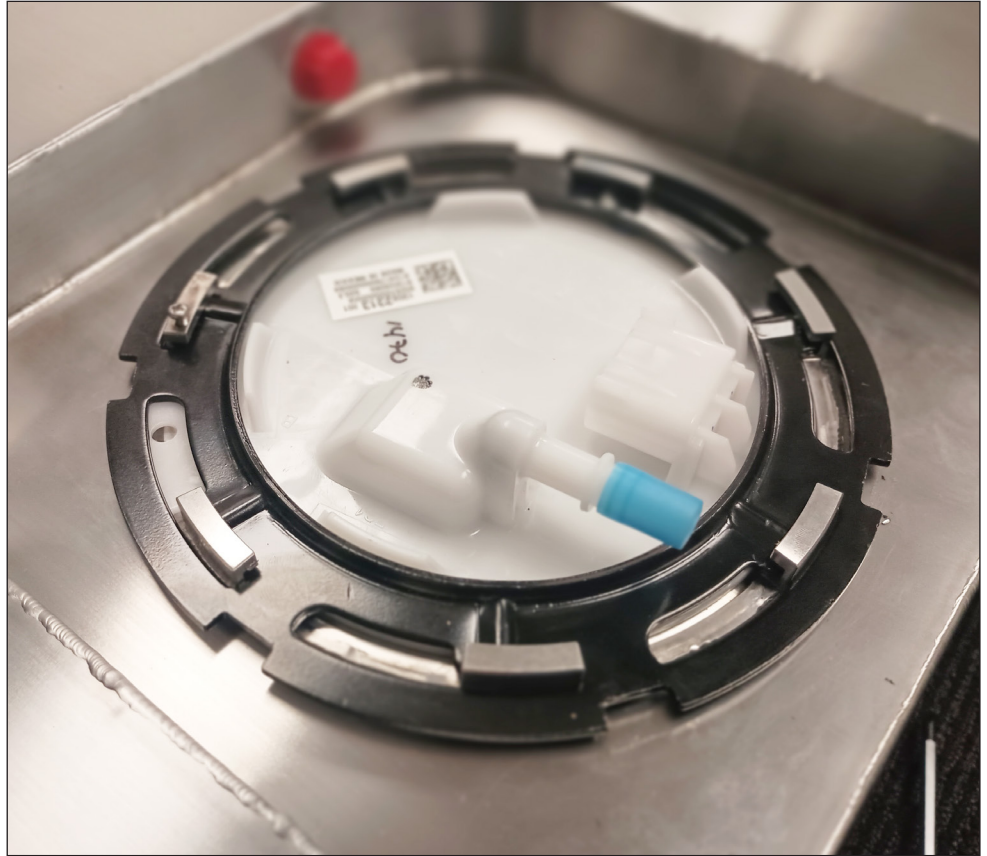
Recommended standalone:
Aeromotive 66136



2 Now, place the o-ring (B) into the groove on the fuel tank's recessed pump mount.



- 3** After that, insert the pump module into the fuel tank (C). Then, install the pump lock ring (D) and rotate it fully clockwise to retain the fuel pump.



- 4** Now, tighten the retaining screw (E) on the pump mount to secure the lock ring.



- 5** First, disassemble the fuel line quick connect (5).
Now, with the pump module installation complete, attach the threaded AN retainer nut (5.1) to the pump's fuel outlet.



- 6** Finally, turn the fuel line quick connect body (5.2) to the retainer nut on the pump's outlet.

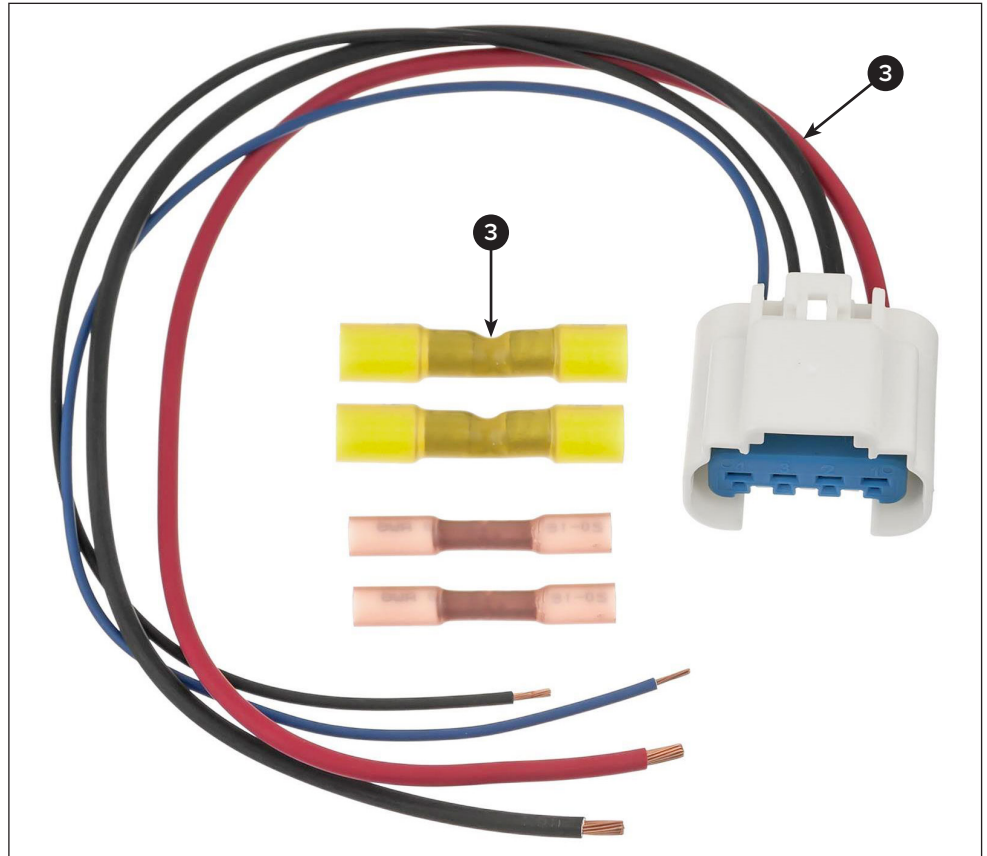


Installer's Note: For proper operation, the fuel pump requires the correct electrical connector spliced into the factory pump wiring harness.

7 First, cut off the factory fuel pump connector, then strip 1/4" insulation from the red and black wires and slip a piece of shrink tube over them.

Note: The image on the right illustrates a new pigtail (3); the actual pigtail wire colors may differ from those shown.

To confirm each wire's function, reference the pin location ID in step 8 before you splice the wires. **Do not rely on wire color alone.**



8 Now, refer to the image to splice the wires together by pin ID:

Pin 1: =12VDC power via relay

Pin 2: Chassis ground

Pin 3: Not used

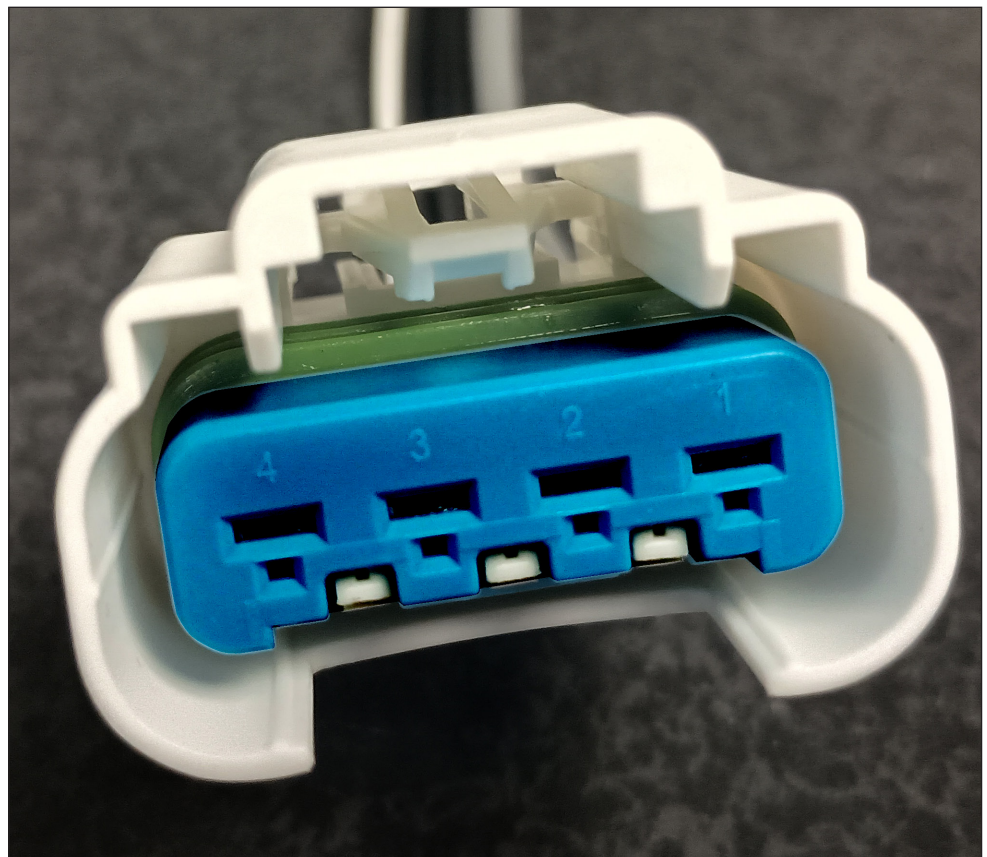
Pin 4: Not used

Use the supplied 12-gauge crimp connectors (3 above) to join each wire to the pigtail as shown by pin ID (only 080312DS).

Slide the pre-installed heat-shrink tubes over the connectors, then use a heat gun or a flame to shrink each to fit snugly.

Optionally, wrap the wire connections with automotive electrical tape for added protection.

Push the pigtail's connector onto the fuel pump's connector until you hear an audible snap.



Installer's Note: All configurations use a USCAR mounting ring, used by modern OEMs, that provides a good seal and serviceability.

Carbureted Modules require an external fuel pump, which can be either mechanical or electric.

This assembly procedure is specifically for the Carbureted Modules equipped with -6 OR -8 AN fittings.

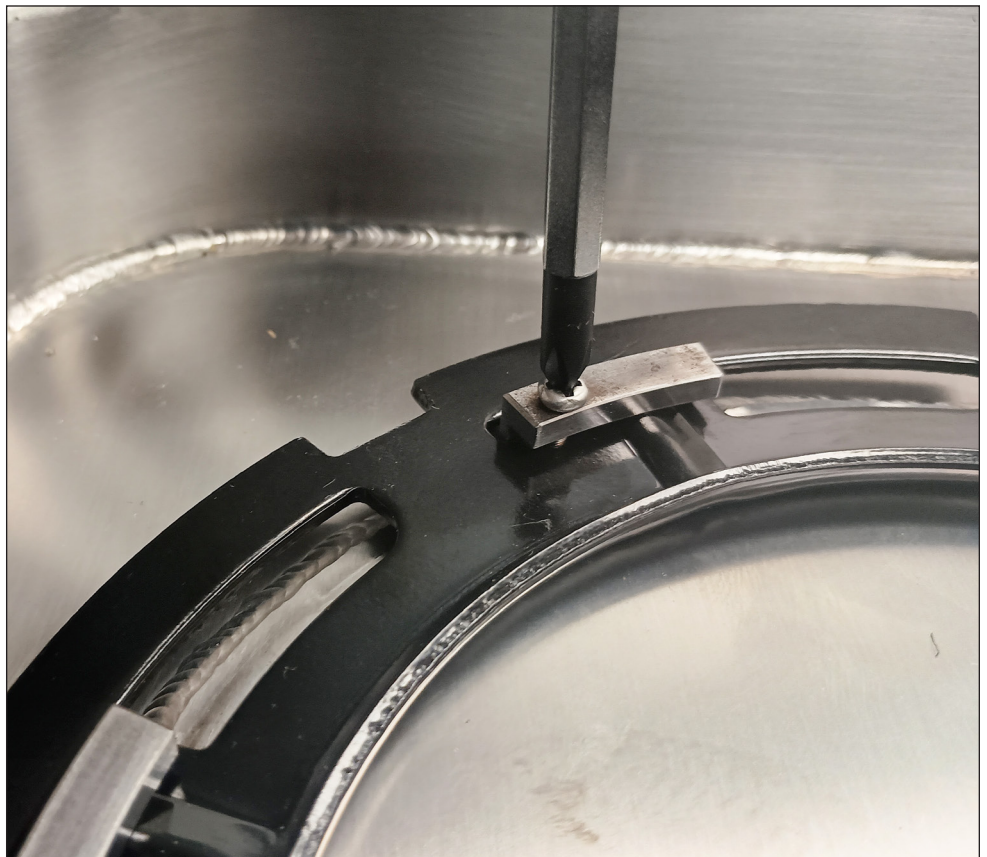


9 First, place the o-ring (B) into the groove on the fuel tank's recessed pump mount.

After that, insert and align the carbureted adapter (6 or 10) into the fuel tank (C).

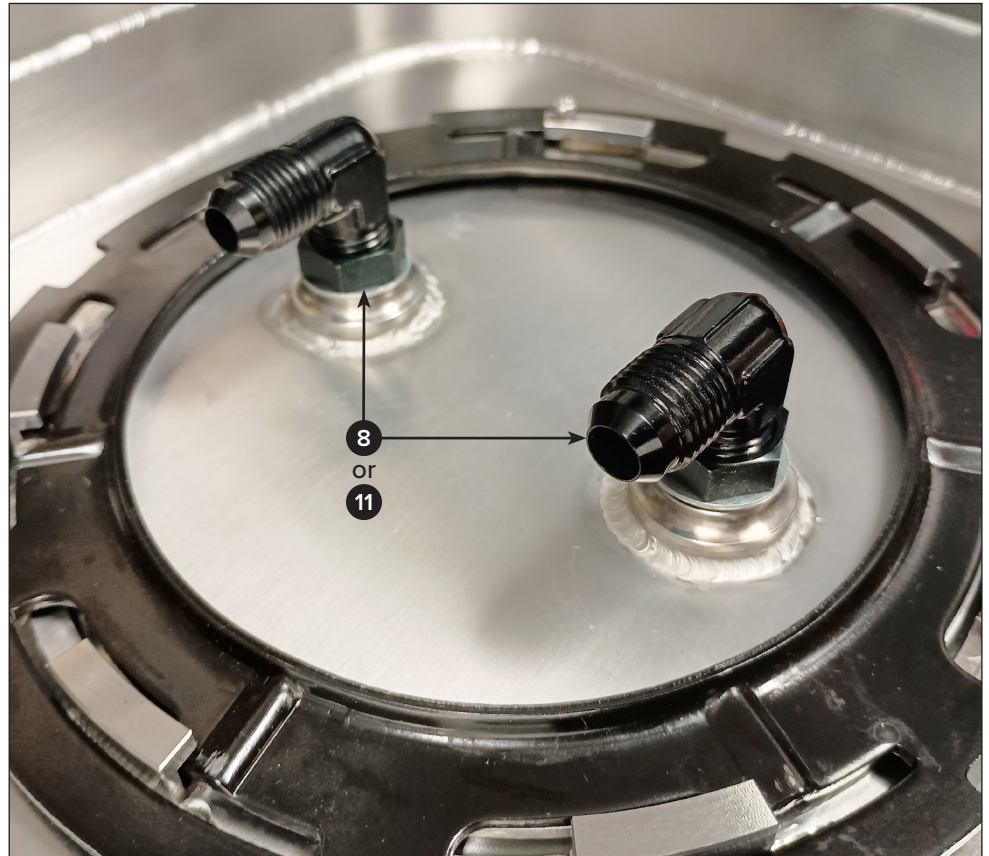
Now, install the pump lock ring (D) and rotate it fully clockwise to retain the adapter.

10 Finally, tighten the retaining screw (E) on the pump mount to secure the lock ring.



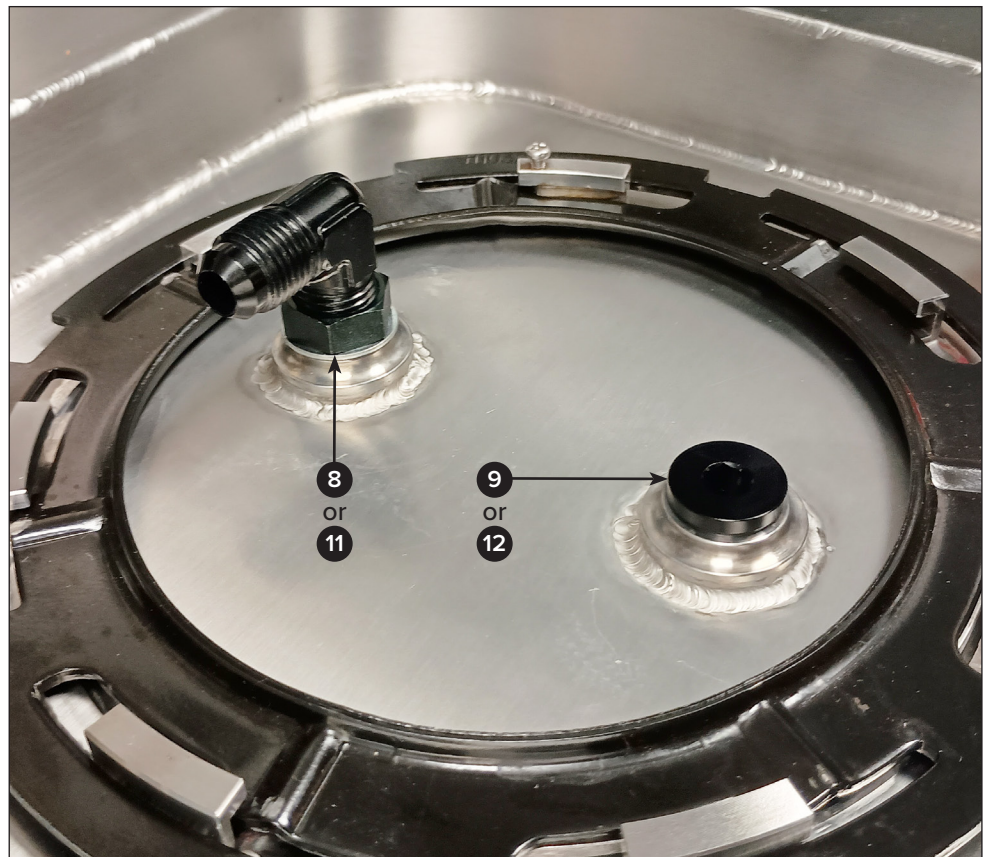
11 Install the 90° -6 ORB to -6 AN (8) or 90° -8 ORB to -8 AN (11) at the pickup location on the AN fuel tank carbureted adapter.

For a fuel return system, install the second 90° fitting on the return AN fitting on the fuel tank carbureted adapter.



12 For a non-return system, install the 90° -6 ORB to -6 AN (8) or 90° -8 ORB to -8 AN (11) at the pickup location on the AN fuel tank carbureted adapter.

Then, install the -6 or -8 ORB inverted hex AN plug (9 or 12) to the return port on the carbureted adapter.



Installer's Note: Because every car build is unique, customers must install a vent system tailored to their vehicle, with specific references and connections.

13

Two 3/8" NPT bungs (H) are welded into the tank for ventilation, and one plug and a 3/8" barb adapters is included.

First, identify the preferred vent location specific to your build.

Then, wrap the threads of the plug/or adapter (7) with gas-rated PTFE tape (typically yellow).

Now, insert the 3/8" barb adapter in the chosen tank bung and tighten it.

Finally, insert the vent plug into the remaining tank bung and tighten it.



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The fuel tank must vent from a minimum of one location.

Detroit Speed recommends venting the fuel tank through a charcoal canister.

Vapor Trapper kits are sold separately.



DISCLAIMER / WARRANTY

Detroit Speed warrants that its products will be free from defects in materials and workmanship for two years (24 months). This warranty is extended only to the first purchaser of any product at retail and who has retained ownership of the vehicle on which the product was originally installed.

This warranty does not cover any labor or materials not supplied by the manufacturer, nor does it include shipping or towing charges. It also does not cover any product that has been repaired, altered, or misused and/or misapplied. All warranty replacement or repair privileges are void when a product is modified by anyone other than Detroit Speed, Inc.

A dated purchase receipt or invoice must be presented with all claims. If DATE CODING is removed from the product, the warranty is void. If the product is found to be defective, Detroit Speed will, at its sole discretion, repair, replace, or refund the purchase price.

Detroit Speed will cover all standard ground shipping costs on replacement products when the returned products are found to be defective or unacceptable due to an error on the part of Detroit Speed, Inc. All non-defective products, as verified by Detroit Speed, will be returned to the customer.

