

Dynatech[®]

Competition Exhaust Systems

INSTALLATION INSTRUCTIONS

LIT-881, REV 6



CORVETTE Z06

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-7, 7.0 LITER ENGINES

PART NUMBERS

715-63510

715-63620

715-63630

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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.

Congratulations on your purchase of the Dynatech system for the 2005-2013 Z06 Corvette with LS-7, 7.0 liter engine. 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 prior to getting started. While slight variations in either the header or the vehicle may cause minor differences in the exact order of steps or the exact positions of components listed in this document, the following narrative and pictorial information should guide you during the removal and installation process to a completely satisfactory install of your new header system.

Installation Instructions

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.

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.

Note: 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.

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.

Header Parts Inventory List:

- 1 ea. Left Side (driver side) Header
- 1 ea. Right Side (passenger side) Header
- 2 ea. PowerCATs - Hi-Flow Catalytic Converters
- 2 ea. Stainless Cable Ties
- 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. Clutch Line Clamp Skin Card
 - 1 ea. Aluminum Clutch Line Clamp
 - 1 ea. 5/16 -18 Self Tapping Hex Bolt
- 1 ea. Install Manual

Intermediate Section Parts Inventory List:

- 1 ea. X-pipe Assembly
- 1 ea. Left (driver side) Interim Tube
- 1 ea. Right (passenger side) Interim Tube
- 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
- 6 ea. 3.0" Stainless Steel Band Clamps
- 2 ea. Rear O2 Extension Cables
- 1 ea. Cross Tunnel O2 Cable Support Bracket
- 4 ea. Cable Ties
- 2 ea. Adel Cushioned Clamps (.63" dia)
- 6 ea. Adel Cushioned Clamps (.50" dia)
- 1 ea. Installation Instruction Manual
- 1 ea. Install Manual

Safety Notes:

While this installation can be done on the floor with the use of jack stands we strongly recommend that this job be completed utilizing a hydraulic lift or have the system installed by a professional mechanic. You will need 24 to 30 inches of ground clearance to slip the header into position from the bottom of the vehicle.

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 headers.

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 (10mm – 17mm)
- 9/16" Combination Wrench and Socket
- Ratchet and extensions 3/8" drive
- Torque wrench
- Rubber Mallet or Dead Blow Hammer
- Hydraulic lift – Installation may be possible from the ground but is not recommended
- Safety glasses or goggles
- Small bottle of Anti-seize (sensor safe)
- Penetrating Fluid (optional)
- Thread Locker (Loc-Tite) (optional)
- Cotton Gloves (optional)

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.

After installation is a good time to change the oil in your vehicle. Refer to the owner's manual for the correct procedures. When you remove the oil sump lines, you will lose some of the oil in both the oil pan and the oil tank.

Note: The Chevrolet Service Instructions indicate that the O-ring seals on the end of the oil sump lines should be replaced anytime the lines are removed. These are a dealer only part and often must be ordered ahead of time. (Please plan accordingly.)

Stock System Removal:

The Z06 Corvette system removal is fairly straightforward. The removal steps, and later the installation steps, listed here are meant as guidelines and as such may not be in the exact order in which you would or could perform the removal of the stock system or the installation of the new system. They should, however provide information that will allow the job to be done to your complete satisfaction. These instructions assume that you will be using a hydraulic lift to provide access to the bottom of the vehicle.

- For safety and to protect your vehicle's electrical system, remove the ground cable from the negative battery terminal.



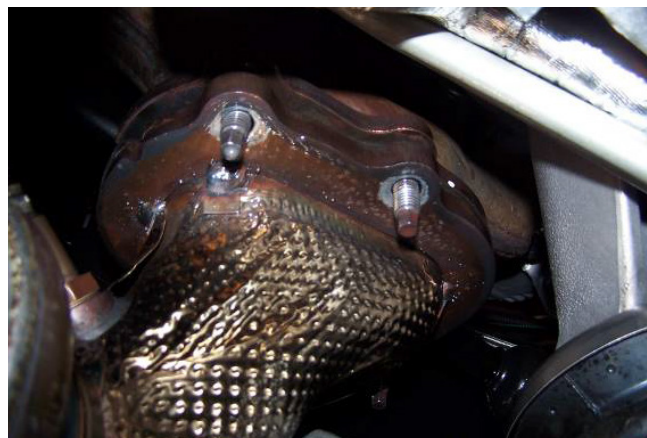
- Spray the muffler inlet tube clamp bolts and the hangar bolts with penetrating fluid and let soak. Loosen the two single bolt clamp nuts. Then remove the nuts on the spring hangers. Save the nuts; they will be used later.



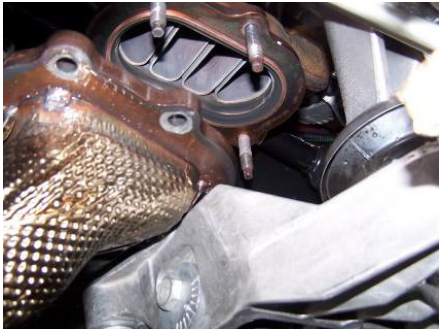
- Move forward in the vehicle and loosen and remove the two (2) bolts and the two (2) studs holding the interim tube assembly to the back of the catalytic converter/tube assembly.



- With the bolts and studs removed, lower the front end of the interim tube assembly to clear the converter tubes. Slide the assembly forward and off of the muffler inlet tubes at the rear. This may take an extra pair of hands and some persuasion with a “dead-blow” mallet. Once the assembly is free from both ends, remove it from beneath the vehicle and store for re-installation should you ever decide to go back to the stock system at some point in the future.
- Spray the converter assembly nuts on the left (driver) side with penetrating fluid and let soak. Remove the nuts.

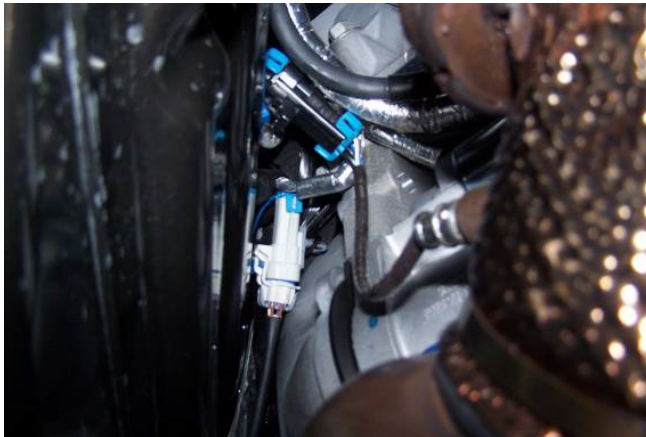


- Once the nuts are removed from the left (driver) side converter assembly, the engine must be raised approximately $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in order to clear the studs on the bottom of the manifold. Remove the motor mount bolt nut. Then carefully jack the motor up just enough for the assembly to slip off of the bottom manifold studs. Support the converter assembly to prevent damaging the O2 sensors and wiring harness.
- Unplug both the front and rear O2 sensor connectors from the left (driver) side catalytic converter assembly and lower it out of the vehicle. Remove the motor jack, replace the motor mount nut, and tighten the nut appropriately.



- The O2 sensors themselves will be removed from the assembly during a later step in the process.
- Spray the converter assembly nuts on the right (passenger) side with penetrating fluid and let soak. Remove the bracket that holds the oil sump lines to allow for movement when raising the engine in the following step. Remove the nuts.
- Once the nuts are removed from the left (driver) side converter assembly, the engine must be raised approximately $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in order to clear the studs on the bottom of the manifold. Remove the motor mount bolt nut. Then carefully jack the motor up just enough for the assembly to slip off of the bottom manifold studs. Support the converter assembly to prevent damaging the O2 sensors and wiring harness.

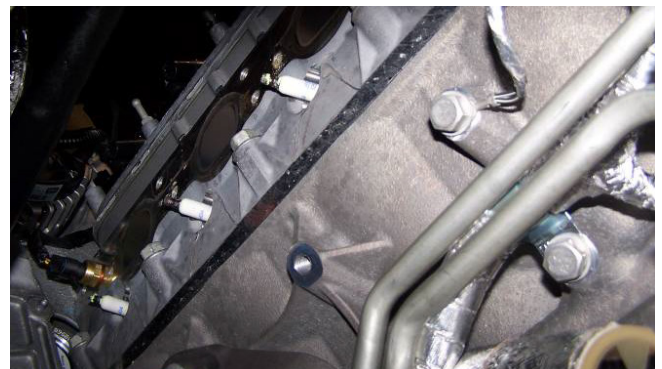




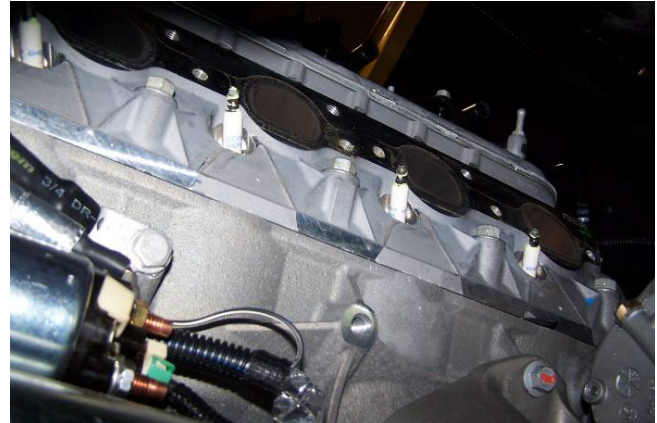
- Unplug both the front and rear O2 sensor connectors from the right (passenger) side catalytic converter assembly and lower it out of the vehicle. Remove the motor jack, replace the motor mount nut and tighten appropriately. Leave the oil sump line bracket off at this time.
- The O2 sensors themselves will be removed from the assembly during a later step in the process.
- Next, turn your attention to the top of the engine to prepare for the removal of the stock exhaust manifolds.
- Remove the fuel rail covers off both sides of the engine and remove all of the spark plug wires from both the coil packs and the spark plugs. Be careful not to damage either the wiring or the boots during the process.



- After the spark plug wires have been removed, start removal of the left (driver) side stock manifold by loosening and removing the six (6) manifold bolts. The manifold must be removed from the bottom side of the vehicle. **Either remove the spark plugs or use extra care not to damage them during the removal process.** The engine bay should look similar to the picture to the right after the manifold is removed.



- Likewise loosen and remove the six (6) bolts holding the stock manifold from the right (passenger) side of the engine. Once again **either remove the spark plugs or use extra care not to damage them during the removal process.** The oil sump lines may have to be flexed slightly to enable the removal of the manifold out of the bottom of the engine bay. The engine bay should look similar to the picture to the right.



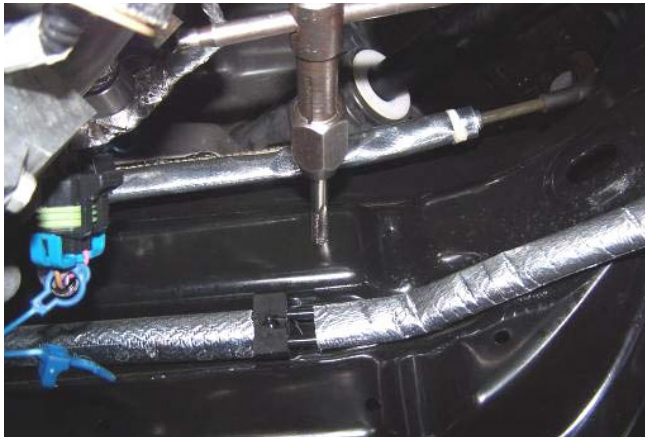
This should complete the removal of the stock system. Make sure that the motor mount nuts have been re-installed and properly tightened.

Continue to the installation instructions for the new Dynatech header and exhaust system.

Installing your new Dynatech Header and Exhaust System

There are several items that should be addressed prior to proceeding with the header installation. They are listed below. There is no particular order in which they should be completed other than they should be completed prior to installing the headers.

- In the case of a manual transmission – Install the hydraulic clutch line clamp. The ¼” hole in the frame should be tapped with either a 5/16x18 NC tap or use the self tapping bolt supplied with the clamp.

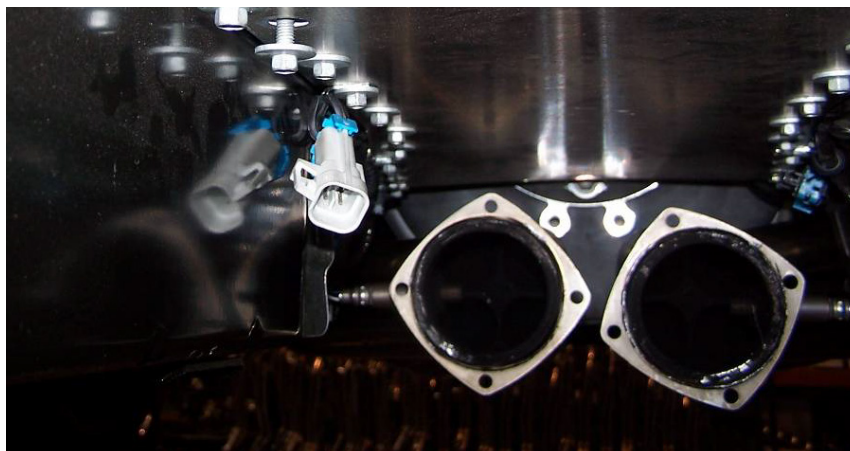


- Install the clamp so that the curved part cradles the clutch line and clamps it loosely to the firewall.
- To install the right (passenger) side header, the oil sump lines need to be removed in order to provide clearance to slip the header into position. The oil line bracket should already be removed from an earlier step. If it is not; please remove it now.
- Now is a good time to change the oil in your vehicle. Refer to the owner’s manual for the correct procedures. When you remove the oil sump lines, you will lose some of the oil in both the oil pan and the oil tank.
- Loosen and remove the two (2) bolts holding the oil sump lines to the engine oil pan. Pull the lines out of the oil pan and cover the holes in the oil pan to prevent dirt infiltration. Likewise plug the end of the oil lines themselves.



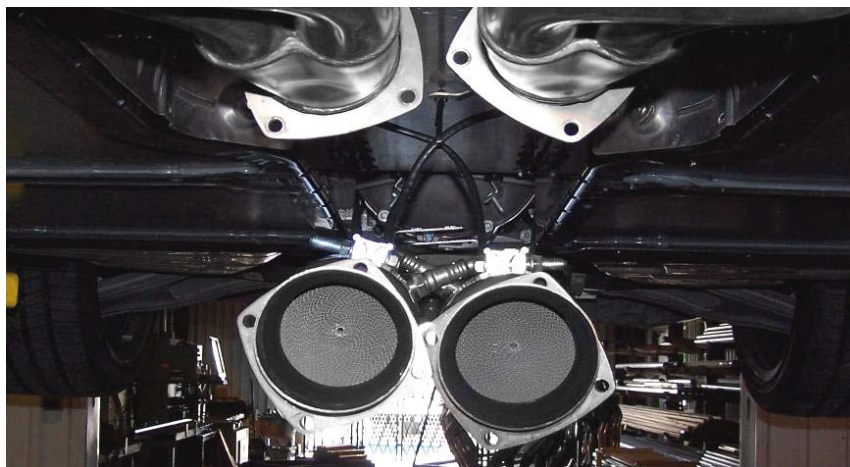
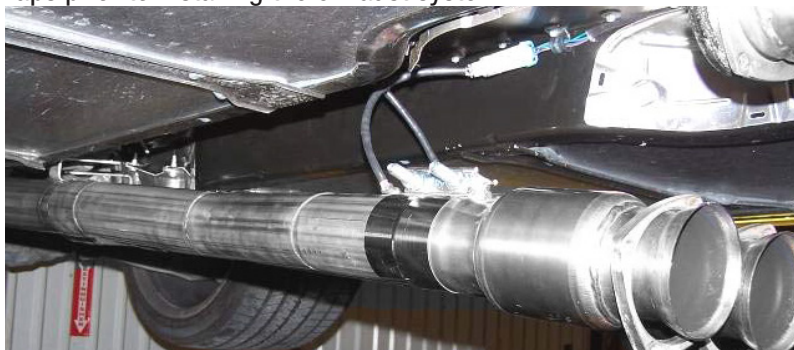
Note: The Chevrolet Service Instructions indicate that the O-ring seals on the end of the oil sump lines should be replaced anytime the lines are removed. These are a dealer only part and often must be ordered ahead of time. Please plan accordingly.

- Install the O2 sensor extensions and route them accordingly prior to installing the headers. Clamp and tie them away from any hot or moving surfaces that could cause damage to either the extensions or the sensors.
- Use the provided “Adel” clamps to secure the O2 sensor wiring to the roof of the tunnel. Depending upon the



type of cross bracket supplied, loosen and remove the appropriate tunnel bolts to secure the bracket. This bracket provides a place to attach the “barbed” tie wrap without having to drill a hole in the tunnel roof.

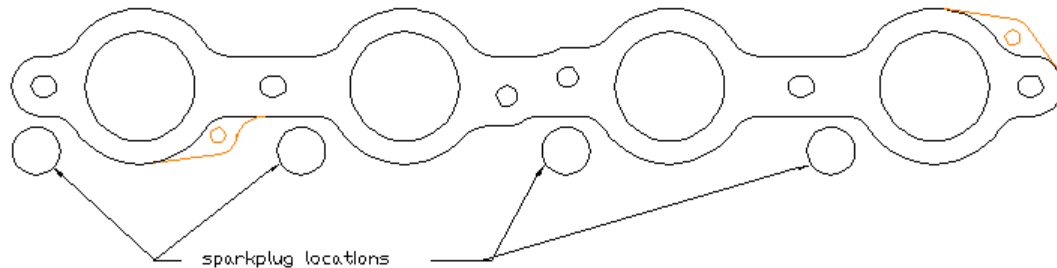
- Be sure to attach all the clamps and tie-wraps prior to installing the exhaust system.



- 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 below. 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.

DYNATECH / SUPERMAXX LS-1 GASKET INSTRUCTION

This diagram shows the rivet location for the LS1 Chevrolet gasket. The view is looking from the outside toward the actual head. The rivet locations are such to avoid clearance problems with the sparkplugs.



- 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. 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.
- With all of the header bolts installed and torqued to specification, reinstall the spark plugs, if removed, and then reinstall each of the spark plug wires.
- Install the fuel rail covers.
- With the headers installed, re-attach the oil sump lines along with the new OEM o-rings to the oil pan and tighten the bolts. **(Note: The front and rear lines are not interchangeable. Be sure to reinstall them in the order in which they were removed.)** Then reinstall the sump lines clamp and tighten the bolt.
- Refill with the appropriate oil. Generally, Mobile One is the oil of choice. Please refer to the OEM operation manual for specific instructions. **If the oil was not completely drained and the filter changed, be sure not to overfill.** This should complete the under-hood work. Please inspect all your work including clutch line and

O2 wiring clearances as well as any other potential mechanical or heat related issues under the hood.

- With the headers installed, slip the supplied donut gaskets over the outlets of each of the headers.

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.

- Remove the two (2) O2 sensors in front of the catalytic converters on the stock system and reinstall them in the bungs provided in the header collectors. Make sure that they are installed in the correct side relative to the side where they were removed.
- Snap the front O2 sensor connectors into the appropriate extension wires and ensure that they are tied and clamped up out of the way.
- Remove the two (2) O2 sensors behind the catalytic converters on the stock system and reinstall them in the bungs provided in the X-pipe of your new system. Make sure that they are installed in the correct side relative to the side where they were removed.
- Install the rear interim tubes over the left and right sides respectively of the stock muffler inlet tubes.
- Next slip the X-pipe onto the just installed interim tubes. Do not tighten any clamps until instructed to do so.
- Install a PowerCAT over each of the inlet legs to the X-pipe. Support the front end of this whole assembly and slip the O2 connectors together for the rear O2 sensors. **Caution: The right side sensor must plug into the right side (passenger) connector. Likewise the left side sensor must plug into left side (driver) connector.**
- While the assembly is still supported on the front end, clamp and/or tiwrap the wiring up in the tunnel area to keep it away from any potential heat or mechanical damage.
- Next raise the tail-pipe assembly and engage the front of the catalytic converters over the donut gaskets at the rear of the headers. **The converters may have to be rotated to properly align with gaskets on the header collectors to compensate for manufacturing tolerances.** Install the bolts and nuts through the clamp rings on both of the collectors and PowerCATs. Do not fully tighten at this time.
- Install the stainless steel band clamps over both the PowerCAT outlets and the X-pipe outlets. To get the bolts aligned in the correct direction, you may have to remove the bolts from two of the clamps and reverse them. Do not tighten at this time.
- Next align the two brackets on the rear interim tubes and attach the spring hanger bolts and nuts. Modify the hanger brackets by bending if necessary to get them to align properly. Go ahead and fully tighten the nuts at this time.

At this time the entire after header exhaust system should be loosely installed. The wiring extensions should be clamped and tie-wrapped in place. Begin the tightening and aligning sequence by performing the following steps.

- Center the tailpipe assembly within the confines of the tunnel. Small wooden wedges may be used to temporarily hold the assembly into position.
- Start at the muffler inlet tube clamps. Securely tighten both clamps. **Make sure that the interim tubes are slid all the way on the inlet tube depth stops prior to fully tightening.**
- Move forward to the rear of the x-pipe. Tighten these clamps fully. The band clamps work by stretching around the tube and as such must be fully pulled down as far as the clamps will tighten.
- Next, begin tightening the clamp rings connecting the collectors and PowerCATs. Tighten two (2) of the bolts then turn the rings to tighten the other two (2). When all four (4) bolts on one collector have been tightened, move to the other collector clamp set and tighten them in the same manner. Take care not to over tighten.
- Once the collectors clamps have been tightened, move to the front x-pipe band clamps and fully tighten them in same manner as the other band clamps in the system.
- Remove the wooden wedges and visually check to see that the tail-pipe assembly remains centered in the tunnel area and that the muffler tips are aligned and leveled. If they are not, loosen the clamps and re-align.
- Reconnect the negative battery cable.

This completes installation of your new header and exhaust system. Please proceed to the “Final Checks”.

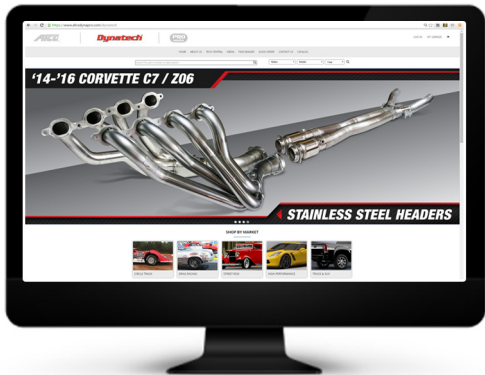
Final Checks

- Check your work. No wiring, fluid lines, sensors, steering components, etc should come in contact with any part of the header or with any area that may cause heat damage or mechanical damage.
- Start the engine. Observe the “Check Engine Light”.

Note: In some instances you may experience a check engine light after the installation of an after-market exhaust system. If this occurs please contact Dynatech at 1-800-848-5850 and ask for customer service or e-mail 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. We have tried to make the removal of the stock system and the installation of the new system as clear and concise as possible. If, however, you find points in our instruction manual that you feel need to be clarified or changed, please e-mail us your constructive comments at dynatechcs@dynatechheaders.com. We will use them to correct and enhance our documentation to the benefit of all customers.



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