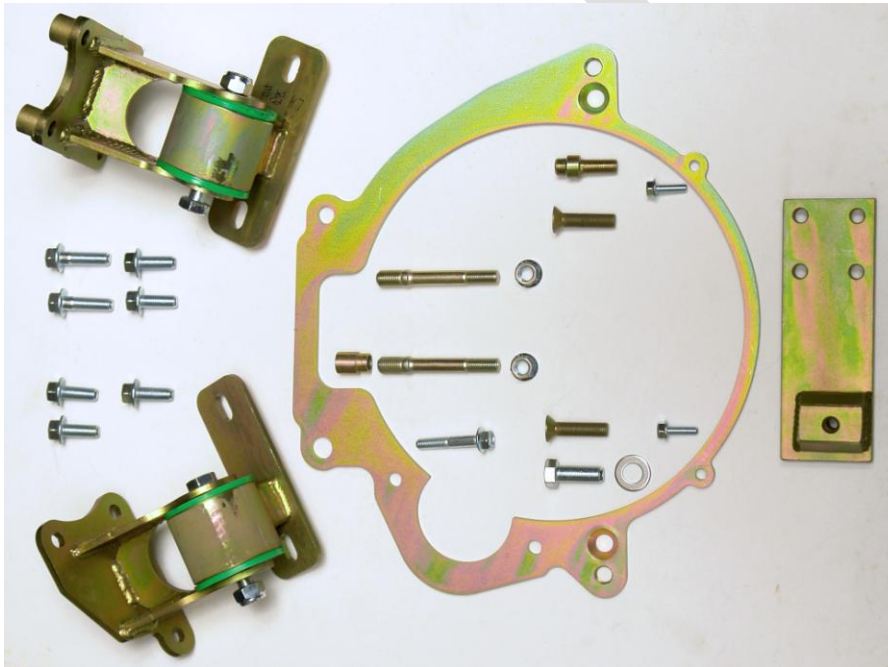


PETROWORKS

OFF-ROAD PRODUCTS



Petroworks 1.6 Adapter Kit



Congradulations on your purchase of our the 1.6 adapter kit. This kit will work on all Suzuki Sidekick/Geo Tracker 1.6 8valve and 16valve motors used in the United States from 1989-1998. This kit is by no means all that is needed to complete this conversion. This kit is for installation of the motor and transmission.

Contents Of Kit

- | | |
|---|------------------------------------|
| 1 Transmission Adapter Plate | 1 Left Side Motor/Engine Mount |
| 1 Right Side Motor/Engine Mount | 1 Transmission Rear Mount |
| 7 Engine Mount Bolts | 2 Transmission Mounting Bolts |
| 2 14mm Hex Cap Nuts | 1 Step Spacer |
| 1 Step Spacer Dowel | 2 6mm Adapter Plate Mounting Bolts |
| 1 Starter bolt | 2 Dust Cover Screws |
| 1 Bolt and Washer for bottom Transmission Mount | |
| 2 Spacers Used to drop The bar under the transmission for clearance | |
| 2 Bolts used with the spacers for the bar under the transmission bell | |
| 2 Frame/Engine Mount Bolts | 2 Nyloc Nuts for Frame/Mount Bolts |

NOTE:

The engine mounts come assembled and it is highly recommended that they not be unassembled for installation. It is best to lower the entire setup down between the frame rails and align the holes for the frame and the frame mount and get the mounting bolts started as the motor is lowered into the engine compartment. It can be difficult to align the frame mounts and engine mounts individually.

Tools needed/recommended:

12mm Wrench and Sockets
14mm Wrench
6mm Allen Wrench
Samurai Flywheel
Samurai Clutch
Sidekick/Tracker Starter

Engine Hoist
Original Frame Mount Bolts (4)

Samurai 1.3 Water Tube
Original Transmission Mount Bolts (rear)
Original Transmission Stud Nut (front of tranny)

NOTE

It is recommended that the engine and transmission be assembled together outside of the car. It is also very helpful to have someone help you install the entire setup when lowering into the engine/transmission into the bay.

***Right Side = Passenger Side of Motor
Left Side = Drivers Side of Motor***

1. Remove the 2 mounting studs on the bottom of the transmission. This can usually be done with the 2 nuts that were originally on the transmission. Tighten them together and turn counter-clock wise to remove the stud.

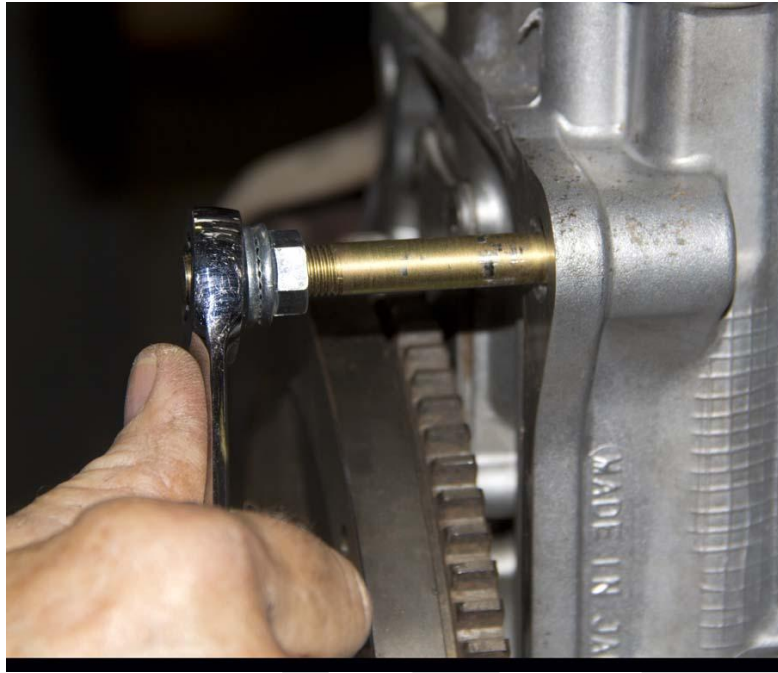


Figure A

2. Locate the bag from the kit that contains the 2 mounting studs and their respective nuts. The short fat end of these bolts need to be installed into the top mounting holes on the engine block. Refer to **Figure A** for detail.

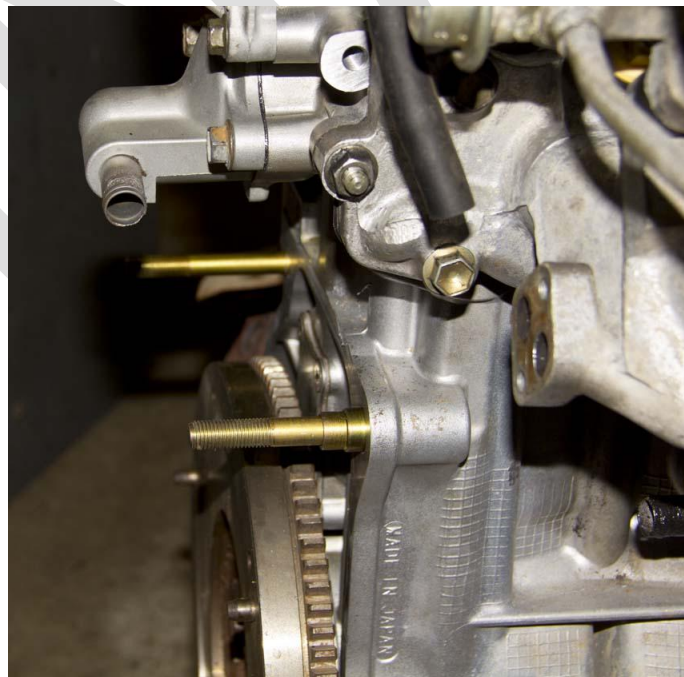


Figure B

3. The right side stud should be screwed all the way in so that the Alignment Dowel will fit flush. See **Figure B**

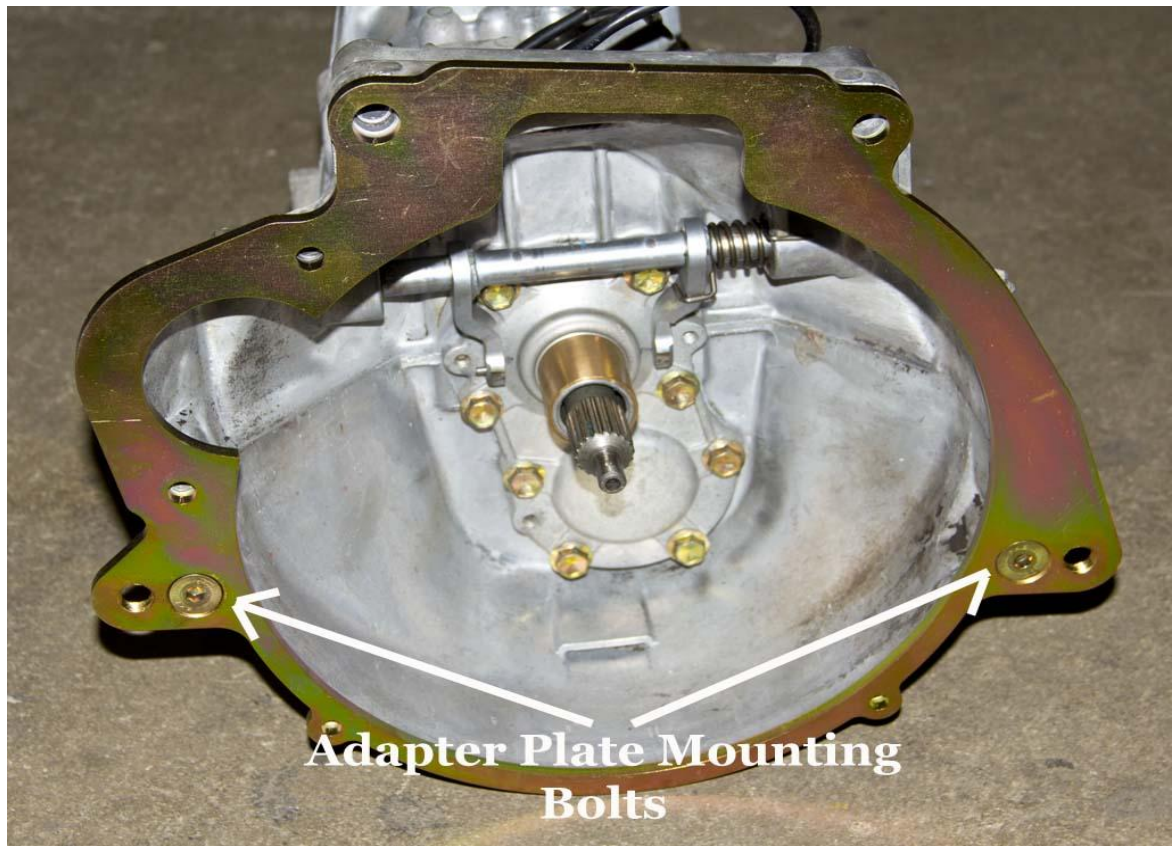


Figure C

4. On the Transmission Install the Transmission Adapter Plate using the 2 supplied counter sunk adapter plate screws using an 6mm Allen Wrench. See **Figure C**.

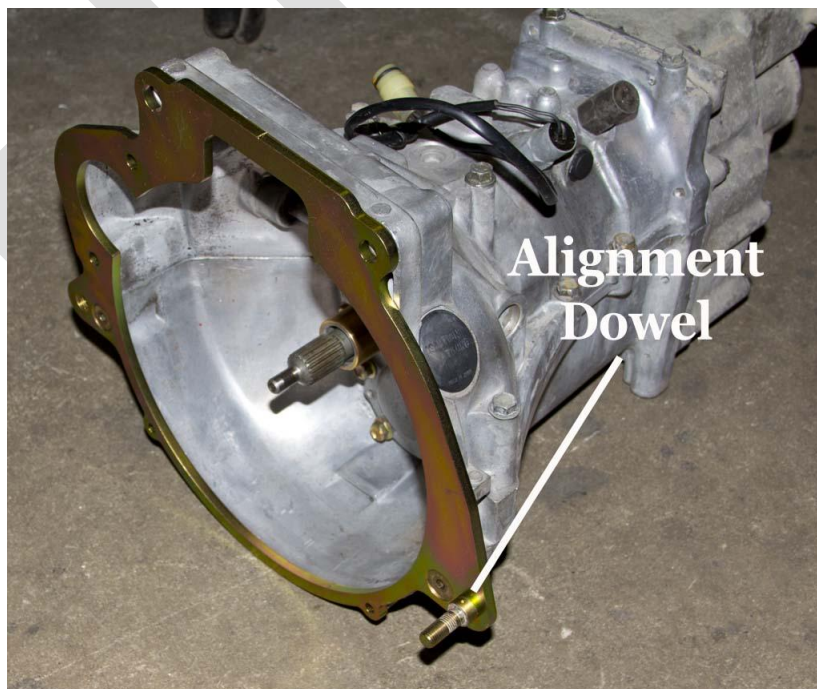


Figure D

5. Install the Alignment Stud (small stud that is threaded on both ends and has a welded in spacer) into the bottom Left hole and tighter it using the “Double Nut” method. See **Figure D**
6. Be sure to install the Throwout Bearing onto the Transmission and Clutch and Clutch Cover onto the flywheel. Since you are using a Samurai transmission you need to use a Samurai Clutch and Samurai Flywheel.



Figure E

7. Carefully align the Transmission to the mounting studs, and input shaft of transmission and slide onto the back of the motor. The two should match up perfectly with no gaps. You may have to give a little turn to the input shaft to align the clutch and shaft splines. See **Figure E**.



Figure F

8. Install the 2 provided Flange nuts onto the upper studs and snug down. See **Figure F**.

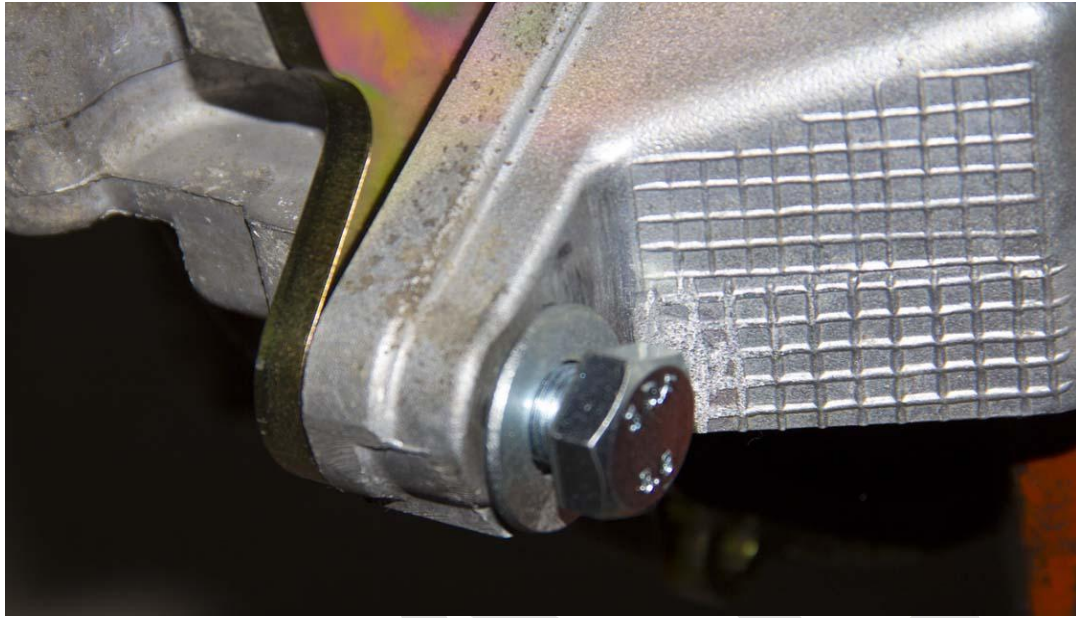


Figure G

9. Install the provided Bolt and washer into the bottom right (as facing the back of the motor) through the motor and into the transmission adapter plate. See **Figure G**.



Figure H

10. Using one of the original Flange Nuts from the transmission, install onto the stud

coming through the motor block on the bottom left side. See **Figure H**.

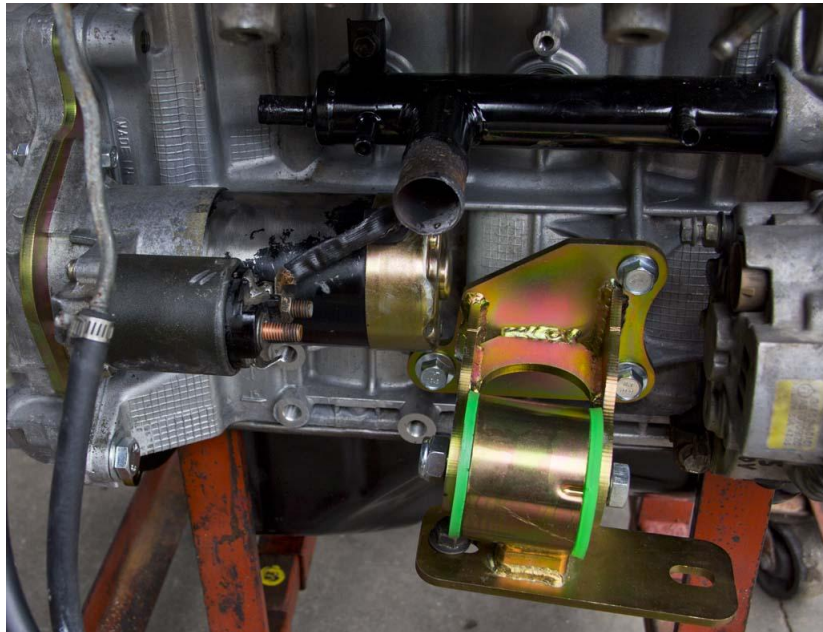


Figure I

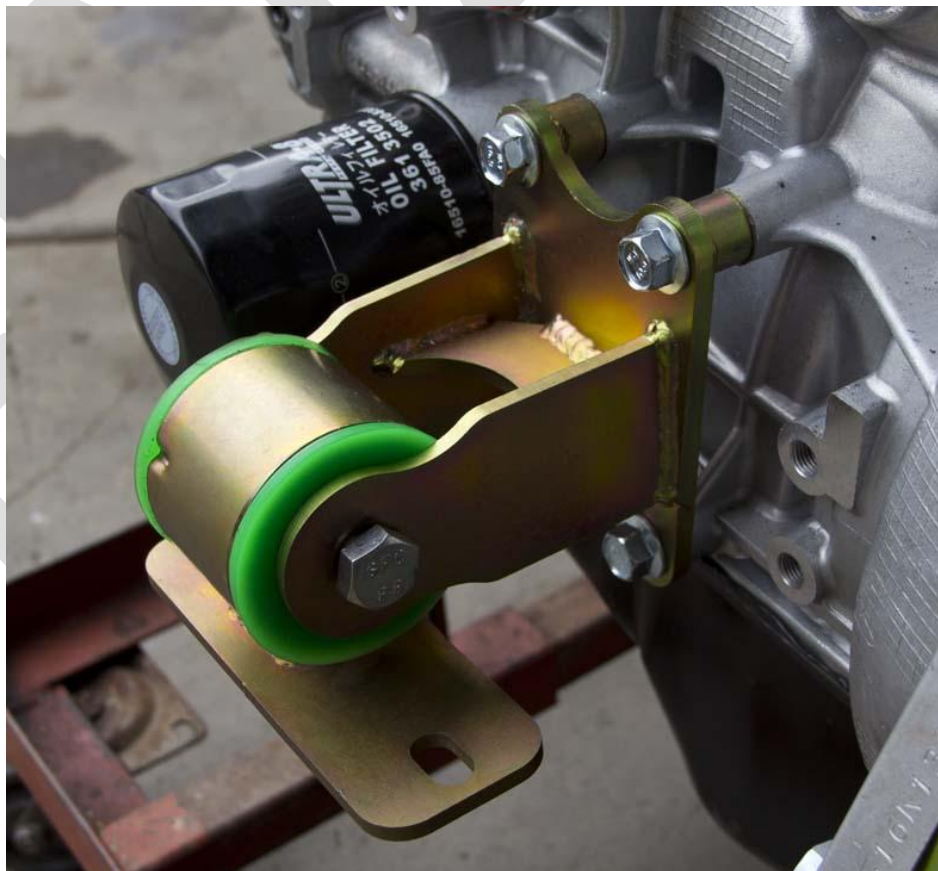


Figure J

11. Install the Engine/Frame Mounts on the respective sides of the motor with supplied Hardware. Right side mount is the 3 bolt unit See **Figure I**. Left Side has 4 bolts See **Figure J**.

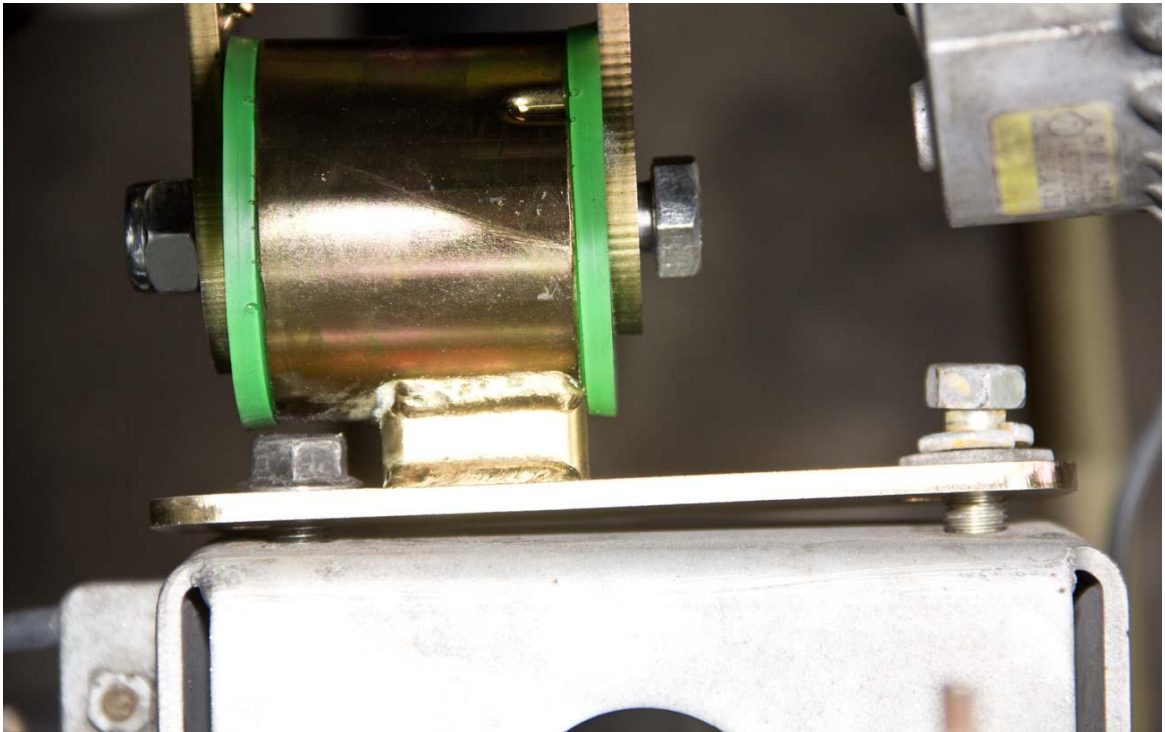


Figure K

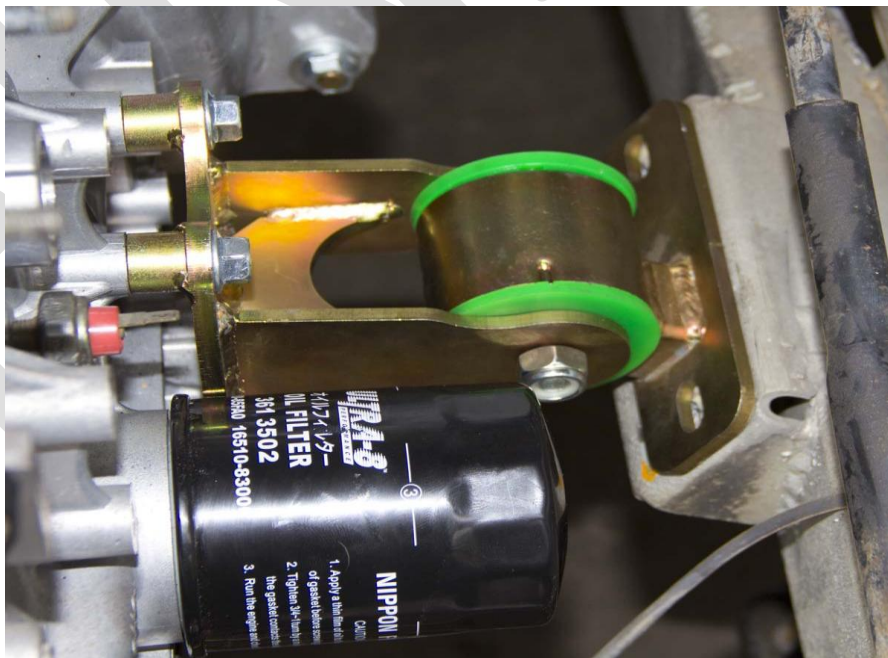


Figure L

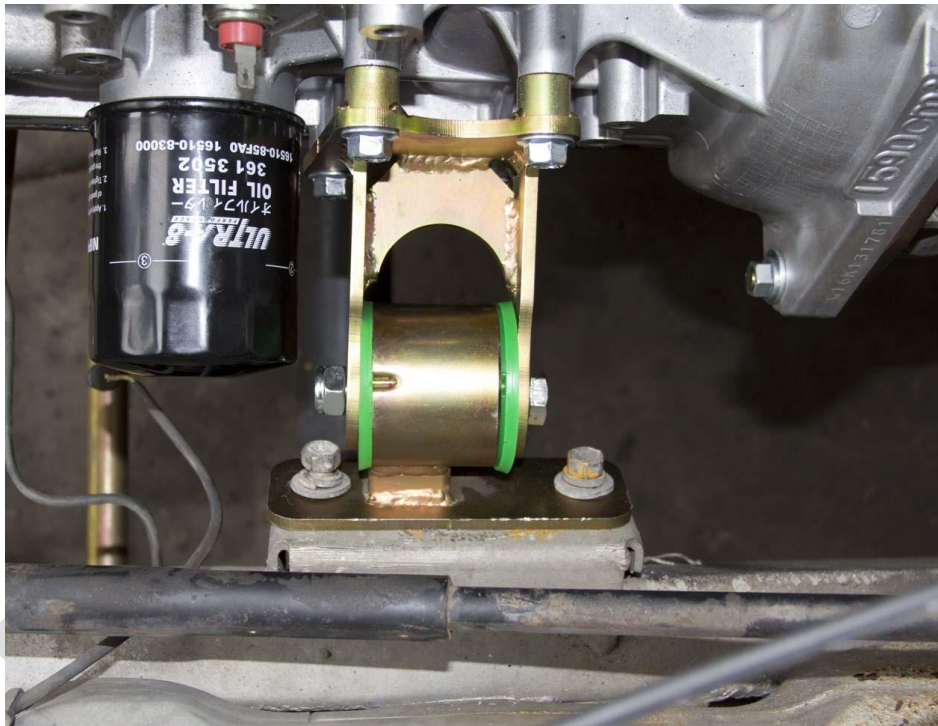


Figure M

12. Lower entire assembly down into the engine bay. As the frame side mounts get closer to their mounting locations have your help start to align the frame mounts to the frame and start to install the original mount bolts into the frame. The rear passenger side frame mount bolt is hard to get past the mount so it is advisable to start this one first while there is no weight on the mounts. See **Figure K , L and M**.



Figure N

13. Before tightening down all the bolts on the frame mount, install the Rear Transmission mount into the stock location as shown in **Figure N**.

14. Tighten all bolts.



Figure O

15. Install the lower front transmission cross member (black bar under the transmission bell housing) using the 2 supplied spacers and new bolts. See **Figure O**.



Figure P

16. Install the Transmission Dust Cover using the 2 supplied longer dust cover bolts. See **Figure P**.
17. Congratulations you have completed the 1.6 motor installation. Now it is time for the fun part. Wiring it all in and getting it running.

Petroworks can provide you with all the other miscellaneous items you may need and we recommended to complete this installation correctly.

Things to Consider

Wiring Harness:

There are other modified wire harnesses available. However, we feel that our harnesses are hands down the best value for the money. We can modify your 1.6 8v, 1.6 16v ODBI and ODBII harness to SMOG certification in all 50 states Including CA. All harnesses are steamed cleaned in our commercial parts washer, all connections are professionally put together with solder and shrink tube, the donor harness is cut down to fit cleanly into your car and not looped back into the harness and taped over, we do not use miles of cheap Harbor Freight tape, all electrical tape used is quality 3m Scotch 33+ electrical tape. All harnesses are fitted into split loom for ease of access to your wires not bound in miles of tape. Remember, you get what you pay for!

Motor Components

Don't forget while you have the motor out it is a good time to install all new

Plugs
Wires
Cap
Rotor
Oil
Oil Filter
Intake and Exhaust gaskets
Clean out all the EGR ports
Clean out the water jackets in the intake
Thermostat
Radiator hoses
Switching to a 3 Core Radiator or Aluminum radiator
Transmission Oil
Upgrade your Clutch or change it out
Pilot Bearing
Throwout Bearing
Resurface Your flywheel
Check/Change Intermediate Driveshaft U Joints
Rebuild Your Transmission