

# **Dynatech**<sup>®</sup>

Competition Exhaust Systems

## **INSTALLATION INSTRUCTIONS**

**LIT-885, REV 7**



## **CORVETTE C6**

**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.

**'05 - '13**  
**LS ENGINES**

### **PART NUMBERS**

**715-63510, 715-63520**  
**715-63530, 715-63620**  
**715-63630, 715-63540**  
**715-63550**

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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.

## **Installation Instructions**

Congratulations on your purchase of the Dynatech Corvette header system. This system is second to none in quality, performance, and ease of installation. Please read and understand each of the steps involved with the removal of your old system and the installation of your new header system kit. 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 following narrative and pictorial information should guide you during the removal and installation process leading to a completely satisfactory install of your new header system.

Dynatech highly recommends hiring a professional installer, one that is familiar with the installation of off-road exhaust products. Headers are designed to increase the performance of your vehicle, and as such are designed differently than your stock exhaust system. 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 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.

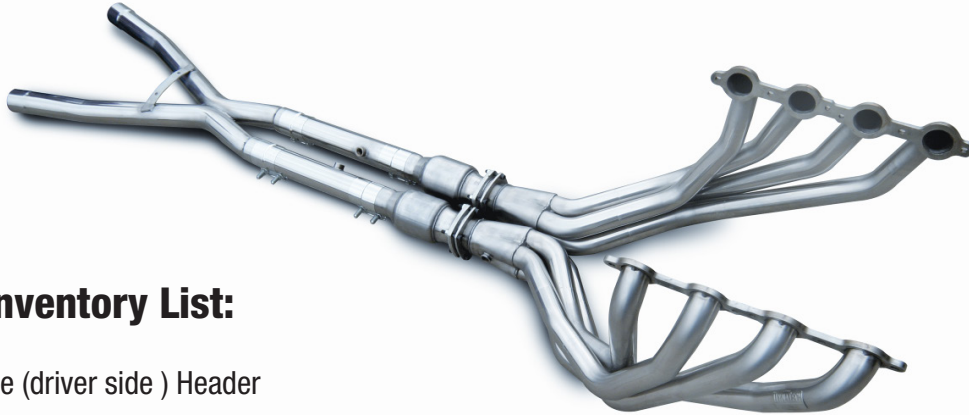
The Dynatech Team takes pride in providing the utmost in quality and performance. Should you have a concern about the product you receive, please contact Dynatech Customer Service at [dynatechcs@dynatechheaders.com](mailto:dynatechcs@dynatechheaders.com).

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## What's in your new header kit?

Your exhaust system should contain all of the following parts. Please inventory each part prior to proceeding with the installation. **The system will fit up to the factory Cat-back system on 2011-2013 models. This system must be used in conjunction with an aftermarket Cat-Back system from any one of several manufacturers. Additional fabrication may be required and the owner would assume all responsibility for any fitment issues encountered. On 2007-2010 models, this system must be used.**



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

- 1 ea. Left Side (driver side ) Header
- 1 ea. Right Side (passenger side) Header
- 1 ea. Header Gasket / Header Bolts Skin Card
  - 2 ea. OEM Style Stainless Steel Header Gaskets
  - 12 ea. 8mm Header Bolts
- 2 ea. Front O2 Extension Cables
- 1 ea. Install Manual

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

- 1 ea. Left Side (driver side) Interim Tube
- 1 ea. Right Side (passenger side) Interim Tube
- 2 ea. PowerCATs - Hi-Flow Catalytic Converters
- 1 ea. Donut Gasket Skin Card
  - 2 ea. 3" Graphite Donut Gaskets
  - 8 ea. 5/16" x 18 x 1 3/4" Allen Head Cap Screws
  - 8 ea. 5/16" x 18 Top Lock Hex Nuts
- 1 ea. X-Pipe Assembly
- 4 ea. 2 1/2" Stainless Steel Band Clamps
- 2 ea. Rear O2 Extension Cables
- 4 ea. Tie Wrap Cable Ties
- 2 ea. Adel Cushion Clamps ( .625 ID)
- 6 ea. Adel Cushion Clamps ( .483 ID)
- 1 ea. Install Manual

## **Safety Notes:**

For your safety, please allow the engine to cool for a minimum of 90 minutes before starting the removal / installation steps.

The use of safety goggles is strongly recommended, as debris may be dislodged from beneath your vehicle while removing or installing parts.

While not required, the use of cotton gloves is recommended to protect not only your hands from sharp objects under the hood and chassis of your vehicle but also keeps the oils and grease off the header's stainless steel surface possibly preventing permanent stains on the header themselves.

## **Required and Optional Tools:**

Miscellaneous hand tools are required for proper installation of these headers. We have listed a few of the required and optional tools to help with your installation.

- 7/8" open end wrench or O2 Sensor Socket.
- Assorted metric sockets and wrenches (8mm – 16mm)
- Ratchet and extensions
- Torque wrench
- Rubber Mallet or Dead Blow Hammer
- Floor jack and safety stands or a hydraulic lift
- Safety glasses or goggles
- Small bottle of Anti-seize Penetrating Fluid (optional)
- Cotton Gloves (optional)

## **Before You Get Started:**

- Take inventory of all the parts in your new system.
- Look at the tool and supply list to make sure you have all the needed tools and supplies.



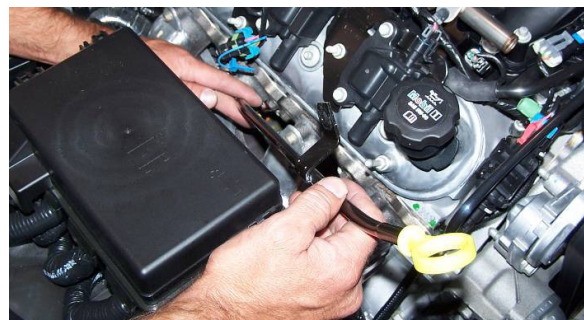
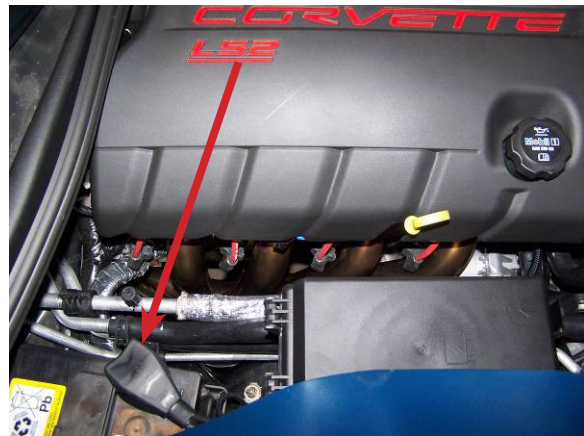
## Stock System Removal:

Please read the following instructions carefully. Following the instructions carefully will make the removal and installation easier, more organized, and will hopefully result in a professional quality install of your new header system.

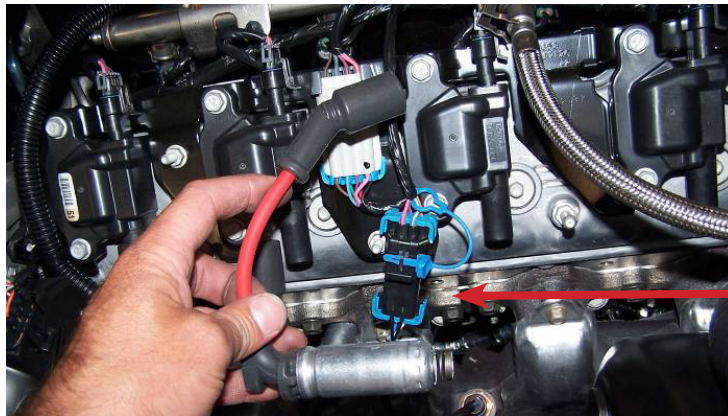
Place the vehicle up on jack stands or a hydraulic lift to provide access to the bottom of the vehicle. You should plan to get the bottom of the vehicle at least 2 feet off the ground to allow for the insertion of the headers from below.

## Under the Hood:

- For safety and to protect your vehicle's electrical system, remove the ground cable from the negative battery terminal.
- Remove the left (driver) side fuel rail cover.
- Remove the right (passenger) side fuel rail cover. The oil fill cap will have to be removed first and then replaced after the fuel rail cover is removed.
- Loosen the bolt holding the oil dip stick tube bracket to the right (passenger) side engine head and pull the dip stick tube out of the block.



- Remove the spark plug wires from both the coil packs and the spark plugs on both engine banks. (Do not pull on the wires, pull on the boots.)



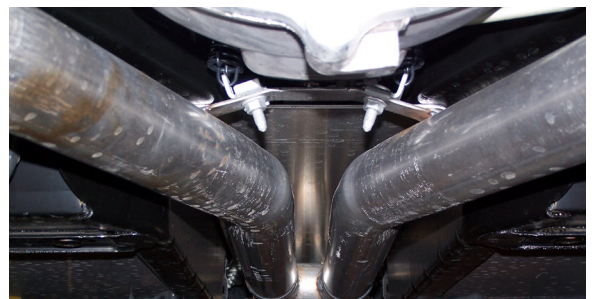
Front O2 sensor connector on the left (driver) side.

- Remove the spark plugs from both engine banks. Be careful not to crack the insulators during removal.
- Remove the small blue clips and disconnect the front O2 sensors from the main wiring harness on both the right and left sides of the engine.

With the preliminary under the hood tasks out of the way, move to the bottom of the vehicle to begin the tail pipe removal.

- Begin by loosening the clamp bolts holding the joint between the stock muffler inlets and the tail pipe assembly on both sides of the transmission at the rear of the vehicle.

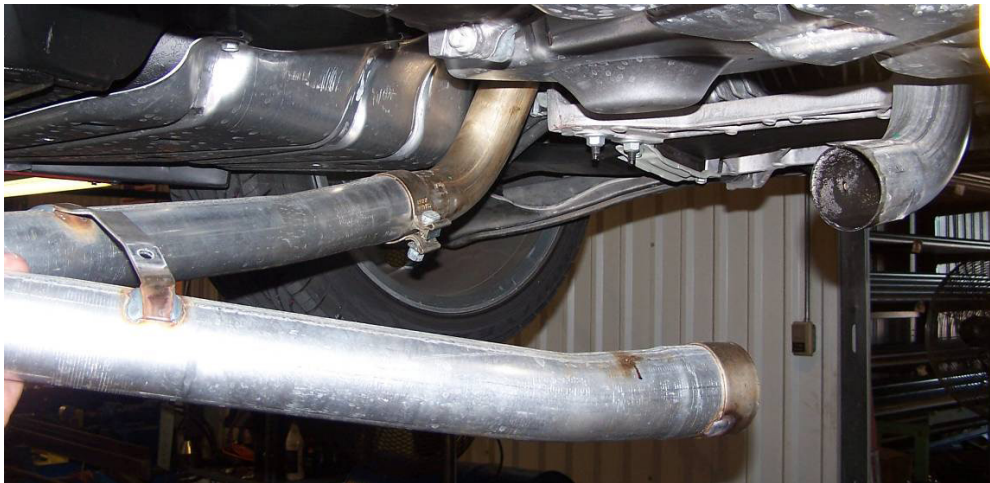
- Next, loosen and remove the two (2) nuts holding the stock tail pipe cross brace bracket.



- After completing the removal of the cross brace bracket nuts, move forward in the vehicle and remove the four (4) nuts holding the tail pipe assembly to the down tubes. Be careful to support the front end of the tail pipe assembly as the last of the nuts is removed. You may need some help at this point to slip the tail pipe assembly off of the muffler inlet tubes. It is best to do one side at a time until both are removed. The assembly can then be removed from beneath the vehicle.



- Remove the small blue clips and disconnect the rear O2 sensors from the main wiring harness on both the right and left sides of the engine. (The O2 sensors will be removed later in the process.)

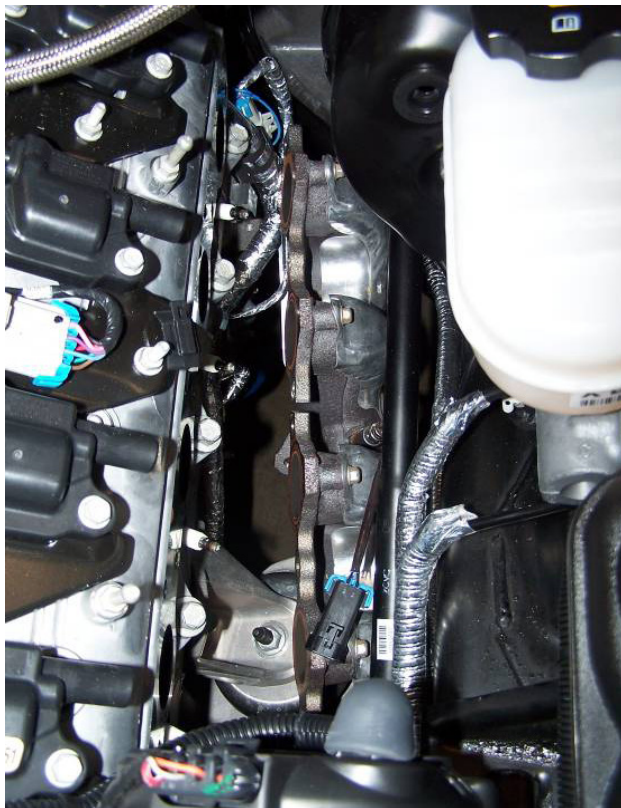




- The next step is to loosen and the remove the down tube/catalytic converter from the cast manifold on the left (driver) side.



- Lower the assembly out of the bottom of the vehicle and out from under the vehicle.
- Likewise loosen and remove the nuts for the right (passenger) side down tube/catalytic converter from the cast manifold and remove the assembly from beneath the vehicle.
- Next remove the left (driver) side cast manifold by loosening and removing the six (6) stock manifold bolts. The manifold should come out of the engine bay from the bottom of the vehicle.





- The right (passenger) side cast manifold is removed in a like manner as the left side. Loosen and remove the six (6) stock manifold bolts and lower the manifold out the bottom of the vehicle.



There are just a few clean-up steps to do prior to continuing with the new system installation.

**Note: O2 sensors are delicate electronic components and should be handled very carefully. Take extra care in not contaminating the sensing end with shop towel lint, finger prints, oil, etc.**

- Prior to beginning the installation of your new Dynatech system, you must remove the O2 sensors from the stock down tubes and the cast manifolds.
- Placement of the O2 sensors in the new system is critical in that they must go back into the new system in the same relative position they came out of the old system. **Remember – handle the sensors carefully.**
  - Begin with the left (driver) side cast manifold, remove the O2 sensor and mark it as the left front sensor. Set aside for later reinstallation.
  - Remove the O2 sensor from the right (passenger) side cast manifold and mark it as the right front sensor. Set aside.
  - Select the left (driver) side down tube and catalytic converter, remove the O2 sensor and mark it as the left rear sensor. Set aside.
  - Likewise, select the right (passenger) side down tube and catalytic converter, remove the O2 sensor and mark it as the right rear sensor. Set aside.

Store all of the parts removed during the disassembly phase of this project. They are valuable parts that could be sold or put back on the vehicle in the future. This completes the removal of the stock system. Please proceed to “Installing your new Dynatech Header System.”

## Installing your new Dynatech Header System

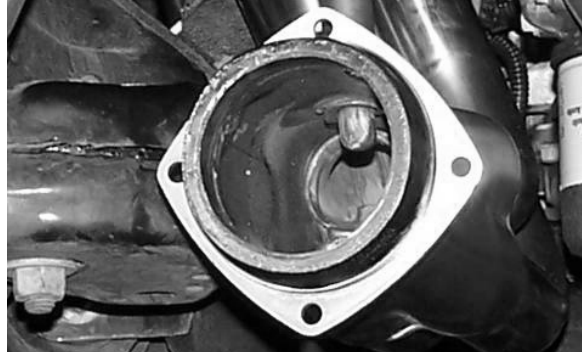
Before installing the headers: If you have a manual transmission you must install the clutch line clamp as indicated below.

- Install the hydraulic clutch line clamp. The ¼" hole in the frame should be tapped with either a 5/16-18 NC tap or use the self tapping bolt supplied with the clamp.
- Install the clamp so that the curved part cradles the clutch line and clamps it loosely to the firewall.



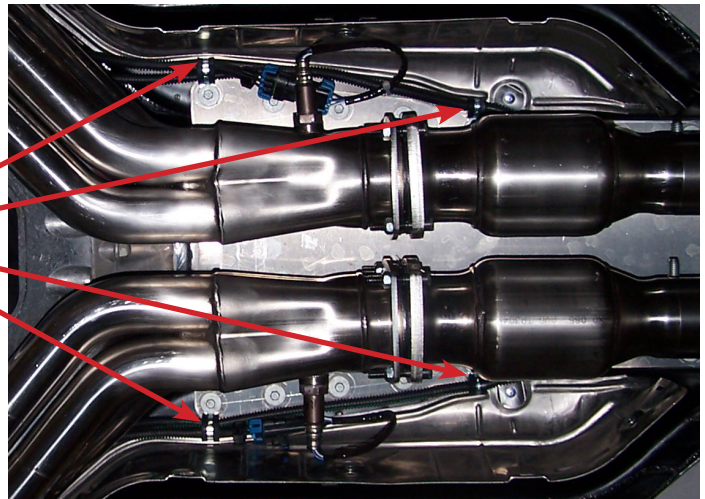
- Prepare six (6) of the supplied header bolts by putting a small amount of anti-seize on the threads to prevent galling during installation.
- Orient the supplied OEM style stainless steel gasket as indicated on the gasket. Slip the left (driver) side header and gasket up from the bottom of the vehicle into place and hand start each of the six (6) header bolts. Hand starting helps prevent cross threading the bolts during installation.
- Prepare six (6) of the supplied header bolts by putting a small amount of anti-seize on the threads to prevent galling during installation.
- Orient the supplied OEM style stainless steel gasket as shown above. Slip the right (passenger) side header and gasket up from the bottom of the vehicle into place and hand start each of the six (6) header bolts. Hand starting helps prevent cross threading the bolts during installation.
- With all of the bolts hand started on both banks of the engine, snug each bolt and then torque each of the bolts to approximately 20 ft/lbs.
- Now that the headers have been installed and the bolts have been torqued to spec., open the donut gasket skin card and retrieve the two (2) 3.0" donut gaskets.

- Slip a gasket over the end of each of the header collectors.



- Now is the time to install the four (4) supplied extension cables. The front and rear cables are different as indicated by their shape and keys. The fronts will only plug into the front connectors and likewise the rears will only plug into the rear connectors.
- Route the front cables from the connectors near the center of the coil packs. Run the cables around the back of the engine and down over the top of the bell housing. Using the supplied tie wraps secure the cables away from moving or hot surfaces that may cause damage.
- Connect the cables to the rear O2 sensor connectors and route them along with the front sensor cables toward the rear of the vehicle.
- The two (2) larger Adel clamps of the eight (8) provided should hold both the front and rear sensor cables for each side of the engine.
- Open the clamps and slip the cables from the left (driver) side inside. Attach the Adel clamp with the first bolt holding the tunnel cover in place.

Adel cushion clamps.



- Repeat the above step for the right (passenger) side cable extension.
- Leave the O2 sensor cables for now and begin the installation of the X-pipe and the rest of the tail pipe system.



- To begin the X-pipe installation, it is advisable to put a little lubricant (white grease) on the muffler hangers at the very rear of the vehicle. Lubricating the hanger studs allow the rubber hangers to slide front to rear increasing the ease of adjustment during the following installation and alignment steps.
- To install the X-pipe, insert the two (2) muffler inlet tubes into the corresponding outlets of the X-pipe. Do not tighten the clamps at this time.
- Start the two (2) stock bolts into the spring mounted nuts at the X-pipe cross brace bracket. Do not tighten at this time.
- Moving forward, slide a 2 ½" stainless band clamp over each of the X-pipe inlets, and slide an interim tube into place at each of the inlets. Make sure the step in the clamp surface is oriented properly.

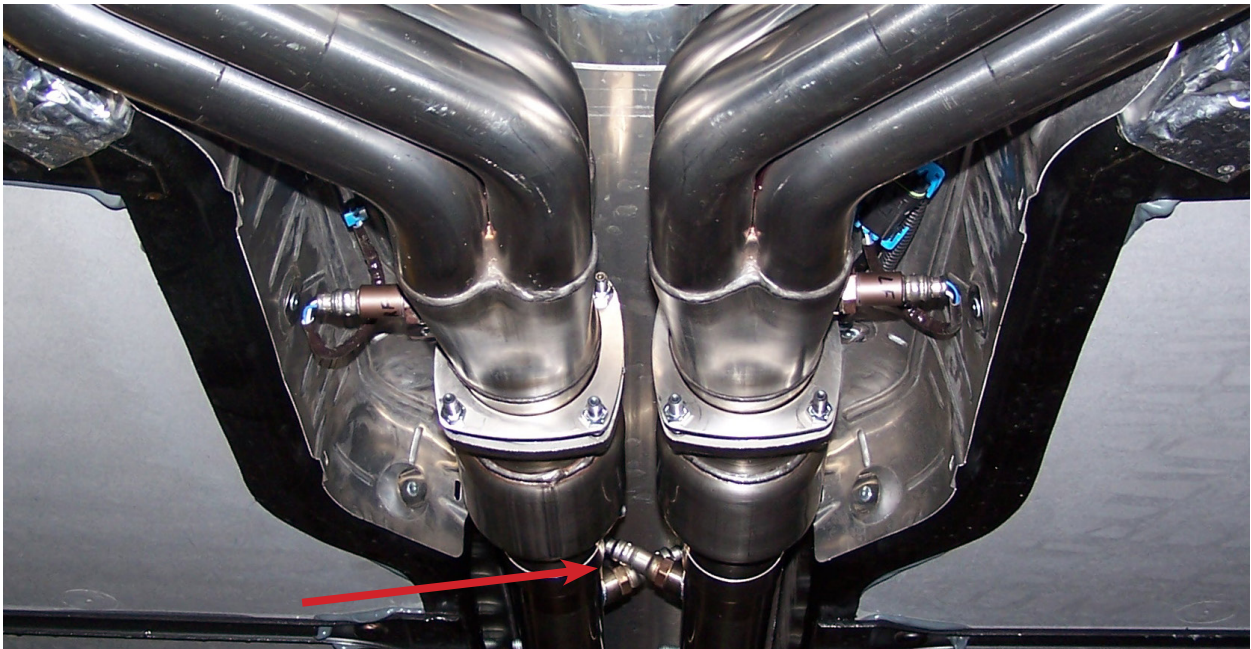
**Note:** The interim tubes differ only in the position of the O2 sensor bung. The bungs are staggered when installed to allow the O2 sensors to fit under the tunnel without interference. The interim tubes should be installed with O2 sensor bungs closest to the front of the vehicle.

- Next install two (2) more 2 ½" stainless band clamps on the inlets of the interim tubes. Make sure the step in the clamp surface is oriented properly.
- Slip the outlet end of one of the provided PowerCAT converters over the inlet of the interim tube, slip the leg assembly up to engage the donut gasket on the end of the collector.
- Insert four (4) of the eight (8) allen head bolts through the clamp rings and start the nuts. Tighten the nuts equally around the clamp rings to make the converter self supporting but not fully tightened.
- Repeat the two preceding steps to complete the opposite leg assembly.

**Note:** O2 sensors are delicate electronic components and should be handled very carefully. Take extra care in not contaminating the sensing end with shop towel lint, finger prints, oil, etc.

- Now is the time to install the two (2) rear O2 sensors.
- Swivel the left (driver) side interim tube around its axis to facilitate installation of the O2 sensor. Install the left (driver) side rear sensor and tighten into place.
- Swivel the right (passenger) side interim tube around its axis to facilitate installation of the O2 sensor. Install the right (passenger) side rear sensor and tighten into place.
- With the help of another person, begin the tightening and aligning process by holding the rear exhaust tips where they exit the body both level to the ground and so that the tips extend equally from the body.

- With the tips in the correct position, the X-pipe level side to side, and the X-pipe centered in the tunnel, tighten the clamps holding the joint between the muffler inlets and the X-pipe outlets. Then tighten the bolts on the cross brace bracket
- Next, rotate the interim tubes so that the rear O2 sensors form an “X” in the center of the tunnel (the left sensor points to the right of the vehicle and the right sensor points to the left of the vehicle.) **Make sure that neither the wiring or the sensor itself hits the tunnel roof. ½” to ¾” clearance between the sensor and the tunnel roof should be adequate.**



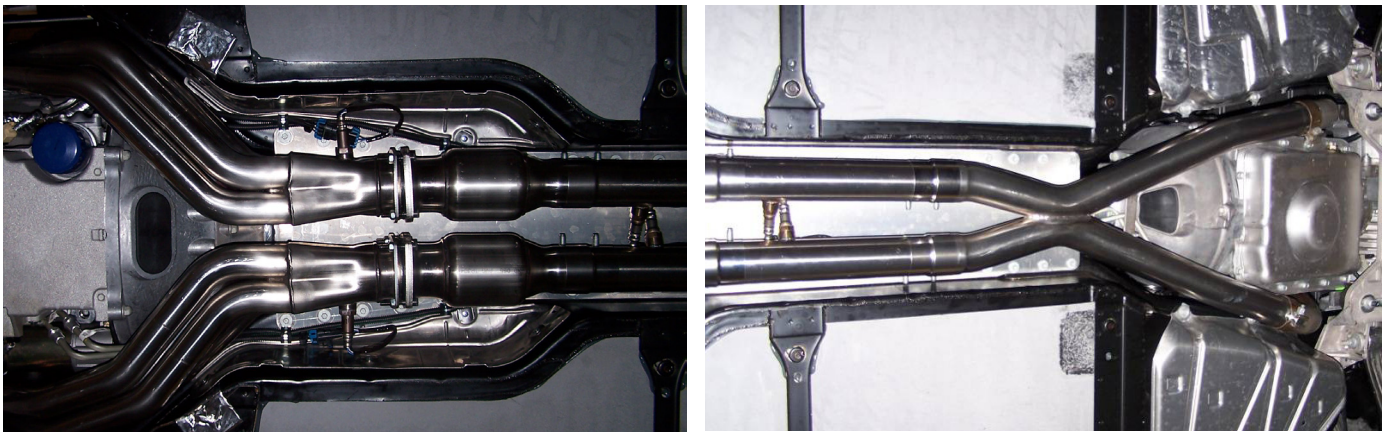
- Tighten the four (4) band clamps securely. The clamps should be tightened down against the stops. The sealing process depends on the clamp material stretching around the tube.
- With each of the four (4) band clamps securely tightened, equally tighten the allen bolts and nuts on the PowerCAT/collector clamp rings. These need to be tightened enough to adequately seal the joint but not so tight that the donut is crushed.

**Note: O2 sensors are delicate electronic components and should be handled very carefully. Take extra care in not contaminating the sensing end with shop towel lint, finger prints, oil, etc.**

- After all the clamps throughout the system have been securely fastened, install the front O2 sensors in the appropriate position left and right into the collectors as previously marked during disassembly.
- Plug each of the front O2 sensor connectors into the appropriate extension cables. (Left front to left front, right front to right front, etc. The same applies for the rear sensor connections). Install the small blue retainer clips where available to complete the connections.
- Use the remaining Adel cushion clamps (three (3) on each side of the tunnel) to securely clamp the extension cable to the roof of the tunnel and away from any heat source that could damage the cables or sensors. Utilize the screws holding the tunnel cover to secure the Adel clamps.

This completes the under vehicle installation of your new header system. Before going back to top side of the vehicle, take this opportunity to inspect and check all of the under vehicle work to include the alignment, clamp tightness, wiring routings, etc. Also inspect for stray tools, rags, oil leaks, etc.

- Back on top of the engine, clean the oil dip stick tube and lubricate the o-ring. Install the tube back in the block and reattach the bracket to the cylinder head.
- Reinstall the spark plugs in both the left and right engine cylinder heads.
- Install the spark plug wires on the spark plugs and the coils packs for both the left and right engine banks.
- Check the engine bay area for stray tools, rags, leaks, etc.
- Remove the oil fill cap and replace the right (passenger) side fuel rail cover. Reinstall the oil fill cap.
- Reinstall the left (driver) side fuel rail cover.
- Install the negative battery terminal to finish the installation.



**This completes the installation of your new exhaust system. Proceed to “Final Checks”.**



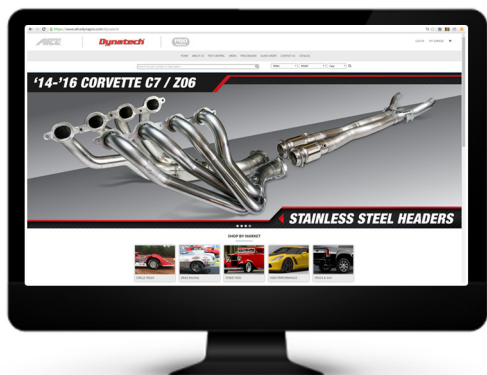
## **Final Checks:**

- Check all work for completeness, bolts tightened, connectors connected, and lines replaced and clamped etc. Check that no wires or lines are close to the headers where heat damage could occur or near moving parts where they could be pinched or cut. Check for misplaced tools and rags and check for oil leaks etc.
- 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.

**This completes the installation of your system. Go back over all the connections to check tightness, tube clearances, and brackets before starting the vehicle. Once you are satisfied that the system is correctly aligned and tightened, start the engine and check for leaks. If any are found, retighten the fasteners around the clamp at issue. All fasteners should be rechecked after the system has gone through several thermal cycles.**



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