

# **Dynatech**<sup>®</sup>

Competition Exhaust Systems

## **INSTALLATION INSTRUCTIONS**

**LIT-996, REV 3**



## **CHEVY / GMC 1500 / H2 HUMMER**

### **STAINLESS STEEL HEADERS**

Note: We do our best to ensure the instructions in the box are the latest version. However in some cases where the system does not change for a new model year, inventory on the shelf may not have the latest version of the instruction manual. If you do not see your model or application listed above, please feel free to contact us at 800-848-5850 or sales@dynatechheaders.com for an updated instruction manual. We assure you the parts in the box are correct. The instructions may have added notes for a specific model year update.

## **'99 - '06**

**2WD, 4WD, 4.8, 5.3, 6.0L ENGINES**

### **PART NUMBERS**

**715-84110, 715-84120**

**715-84130, 715-84110**

**715-84220, 715-84230**

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These products are intended for racing and off-road applications. Not legal for sale or use in the state of California, nor in states which have adopted California emission standards.

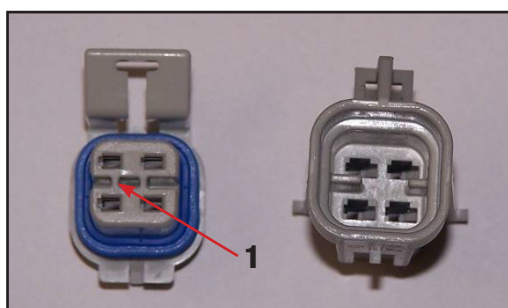
## ***A special note concerning the O2 Extension Cables provided in your kit***

Research has shown that depending on where your vehicle was manufactured, there may be variations in the O2 sensor connections. This can create problems getting the O2 extensions, provided with this kit to match the factory O2 sensor connection.

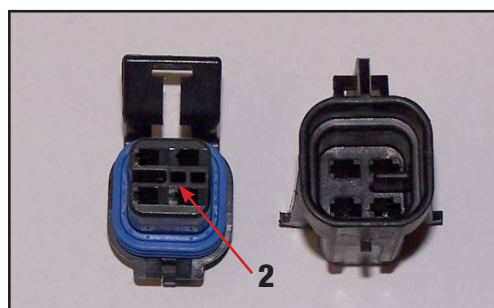
Before any disassembly, we ask that you check the shape of the front drivers side O2 cable plug and compare it to the extension supplied.

These sensor connectors vary in color, either gray or black and in shape, either square or trapezoidal. In all cases, as long as the shape is the same, the only difference is the keying tabs inside the connector which can easily be modified to fit. The pictures and diagrams below will help illustrate which keys/tabs should be removed if in fact there is a difference between the Dynatech supplied sensor extension connectors and your vehicle connectors.

If you are uncomfortable making these changes or the supplied extensions have the incorrect connector shape, please contact us for the correct extension prior to taking your vehicle out of service.

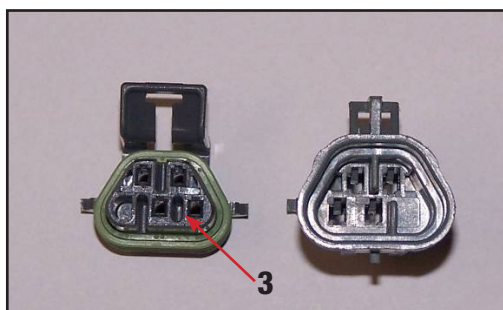


**788-73830**



**788-73230**

To make the square gray male connector work with the black square female connector cut the web indicated by arrow number 1. To make the square black male connector work with the female square gray connector, cut the two webs located at arrow 2, and do not cut the center web.



**788-63531**



To make the trapezoidal gray male connector work with the black trapezoidal female connector cut the web indicated by arrow number 3. To make the trapezoidal black male connector work with the female trapezoidal gray connector, cut the two webs located at arrow 4.



Congratulations on your purchase of the Dynatech system. This system is second to none in quality and performance. While slight variations in either the header or the vehicle may cause minor differences in the exact order of steps listed in this document, the information should guide you during the process.

Dynatech recommends hiring a professional installer. Extra care must be taken to ensure that hoses, cables, electrical lines, fuel lines, hydraulic lines, or any other objects are not in contact with, or located too close to your installed system. (Nothing should be allowed to touch or be located too close to the header/exhaust system)

Dynatech will repair or replace any products found upon our inspection to be defective in workmanship or material within 12 months from date of purchase for the original purchaser.

The Dynatech Team takes pride in providing the utmost in quality and performance. Should you have a concern about the product you receive, please contact Dynatech Customer Service at [dynatechcs@dynatechheaders.com](mailto:dynatechcs@dynatechheaders.com).

Dynatech is not responsible for any exhaust product that has been improperly installed, crashed, welded to, or modified in any way. Dynatech does not cover damage to any related components. Neither the seller nor Dynatech will be responsible or liable for any loss, damage, or injury resulting from the direct or indirect use of this product or inability by the purchaser to determine proper use or application of this product. Dynatech competition exhaust products are built for off-highway use only and are not intended for use on street legal, pollution controlled vehicles.

## **Installation Instructions**

**Please read the following information before installing the headers.**

### **Tools required for proper installation:**

- Small standard screwdriver
- 7/8" open end wrench or O2 sensor wrench
- Assorted metric wrenches (8mm – 19mm)
- Ratchet & extension
- 10 mm, 13 mm, 14 mm , 15 mm, and 19 mm sockets
- 13/16" socket
- Optional: ratchet box end wrenches 10mm,13mm (these make certain operations easier)
- 5/8" spark plug socket
- Torque wrench
- Your Chevy factory supplied lug nut wrench ( stock wheels )
- Hacksaw
- Floor Jack and stands or hydraulic lift
- Safety glasses or goggles
- Small amount of Anti-seize

## What's in Your New Header Kit:

Your exhaust system should contain all of the following parts. Please inventory each item prior to proceeding with the installation.

### **1999-2006 Chevy/GMC1500 4.8-5.3L**

#### **Header Parts Inventory List:**

- 1 ea. Left Header
- 1 ea. Right Header
- 1 ea. Header Gasket /Bolts Skin Card
- 2 ea. Multi-Layer Stainless Gaskets
- 12 ea. 8 mm Header Bolts
- 1 ea. EGR Gasket
- Steering Shaft Bolt and Nut

#### **Intermediate Section Parts Inventory List:**

- 1 ea. Catalytic Converter w/Cross-over Tube Assembly. (left side)
- 1 ea. Catalytic Converter (right side)
- 1 ea. "Y"-Pipe Assembly
- 1 ea. O2 Sensor Extension
- 2 ea. 2 ½" Stainless Steel Band Clamps
- 1 ea. Donut Gasket Skin Card
  - 2 ea. Donut Gaskets
  - 8 ea. 10 mm Serrated Flange Nuts
  - 6 ea. Anti-Crush Spacers



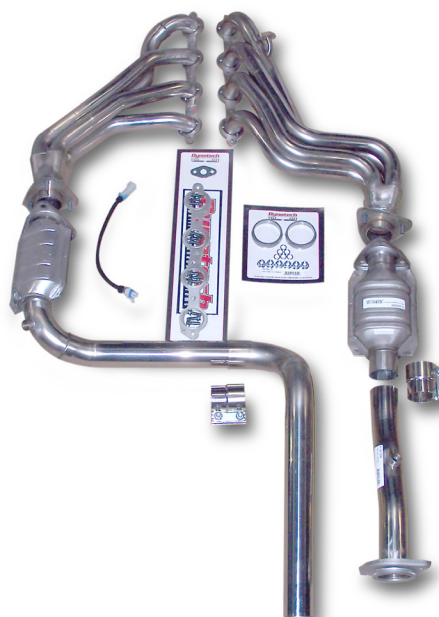
### **1999-2006 Chevy/GMC1500/H2 Hummer 6.0L**

#### **Header Parts Inventory List:**

- 1 ea. Left Header
- 1 ea. Right Header
- 1 ea. Header Gasket /Bolts Skin Card
- 2 ea. Multi-Layer Stainless Gaskets
- 12 ea. 8 mm Header Bolts
- Steering Shaft Bolt and Nut

#### **Intermediate Section Parts Inventory List:**

- 1 ea. Catalytic Converter w/Cross-over Tube Assembly. (left side)
- 1 ea. Catalytic Converter (right side)
- 1 ea. Left side secondary tube.
- 1 ea. Right side flanged tube (for connection to rear of right side catalytic converter)
- 1 ea. O2 Sensor Extension
- 2 ea. 2 ½" Stainless Steel Band Clamps
- 1 ea. Donut Gasket Skin Card
  - 2 ea. Donut Gaskets
  - 8 ea. 10 mm Serrated Flange Nuts
  - 6 ea. Anti-Crush Spacers



## Safety Notes:

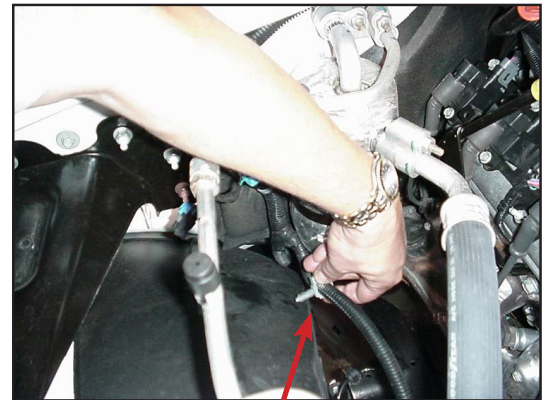
Please allow engine to cool for a minimum of 90 minutes before starting installation. The use of safety goggles is strongly recommended, as debris may be dislodged from your vehicle while removing and installing parts. Cotton gloves are recommended to keep any oils and grease off of the headers to prevent any permanent staining, also to protect your hands from sharp objects during the installation.

## Before You Get Started:

- Take inventory of all the parts in your new system. Make sure each piece is accounted for prior to taking your vehicle out of service.
- Look at the tool and supply list to make sure you have all the needed tools and supplies.

## Stock System Removal:

1. Remove negative terminal battery cable.
2. Loosen the lug nuts on both front wheels, but do not remove.
3. Open the hood and remove the wire loom holders from both wheel well covers. See **Fig. 1**.
4. Raise the vehicle using a floor jack (you must use jack stands to support vehicle while working under vehicle) or hydraulic car lift.
5. Remove both front wheels after vehicle is raised and secured.
6. Remove wheel inner fender panels from both sides by removing quick release plastic retainers. See **Fig. 2**.

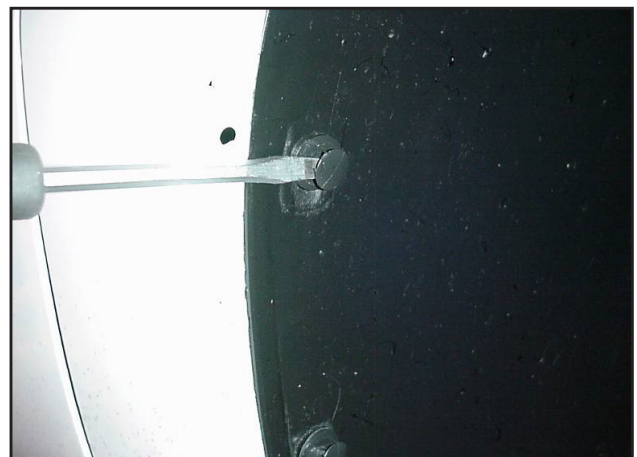


Pull barbed wire loom out of plastic inner fender panel. These need to be removed from both driver and passenger sides.

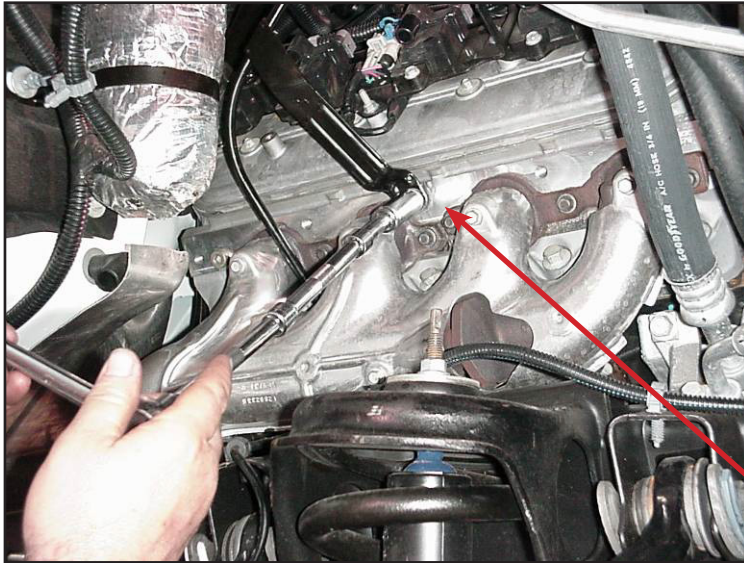
**Fig. 1**

Use small screwdriver to gently pry the center up and remove inner and outer assembly.

**Fig. 2**



7. Remove spark plug wires on both sides from spark plugs and coil packs.
8. Remove bolt from oil dip stick bracket and pull upward gently to remove oil dip stick tube. Use caution not to damage "o"-ring seated at the bottom of the oil dip stick tube. Temporarily cover dip stick tube hole Fig. 3.

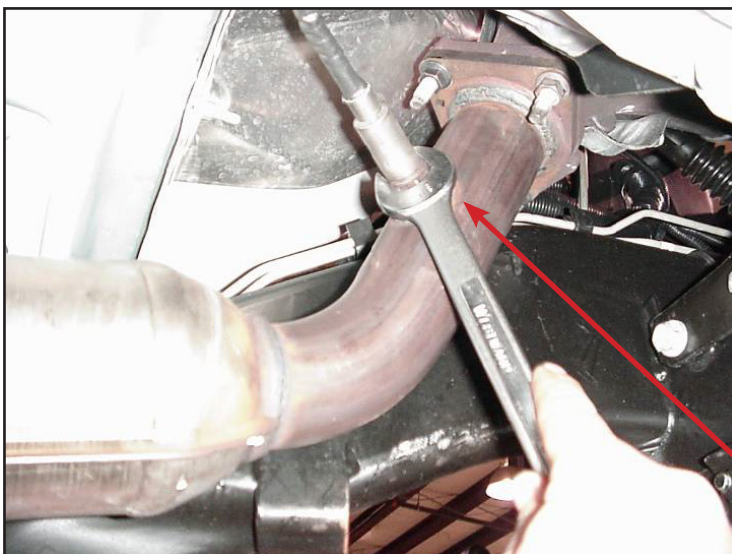


Remove dip stick tube retaining bolt, using care not to damage the "O" ring on the dip stick tube.

**Fig. 3**

*Note: Proper operation of the forward O2 sensors is crucial for peak performance and good air-fuel ratio. Please handle with care and keep hands free from contaminating the sensor surface. All sensors should be considered as delicate instruments and should be handled accordingly.*

9. Remove all exhaust (4) O2 sensors from factory exhaust. These are located one in each side of the exhaust before and after the catalytic converters. See **Fig. 4**.

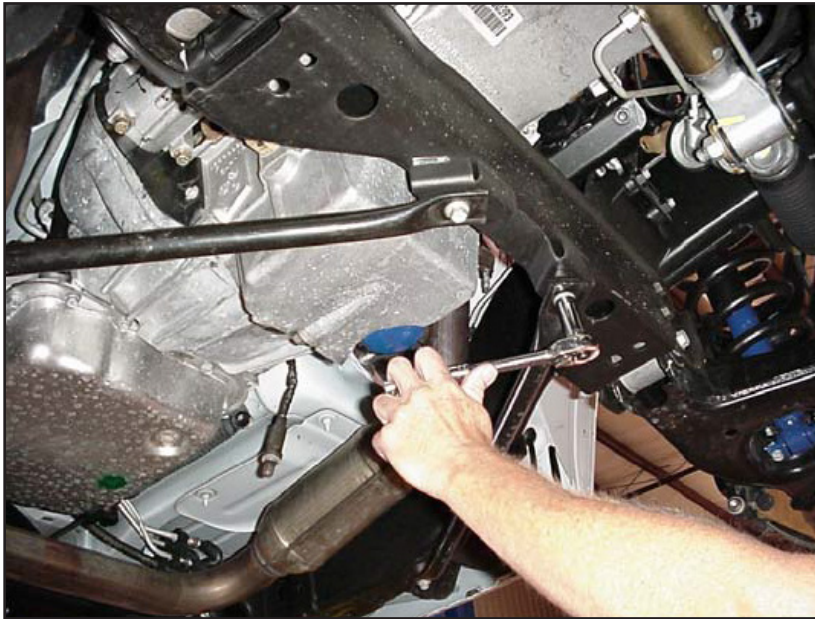


Use care in removing all four sensors. Handle the sensor ends with care, keeping free from oil and dirt.

**Fig. 4**



10. Remove both frame to engine cross member struts. See **Fig. 5**.



Only the front two bolts have to be removed if you want to swing braces away from center of vehicle.

**Fig. 5**

11. Remove the nuts holding the transmission to the cross member.

12. The transmission **MUST** be temporarily lifted and braced after the nuts are removed. **\*\*Note 4WD models may brace the transmission using a small wooden block on top of the second cross member.** See **Fig. 6**.

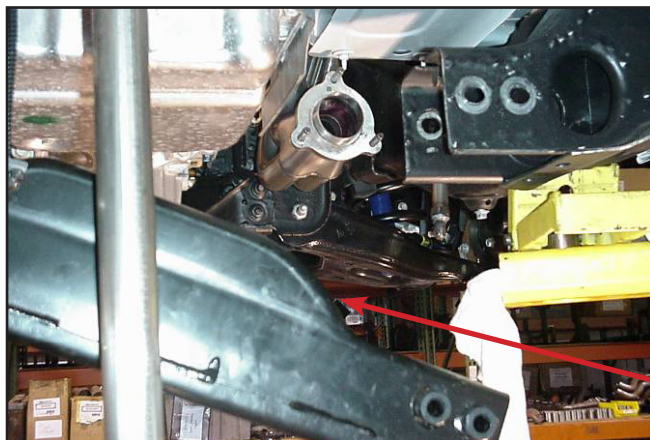


**Fig. 6**

13. Remove the two passenger side cross member bolts, one driver's side, and loosen the other. This will allow you to swing down the cross member enough to remove the factory exhaust. **Fig. 7** and **Fig. 8**.



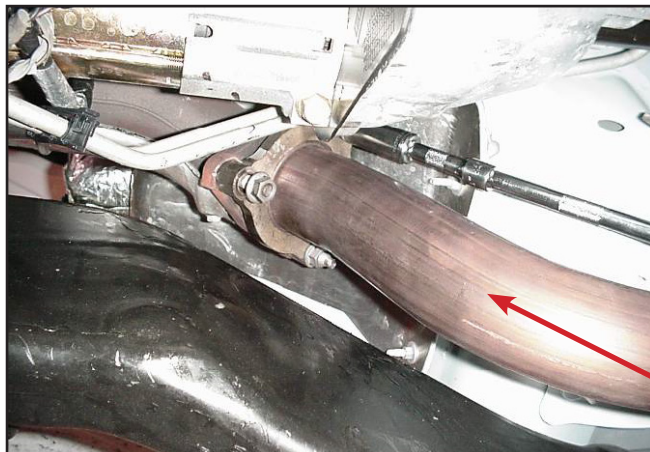
**Fig. 7**



Here is the cross member lowered for removal and install.

**Fig. 8**

14. Remove all the 6 exhaust manifold nuts holding the Y-pipe to the cast manifolds, and the nuts (2) at the rear of the exhaust. The assembly is now ready to remove. See **Fig. 9**.



Tilt the exhaust slightly forward to assist in the removal of the pipe.

**Fig. 9**



15. Now remove the complete exhaust assembly from the vehicle.
16. Remove exhaust manifold bolts from passenger and driver side of vehicle through the wheel well area. The manifold on driver side will exit from the under side of the vehicle. The passenger manifold can be removed through the wheel well. (Either remove the spark plugs prior to removing the manifolds or use extreme caution to prevent damaging the spark plugs.) See **Fig. 10**.



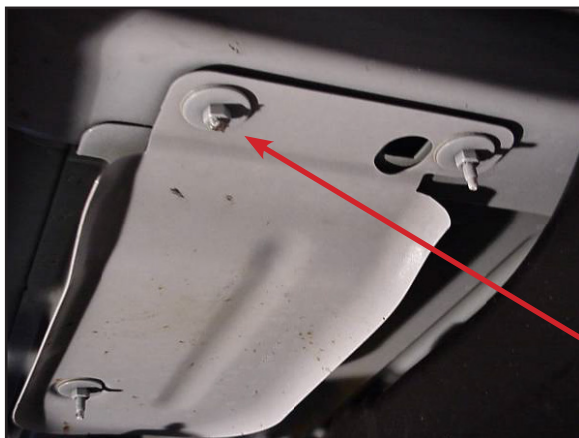
Use caution when last manifold bolt is removed as not to drop manifold.

**Fig. 10**

17. The factory exhaust system should now be completely removed from the vehicle. Please check your progress to ensure all steps have been completed before proceeding to the installation of the Dynatech Dynatech Exhaust System.

## **Installation**

1. We suggest you raise the cross member back into position, and install one bolt in the cross member to secure it while continuing installation. Now you can lower the transmission back down.
2. **Important!** On the front driver's side heat shield, the extra threads below the nut must be removed on one of the bolts. See **Fig. 11**.



Bolt at upper left is cut off on drivers side of vehicle.

**Fig. 11**

3. Install the supplied O2 sensor extension for the left (driver side) front O2 sensor. Slip the connectors together and route the extension cable up and over the driveshaft in the case of 4WD and over the top of where the collector will be after header installation. Tie this cable up, out of the way with tie-wraps or a clamp to an existing heat shield bolt. **Refer to page 2 of this manual if connector modification is required.** *Note: No O2 sensor extension required on H2 Hummer.* See **Fig. 12** and **Fig. 13**.



**Fig. 12**



**Fig. 13**

4. At this time replace the steering column shaft bolt and nut with the new nut and bolt supplied with the kit. Replacing this bolt and nut provides an extra margin of clearance between it and the header especially when installing on a 2WD vehicle. See **Fig. 14**.

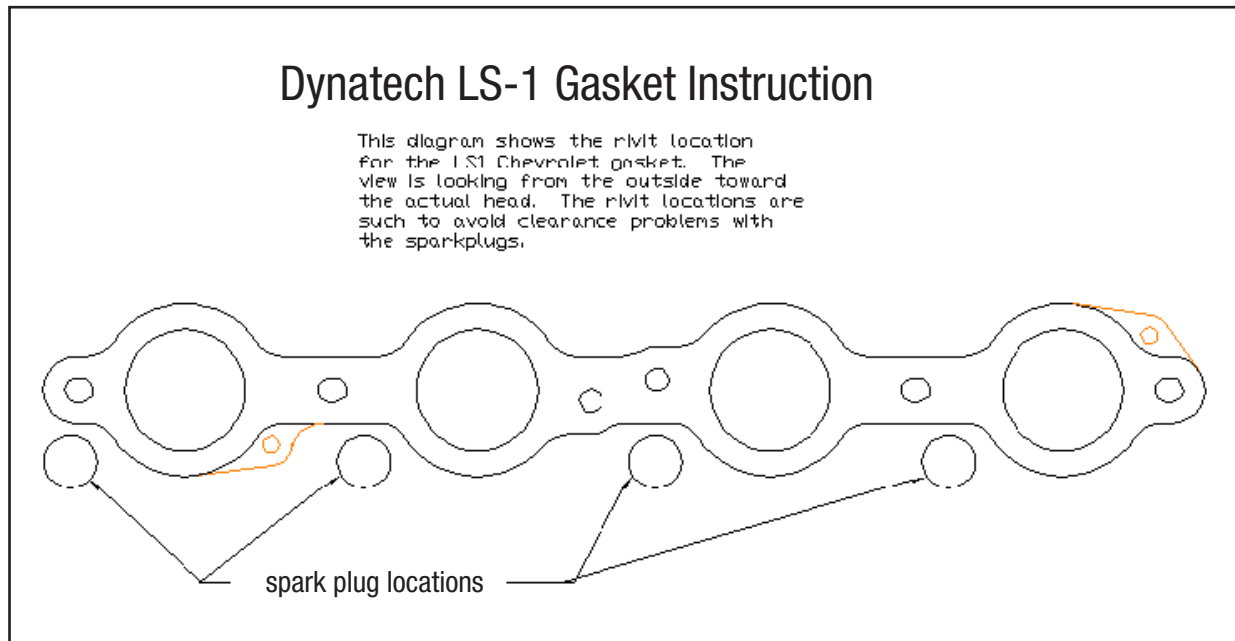
*Caution: Failure to perform these additional steps may in certain cases cause the steering to jam resulting in the loss of control of your vehicle.*



**Fig. 14**

- Remove the bolt and nut from the steering shaft.
- Apply a removal tread locker to the bolt. Reinstall the new bolt and nut through the steering shaft and tighten securely.

**Note:** Be sure to install the gasket as shown in the diagram below to prevent interference when reinstalling the spark plug wires. See **Fig. 15**.



**Fig. 15**

5. Install new headers from bottom of vehicle using care to keep the gasket in place. Use a small amount of anti-seize on each bolt making sure to start them by hand to prevent cross-threading. When installing header on driver's side, the header bolt closest to the firewall may have to be installed from the under side of the vehicle. Then install remainder of header bolts through wheel well and tighten to approximately **18ft/lb torque**. See **Fig. 16**.



**Fig. 16**

6. If necessary re-attach the EGR tube along with a new gasket provided in the kit. **If the EGR is utilized, you must remove the small brass plug from the center of the EGR flange on the header and discard it prior to attaching the EGR tube.**



7. After installing both headers and all header bolts, brace transmission in the same manner as done in removal of stock exhaust. See **Fig. 17**.



Do not lower cross member until transmission is supported.

**Fig. 17**

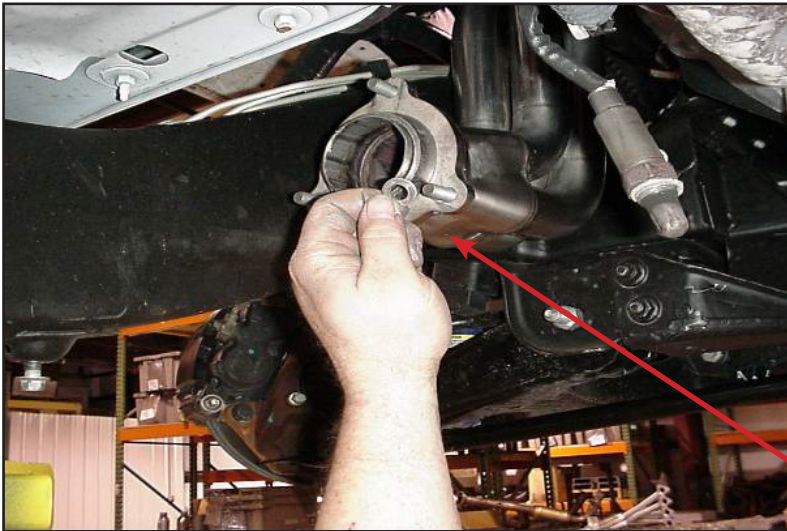
8. Install both sintered metal donut gaskets to header collector outlets. See **Fig. 18**.



Install the sintered donut gaskets

**Fig. 18**

9. Slip round spacers on header collector studs. See **Fig. 19**.

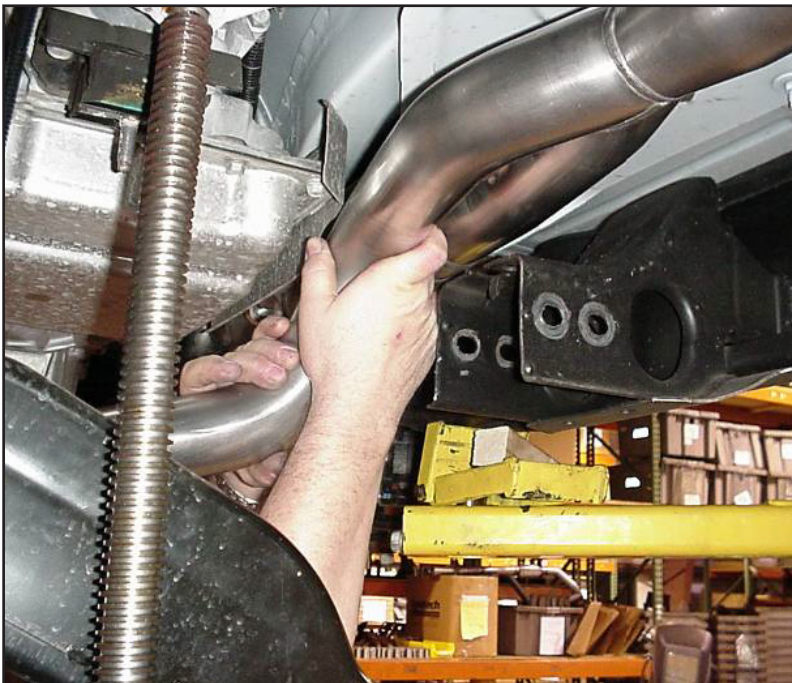


Install one spacer per stud to ensure proper connection. (Both headers)

**Fig. 19**

10. Install all O2 sensors in cats & secondary pipes at this time. **Be sure to observe previously marked sensor positions. Start cat installation and secondary pipe with passenger side.** Attach catalytic converter loosely with 3 flanged nuts. Slip band clamp over the end of the cat and install secondary pipe between cat and muffler's two (2) bolt flange. See **Fig. 20**.

Make sure no anti-seize or other contaminate gets on the sensor's sensing surface.



Stock cat-back section must be gently pushed back on hangers to accept new Y-pipe.

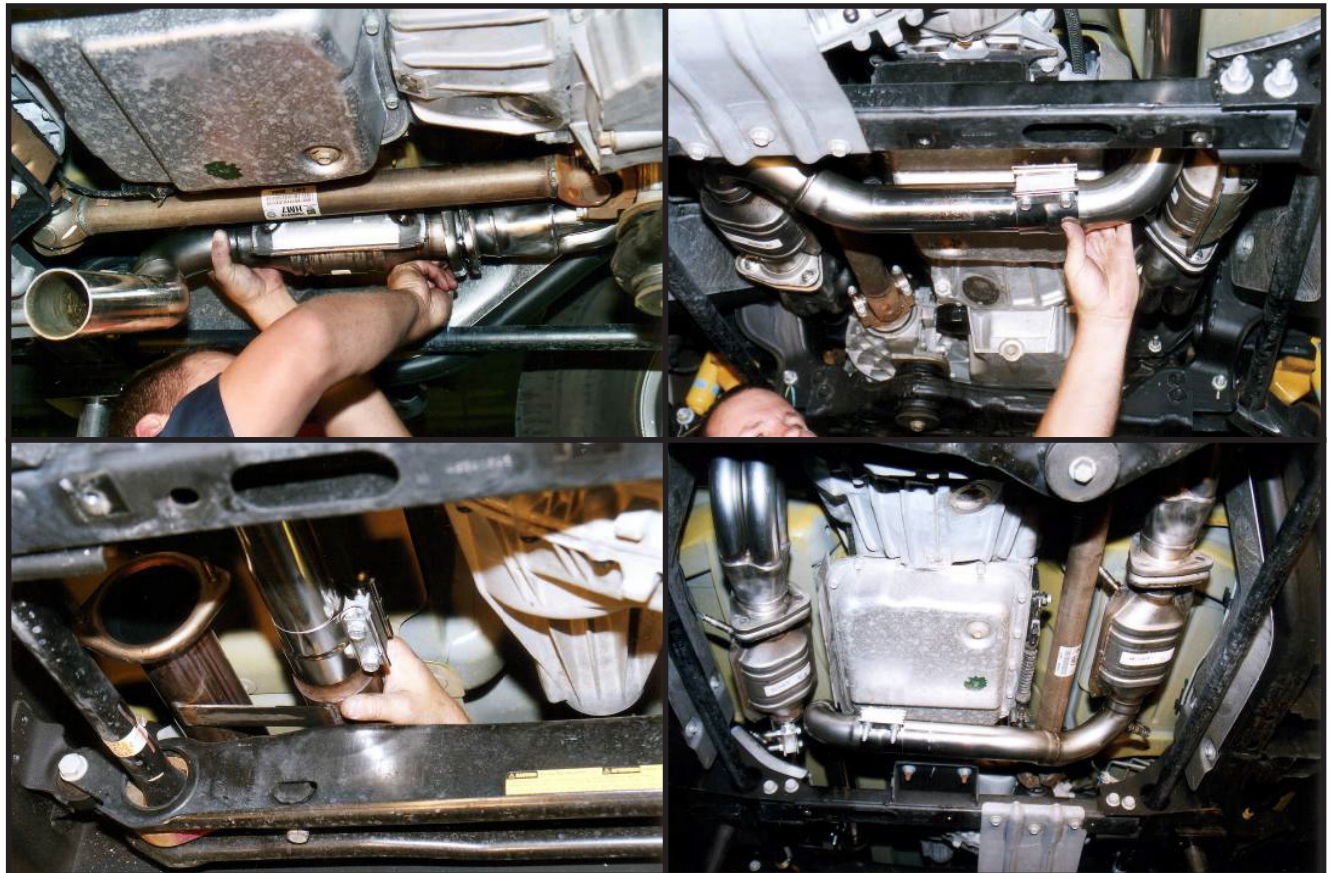
**Fig. 20**



11. The driver's side catalytic converter & cross-over pipe can now be attached to header collector with 3 flanged nuts. Make sure a band clamp is installed on the outlet end of the cross-over pipe and the outlet end of the secondary before slipping the left (driver) side secondary tube into position. See **Fig. 21** for **4.8/5.3L**. See **Fig. 22** for **6.0L system**.



**Fig. 21 (4.8/5.3L)**



**Fig. 22 (6.0L)**



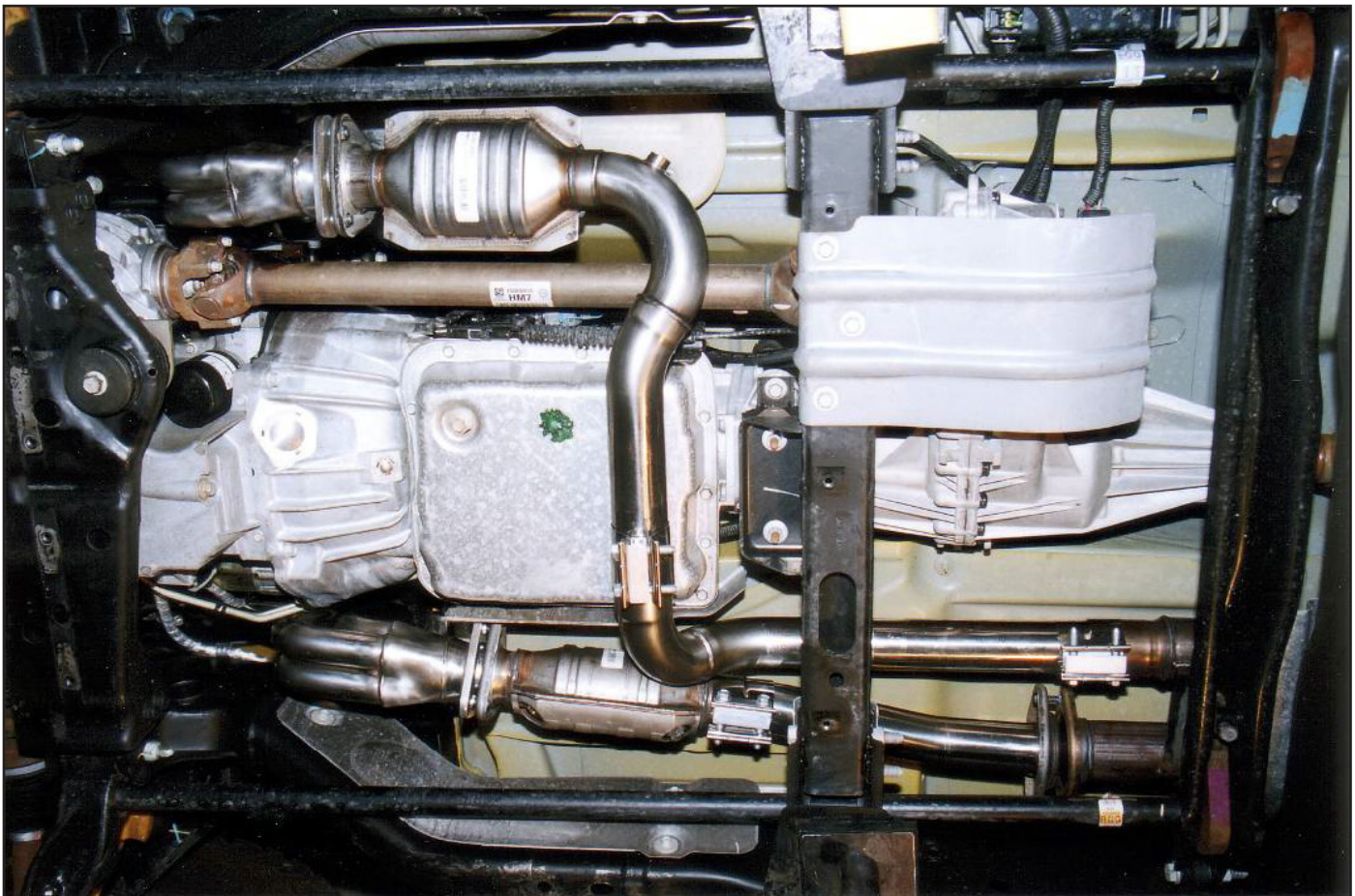
12. After ensuring all clamps and fasteners are installed, check clearance and align properly before tightening. Tighten down header collector nuts tight against spacers. See **Fig. 23 and Fig. 24 for 4.8/5.3L**. See **Fig. 25 for 6.0L system**.



**Fig. 23 (4.8/5.3L)**



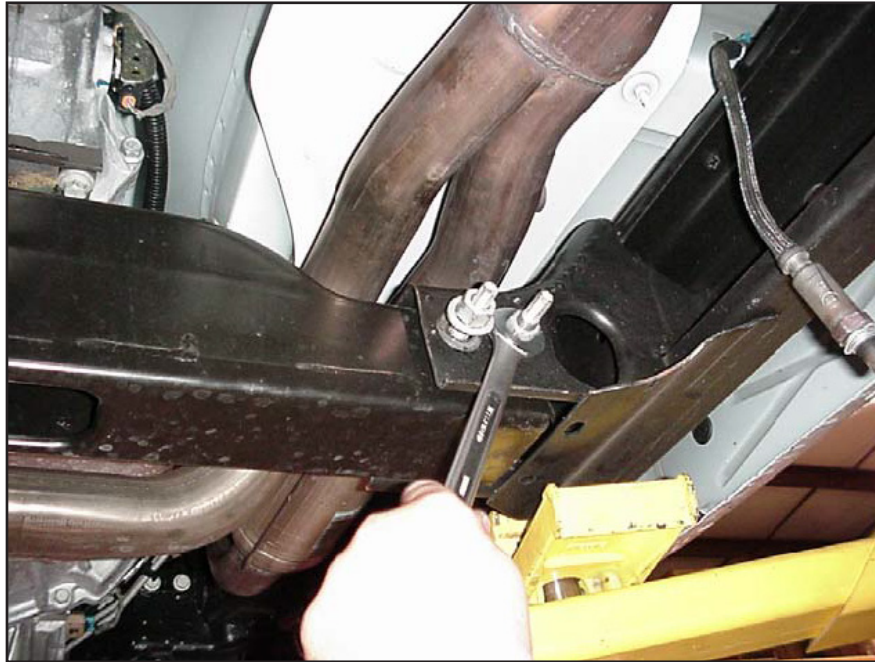
**Fig. 24 (4.8/5.3L)**



**Fig. 25 (6.0L)**



13. Raise cross member back into position and reinstall and tighten all the bolts. Next lower the transmission and reinstall and tighten the nuts holding it into place . See **Fig. 26**.



**Fig. 26**

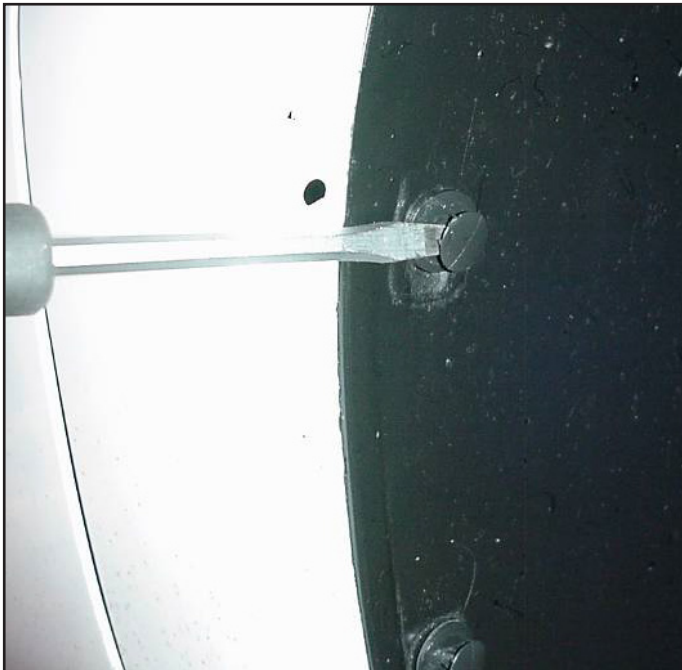
14. Install spark plugs and connect the wires to both the spark plugs and the coil packs. See **Fig. 27**.



**Fig. 27**

15. Reinstall oil dip stick tube and brace.

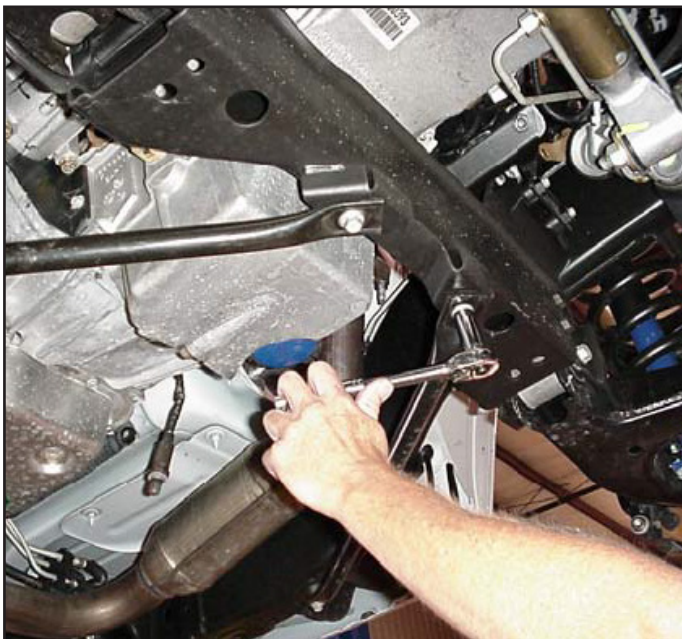
16. Install wheel well covers using the stock pop-top quick connectors. See **Fig. 28**.



Install quick release tabs in same fashion in which they were removed.

**Fig. 28**

17. Reinstall front cross bracing and tighten. See **Fig. 29**.



Recheck all exhaust connections and hardware at this time.

**Fig. 29**



18. Check all exhaust connections and all frame parts at all locations before lowering vehicle.
19. Install both front wheels and tighten all lug nuts to factory specifications.
20. Lower the vehicle.
21. Install plastic wire loom holders to inner fender panels under hood area. See **Fig. 30**.



**Fig. 30**

21. Connect negative battery terminal. See **Fig. 31**.



**Fig. 31**

22. Installation should now be complete, start engine and check for exhaust leaks, tighten as necessary.

## **Finishing up the installation**

### **Final Steps & Checks:**

- Once again, verify that all hoses, cables, electrical lines, fuel lines, hydraulic lines, or any other objects are not in contact with, or located too closely to your installed system. (Nothing should be allowed to touch or be located close to the header/exhaust system.)
- Start the engine. Observe the “Check Engine Light”.

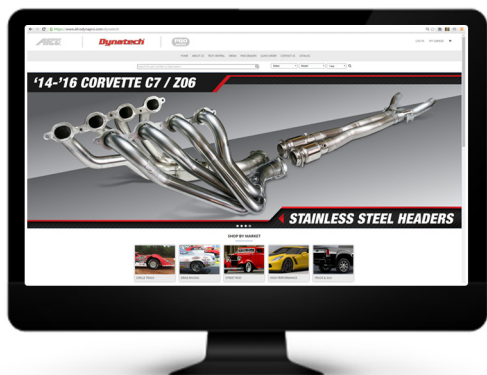
**Note: In some instances you may experience a check engine light after the installation of an aftermarket exhaust system. If this occurs please contact Dynatech at 1-800-848-5850 and ask for customer service or e-mail [dynatechcs@dynatechheaders.com](mailto:dynatechcs@dynatechheaders.com).**

- Listen for any exhaust leak “ticking” sounds. Check around each clamp and gasketed joint for leaks. If any are found, check to see that the gasket is properly installed and the joint or clamp is tightened properly.

*All bolts and connections should be re-tightened as necessary after the system has gone through several thermal cycles and as needed thereafter.*

*We make every effort to build our products to the highest standards of workmanship and materials possible. This also applies to our documentation. If you find points in our instruction manual that you feel need to be clarified or changed, please e-mail us your comments at [dynatechcs@dynatechheaders.com](mailto:dynatechcs@dynatechheaders.com). We will use them to enhance our documentation.*





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