



FIREWALL FORWARD FUEL LINE KITS

For 1996-2000 Honda Civic Equipped with B-Series Engine
Catalog #641570, 641573

INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 5:00 pm, Pacific Standard Time, Monday through Friday or e-mail us at Edelbrock@Edelbrock.com.

IMPORTANT NOTE: Proper installation is the responsibility of the installer. Improper installation will void your warranty and may result in poor performance and engine or vehicle damage.

DESCRIPTION: This Russell Performance Firewall Forward Fuel Line kit includes all necessary parts to replace your factory rubber fuel lines from the fuel filter to the fuel rail and from the fuel rail to the factory steel return line with a high performance Edelbrock aluminum fuel rail, Proflex/Twist-Lok, or Proclassic hoses, and AN fittings. The kit is designed to fit 1996-2000 Honda Civic chassis equipped with a Honda DOHC B-Series engine, and will provide increased fuel flow for high performance applications. Kit #641570 features Proflex/Twist-Lok hoses and red and blue anodized fittings, while kit #641573 features Proclassic hose and fittings with a black and clear finish.

KIT CONTENTS:

- | | |
|---|---|
| <input type="checkbox"/> 1 Fuel Rail. High Flow, Honda B-Series Engines (PN 4796) | <input type="checkbox"/> 1 Straight Hose End (-4AN) (641573 Only) |
| <input type="checkbox"/> 1 Adjustable Fuel Pressure Regulator (PN 1728) | <input type="checkbox"/> 2 #4 Hose End Cover (Red, 641570 Only) |
| <input type="checkbox"/> 5ft Proflex Hose (-6AN) (641570 Only) | <input type="checkbox"/> 1 #4 Hose End Cover (Polished, 641573 Only) |
| <input type="checkbox"/> 3ft Twist-Lok Hose (-4AN) (641570 Only) | <input type="checkbox"/> 2 -8AN to -6AN Adapter Fittings (with o-rings) |
| <input type="checkbox"/> 5ft Proclassic Hose (-6AN) (641573 Only) | <input type="checkbox"/> 2 -6AN Dry-Sump Fittings (with o-rings) |
| <input type="checkbox"/> 3ft Proclassic Hose (-4AN) (641573 Only) | <input type="checkbox"/> 1 -6AN Block-Off Plug (with o-ring) |
| <input type="checkbox"/> 1 Honda Banjo to -6AN Male Adapter Fitting | <input type="checkbox"/> 1 -6AN Female to -4AN Male Coupling |
| <input type="checkbox"/> 2 Straight Hose End (-6AN) | <input type="checkbox"/> 1 -6AN Female Coupling Nut |
| <input type="checkbox"/> 1 90° Swivel Hose End (-6AN) | <input type="checkbox"/> 1 #4 Hose Clamp |
| <input type="checkbox"/> 1 45° Swivel Hose End (-6AN) | <input type="checkbox"/> 2 12mm Aluminum Crush Washers |
| <input type="checkbox"/> 1 Straight Twist-Lock Hose End (-4AN) (641570 Only) | <input type="checkbox"/> 6 Tie-Wraps |

TOOLS REQUIRED:

- | | |
|--|---|
| <input type="checkbox"/> Hand Tools, Standard and Metric | <input type="checkbox"/> AN Fitting Assembly Lubricant |
| <input type="checkbox"/> Standard and Metric Allen Keys | <input type="checkbox"/> Liquid Teflon Thread Sealant |
| <input type="checkbox"/> AN Wrenches | <input type="checkbox"/> Fuel Pressure Gauge (For Fuel Pressure Adjustment) |

CAUTIONS AND WARNINGS

WARNING: EXPOSED FUEL AND OIL WILL BE PRESENT DURING THIS INSTALLATION. WHEN WORKING AROUND GASOLINE OR OIL, ALWAYS WORK IN A WELL VENTILATED AREA, AND KEEP ALL OPEN FLAMES, SPARKS, AND OTHER SOURCES OF IGNITION AWAY FROM THE WORK AREA. FAILURE TO DO SO CAN RESULT IN A FIRE OR EXPLOSION.

MAKE SURE TO DISCONNECT YOUR BATTERY TO AVOID THE POTENTIAL FOR SPARKS IN THE WORK AREA!

NOTE: Certain Honda vehicles have security protected audio systems. If your vehicle is equipped with a factory audio system, be sure to have the security code written down prior to disconnecting the battery. See Honda Service Manual for additional details.

WARNING: SOME PROCEDURES IN THIS INSTALLATION MAY REQUIRE THE VEHICLE TO BE RAISED ON JACKSTANDS OR A LIFT. WHEN RAISING A VEHICLE, MAKE SURE THE VEHICLE IS ON LEVEL GROUND AND SUPPORTED SECURELY BY JACKSTANDS. NEVER WORK UNDER A VEHICLE THAT IS SUPPORTED BY A JACK ONLY!

BEFORE BEGINNING INSTALLATION

BEFORE BEGINNING: Someone who has a basic knowledge of automobile repair and modification and is familiar with and comfortable with working on their vehicle can accomplish the mechanical installation of this kit using common tools and procedures. However, this kit is designed to allow you to custom fit the fuel lines to your application, and will require that you cut hoses to fit and drill holes for Fuel Pressure Regulator mounting. If you do not feel comfortable with any of the steps listed below, please consult a qualified professional installer. Make sure to read the instructions provided with the supplied fuel rail and fuel pressure regulator. These will be referenced throughout this instruction sheet.

AFTER INSTALLATION, BEFORE STARTING THE VEHICLE: ALWAYS make sure to check for any leaks BEFORE starting the vehicle. Reconnect the battery and turn the ignition key to the “on” position. This will activate the fuel pump and pressurize the fuel system. If any leaks are present, turn the ignition “off”, disconnect the battery, and make the necessary corrections before continuing.

INSTALLATION PROCEDURE

DISASSEMBLY AND FUEL RAIL INSTALLATION

1. Make sure the vehicle is on level ground, and the gear selector is in “Park” or in 1st gear. Set the parking brake or chock the wheels.
2. Disconnect the battery negative terminal. See note on page 1 regarding Honda/Acura security protected audio systems.
3. Thoroughly clean the area surrounding the fuel injectors and the fuel rail. This will prevent debris from entering the fuel system or the intake manifold upon fuel rail removal.
4. Relieve any residual fuel pressure in the fuel system. Remove the fuel filler cap, then relieve fuel pressure by loosening the banjo bolt connecting the fuel line to the fuel filter. Place a shop towel or rag over the wrench while loosening the banjo to soak up any fuel spray (**See Fig. 1**). When loosening or tightening the banjo bolt on the fuel filter can, use a 19mm wrench on the hex of the fuel filter can to counteract the torque of loosening or tightening the banjo bolt. This will prevent the fuel filter can and bracket from being improperly loaded during loosening or tightening at the banjo bolt. If your vehicle has a special banjo bolt at the fuel filter, which has a service bolt in the top of the banjo bolt, use a 6mm box end wrench to loosen the service bolt at the fuel filter while holding the banjo bolt with another wrench. Keep the banjo or service bolt loose until all pressure is relieved.



Figure 1 - Relieving Fuel Pressure at Fuel Filter

5. Remove the banjo bolt from the fuel filter and disconnect the fuel supply line from the fuel filter. Using a small, fuel safe container, allow the excess fuel to drain from the fuel line and fuel rail.
6. Disconnect the factory fuel return line from the steel tubing on the firewall. Use rags or a small, fuel safe container to catch any spills.
7. Disconnect the wiring harness from the fuel injectors and from the fuel rail. If your vehicle is equipped with a purge valve, disconnect the wiring from the purge valve.
8. Remove the vacuum line from the factory fuel pressure regulator. Refer to the instructions supplied with the 4796 fuel rail, and remove the fuel rail, factory fuel pressure regulator, supply line, and return line from the vehicle as one assembly. Use care when separating the fuel rail from the fuel injectors.
9. Install the supplied -8AN to -6AN Adapter Fittings (with o-rings) into the fuel rail using a bit of o-ring lube on the o-rings. Install the 1/8 NPT pipe plugs (supplied with fuel rail) if the gauge ports are not being used (see fuel rail instructions). Always use liquid teflon thread sealant on pipe threads.
10. Inspect the injectors and transfer them to the new fuel rail as described in the fuel rail instructions.
11. Install the fuel rail / injector assembly on the intake manifold as shown in the fuel rail instructions.

FUEL PRESSURE REGULATOR MOUNTING:

1. Install the provided fittings into the fuel pressure regulator (**See Fig. 2**). Install one -6AN Dry Sump Union in the inlet port and one in the return port (located at the bottom of the regulator). Install the -6AN block off plug in the fuel outlet port of the regulator. Slip the -6AN Female coupling nut over the -6AN female to -4AN male coupling. Install this assembly over the -6AN dry-sump fitting previously installed in the return port of the regulator. Install the vacuum fitting supplied with the regulator in the port on the top half of the regulator. Install the pressure adjusting screw and jam nut at the top of the regulator. See the instructions provided with the regulator for more information.

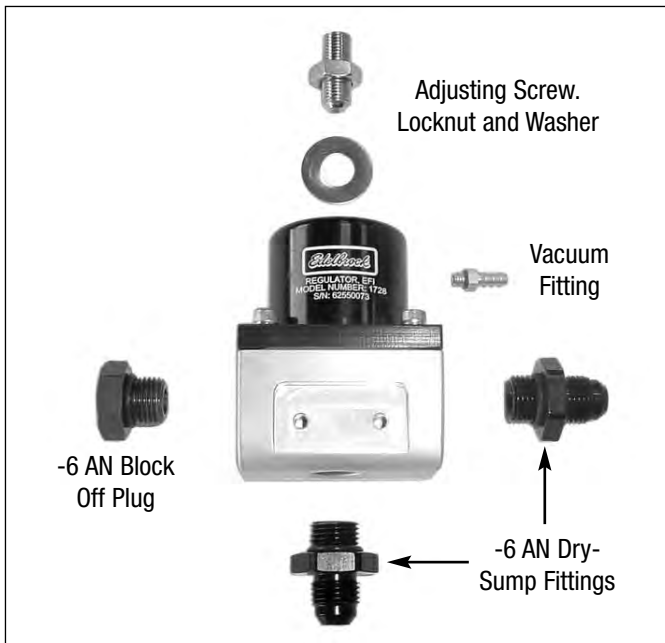


Figure 2 - Fuel Pressure Regulator Fitting Placement

- Determine a location in the engine compartment to mount the fuel pressure regulator. Make sure it is close enough to the factory steel return line that you will have enough -6AN hose to reach from the fuel filter to the fuel rail and from the fuel rail to the regulator. We chose a location on the firewall.
- To mount the regulator in this location you will need to remove the cowl cover (**See Fig 3**).

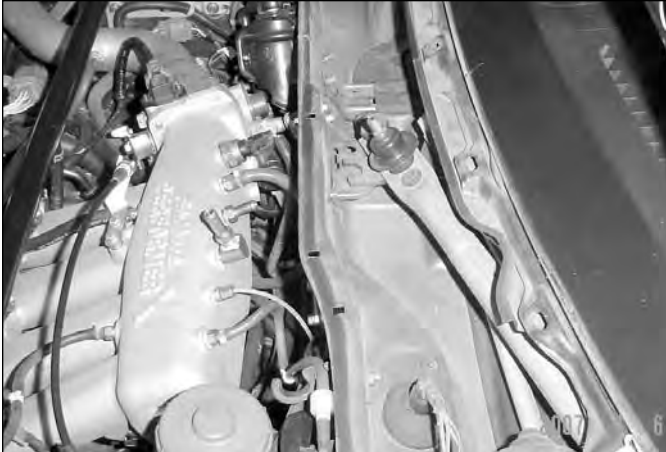


Figure 3 - Cowl Cover Removed

- Following the instructions provided with the fuel pressure regulator, use the provided bracket, and mark the location to drill the mounting holes.
- Using appropriate hardware (sheet metal screws, or bolts & nuts available through your local hardware or auto parts store), mount the fuel pressure regulator to the bracket, and the regulator/bracket assembly to the firewall (**See Fig. 4**).

NOTE: You may need to bend/modify the supplied bracket in order to mount the fuel pressure regulator in your desired location.



Figure 4 - Regulator Mounted on Firewall

- Install the factory fuel pressure regulator vacuum line onto the fitting on the fuel pressure regulator. You may need to replace or extend this line, depending on where you are mounting the regulator.

FUEL LINE AND HOSE END PREPARATION:

- Measure the -6AN hose and determine the lengths needed to reach from the fuel filter to the fuel rail and from the fuel rail to the fuel pressure regulator. Mark the location to be cut and wrap the hose tightly with masking or electrical tape at this point. Make sure to use enough hose to prevent the possibility of the hose kinking after assembly.
- Clamp the hose loosely and position the cut line at the edge of the vice. The best way to cut is with cutting wheel or a hacksaw with two blades opposing one another. Remove the tape when you are finished cutting. Proclassic hose may be cut using a utility knife.
- Locate the hose ends to be used in your installation. For the fuel filter to fuel rail supply line, use one -6AN straight hose end at each end of the line. For the fuel rail to fuel pressure regulator line, use one 45° swivel hose end and one 90° swivel hose end.

NOTE: The instructions here describe the hose end locations used for our particular installation. You may use the supplied hose ends in any location necessary for your configuration.

4. Hose End Assembly:

NOTE: Use fitting assembly lube when assembling hose ends. Use AN wrenches if available, and **DO NOT OVERTIGHTEN FITTINGS**. See Russell catalog or contact the Edelbrock Tech Line for details.

- Unscrew the socket of the hose end from the nipple. Hold the socket carefully in a vice using soft jaws and insert the hose into the socket by turning it counter-clockwise. The hose will stop at the bottom step of the socket.
- Position the nipple assembly of the hose end in the vice using soft jaws. Apply assembly lube to the threads of the socket as well as to the nipple assembly.
- Start the socket over the nipple by hand to ensure correct alignment of threads and tighten as far as possible by hand. Finish with the correct AN wrench until it reaches the nipple hex or when there is no more than 1/16" gap between the nipple/socket assembly. Be sure to wash and pressure test the assembly before using.

5. Determine the length of -4AN (Twist-Lok or Pro-Classic) hose required to reach from the fuel pressure regulator to the factory steel fuel return line. Measure and cut the hose making sure the hose will not be kinked after installation.
6. Slip the -4AN Twist-Lok hose end cover over the Twist-Lok Hose. The tapered end of the cover should face away from the end of the hose. Insert the -4AN Twist-Lok hose end into this end of the line and slide the hose end cover up to the hose end. For Proclassic hose, assemble the the -4AN hose end on one end of the hose as described in step 4 above.
7. Slip the #4 hose clamp cover and then the #4 hose clamp, over the other end of the -4 hose, but do not tighten.

ASSEMBLED FUEL LINE INSTALLATION:

1. Install the Honda banjo to -6AN male adapter fitting to the assembled fuel filter to fuel rail supply line. Install the banjo end to the fuel filter using the factory banjo bolt and the supplied 12mm crush washers. Use one washer on each side of the banjo fitting **(See Fig. 5)**.



Figure 5 - Banjo Fitting Installation

2. Install the -6AN straight fitting end of the fuel rail supply hose to the inlet side of the fuel rail **(See Fig. 6)**.

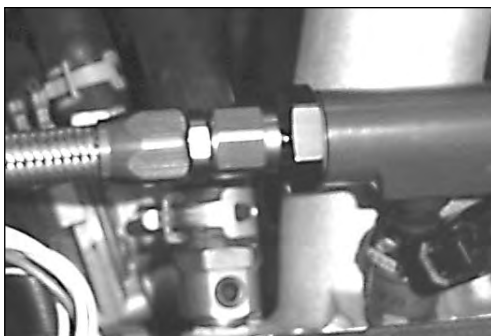


Figure 6 - Fuel Rail Inlet

3. Install the 90° hose end side of the fuel rail to fuel pressure regulator line onto the fuel rail's outlet end. Attach the 45° hose end side of this line onto the -6AN dry-sump fitting on the inlet side of the fuel pressure regulator **(See Fig. 7)**.



Figure 7 - Fuel Rail to Regulator Line

4. Install the hose end side of the -4AN hose onto the -4AN coupling on the return port of the fuel pressure regulator. Slip the end with the #4 hose clamp onto the factory steel return line. Slide the #4 hose clamp over the end of the hose and tighten around the end of the factory steel return line. Slide the #4 hose clamp cover over the clamp.
5. Make sure all connections are tight. Check the overall fuel line routing, and using the provided tie-wraps, secure the fuel lines away from any heat sources if necessary **(See Fig. 8)**.

NOTE: The instructions above describe the hose end locations used for our particular installation. You may use the supplied hose ends in any location necessary for your configuration.



Figure 8 - Overall Fuel Line Routing

FINAL CHECKS:

1. Reconnect the battery negative terminal and check for leaks. Refer to the "AFTER INSTALLATION, BEFORE STARTING VEHICLE" section on page 1 for details. Remember to enter your audio system security code if so equipped.
2. Adjust fuel pressure to the desired level. Refer to the instructions provided with the fuel pressure regulator for proper adjustment procedure.

NOTES



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