

Dynatech[®]

Competition Exhaust Systems

INSTALLATION INSTRUCTIONS

LIT-887 REV 1



**'05-'08 MAGNUM, '05-'17 CHRYSLER 300C,
'06-'17 CHARGER, '08-'17 CHALLENGER**

STAINLESS STEEL HEADERS

Note: We do our best to make sure 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 visit www.dynatechheaders.com or 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-'17

5.7, 6.1, 6.4 LITER ENGINE

PART NUMBERS

724-73310, 724-73320,

724-73330, 728-73310,

728-73320, 728-73330

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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 Dodge Magnum, Chrysler 300C, Charger, and Challenger. 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.

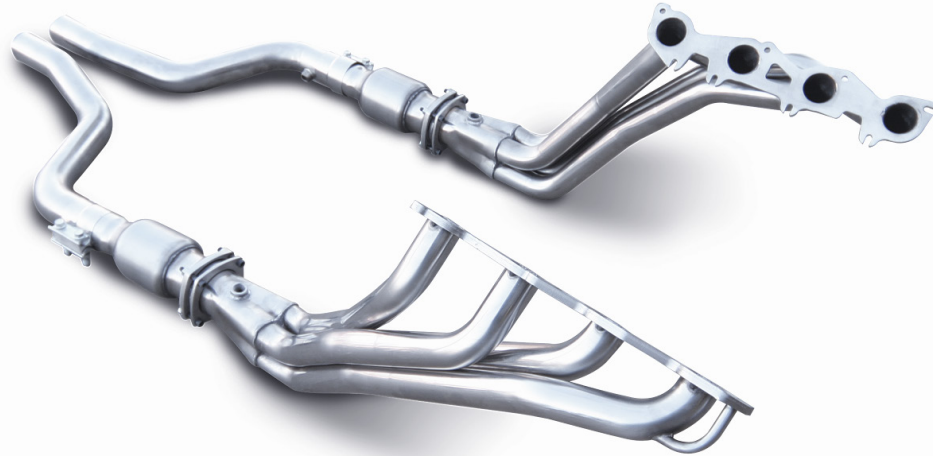
The Dynatech Team takes pride in providing the utmost in quality and performance. Should you have a concern about the product you receive, please contact Dynatech Customer Service at dynatechcs@dynatechheaders.com.

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.

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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 and 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 (left and right)
 - 17 ea. 8mm Header Bolts (8 on the left side, 9 on the right side)
- 2 ea. O2 Extension Cables
- 2 ea. Cable Ties
- Dipstick Tube Spacers/Spacer
- Install Manual

Mid Section Parts Inventory List:

- 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. Left Side (driver side) Tail Pipe Section
- 1 ea. Right Side (passenger side) Tail Pipe Section
- 2 ea. 2 1/2" Stainless Steel Band Clamps
- 2 ea. O2 Extension Cables
- 2 ea. Cable Ties
- 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.
- Your factory supplied lug nut wrench or after market lug wrench (stock wheels).
- Floor jack and safety stands or a hydraulic lift.
- Safety glasses or goggles.
- Small bottle of Anti-seize (sensor safe).
- Penetrating Fluid (optional).
- Cotton Gloves (optional).
- Hand operated tailpipe expander capable of expanding tubes to slide over 2.5" stock. These are available at parts stores for rent or purchase.

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:

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.

Stock System Removal:

(Dodge Hemi Magnum / Chrysler 300C)

The '05 Dodge Magnum Hemi / Chrysler 300C stock system removal is similar between models. These instructions may vary between the two models with notes. Please read the instructions carefully.

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.

- For safety and to protect your vehicle's electrical system, remove the ground cable from the negative battery terminal. **Note: Do not close the rear hatch after the battery has been disconnected – the latch is electric and will not function with the battery disconnected. If you do this, your only alternative will be to crawl over the back seat to reconnect the battery.**
- Lift the rear floor mat and the false floor up into the stowed position to allow access to the spare tire and battery compartment.



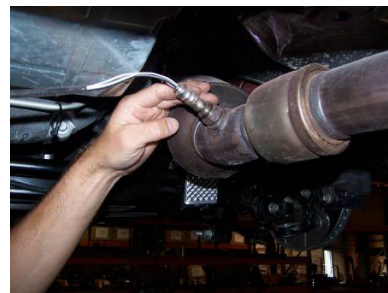
- Loosen the lug nuts on both front wheels while the vehicle is on the ground and remove the wheels when the vehicle is raised off the ground. Although this isn't 100 % necessary, it provides a little more room and light into the working area.

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.

- Unplug the rear O2 sensors from their respective connections.



- Remove each of the two rear O2 sensors and mark them right and left rear as necessary and set them aside for reinstallation later.



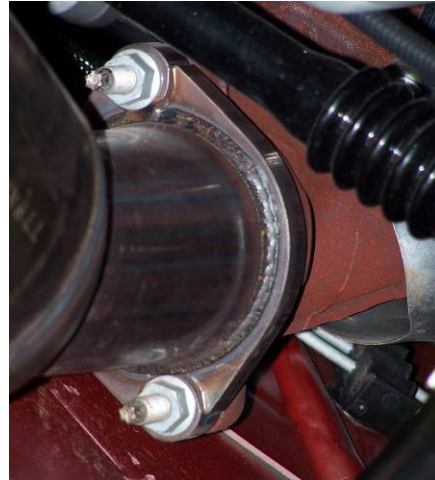
- Remove the plastic bottom engine cover.



- Spray the muffler inlet tube clamp bolts with penetrating fluid and let soak. Loosen the two nuts.



- Spray the two down tube nuts on the left (driver) side with penetrating fluid and let soak. Remove the two nuts.



- Pull the stock catalytic converter down and off the cast manifold studs while twisting the unit in the muffler inlet tubes joint. As the unit clears the studs pull the converter assembly forward and out of the muffler inlet tube joint. Remove from beneath the vehicle and store for reinstallation should you ever desire put the stock system back on your car.



- Spray the tube nuts on the right (passenger) side with penetrating fluid and let soak. Remove the nuts.
Note in the picture that the right side has a heat shield that is held on by the first of two sets of nuts.

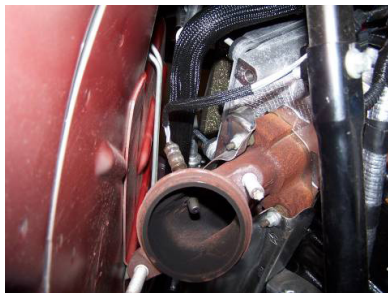


- Pull the stock catalytic converter down and off the cast manifold studs while twisting the unit in the muffler inlet tubes joint. As the unit clears the studs pull the converter assembly forward and out of the muffler inlet tube joint. Remove from beneath the vehicle and store for reinstallation should you ever desire put the stock system back on your car.

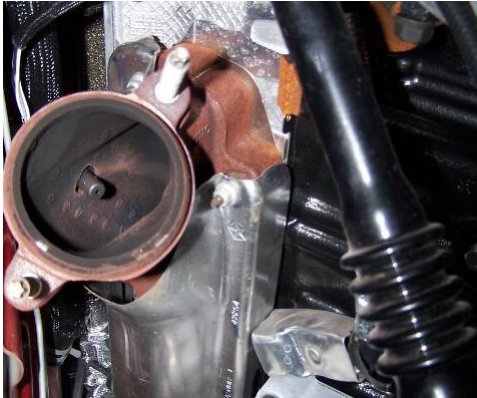


Note: O2 sensors are delicate electronic components and should be handled very carefully. Take extra care in not contaminating the sensing end with shop towel lint, finger prints, oil, etc.

- With both catalytic converter assemblies off the vehicle, disconnect the front O2 sensor connections. (The front O2 sensors are located in the downstream end of the cast manifold.) Loosen and remove the O2 sensor from both the left and right manifold. Make sure to mark each one appropriately so that they may be replaced in the correct side during reinstallation.



- Begin removal of the left (driver) side cast manifold by removing the nuts holding the aluminum heat shield in place. The heat shield nuts are on each of 4 extended stud manifold bolts.



The nuts are fairly easy to remove but will require some effort. The removal of the heat shields is probably the most difficult part of the whole removal process. You may have to bend, twist, and pull just to remove them, but they will come out.

- Loosen and remove all of the manifold bolts on the left side and lower the manifold and gasket out the bottom of the engine bay.
- Loosen and remove all of the manifold bolts on the right side. The upper front manifold bolt does double duty in that it also holds the oil dip stick tube in place. When this bolt is removed, pull the dip stick tube out of the engine block, and store it away for reinstallation at a later step. Be sure not to lose the o-ring that seals the tube to the block.
- Remove the engine cover and the cold air box.



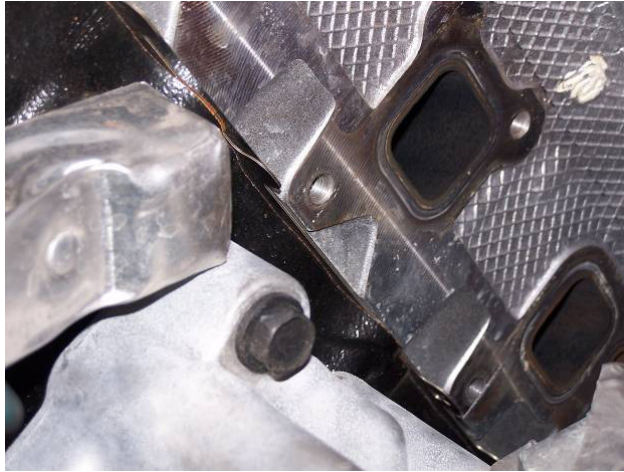
- Unbolt the coolant reservoir tank and place it behind the strut tower. This will allow easier access to some of the bolts on the left side during the header installation.

This completes the removal of the stock system. Please proceed to “Installing your new Dynatech Header and Exhaust System.”



Installing your new Dynatech Header and Exhaust System.

The engine bay as viewed from beneath the vehicle should look similar to the pictures below on both engine banks. If it does not, go back and review the above instructions to make sure something was not overlooked.



- Begin the left (driver) side header installation by finding and preparing enough of the supplied header bolts by putting a small amount of anti-seize on each of the eight (8) bolts required for the left side. Slip a bolt through the lower holes in the OEM style stainless steel gasket as shown below. Make sure that you hand start each bolt to prevent cross threading during installation.

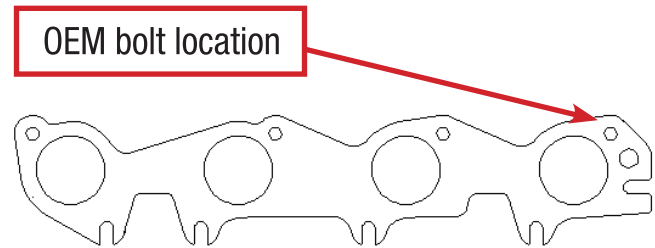


- Slide the left (driver) side header up from the bottom of the vehicle and slip the slotted holes on the bottom of the header flange over the bolts previously installed.
- Install the balance of the prepared bolts in the left side header. Be sure not to cross thread any bolt. Snug each bolt up and torque to approximately 20 ft/lbs. before moving to the right (passenger) side. The remainder of the top bolts on both sides is a little difficult to get to but it can be done from the top side of the engine.

- Prepare for the right (passenger) side header installation by finding and preparing enough of the supplied header bolts and by putting a small amount of anti-seize on each of the eight (8) supplied bolts, plus one (1) of the stock manifold bolts (extended stud style bolt) required for the right side. Slip the standard bolts through the lower holes in the OEM style stainless steel gasket as shown on page 10. Make sure that you hand start each bolt to prevent cross threading during installation.
- After installing the header, start the rest of the standard header bolts in all but the top front bolt hole (see diagram). In the front top hole, install the provided spacer over an extended stud stock bolt and hand start the bolt/spacer assembly.

Note: The OEM manifold bolts were supplied in two lengths depending on the model year. Use both of the 1/2" spacers for bolts measuring 2.0" beneath the head to the end of the threads. Use one of the 1/2" spacer for bolts measuring 1.75" beneath the head to the end of the threads. Failure to comply with this note may cause damage to the aluminum head by either preventing adequate thread contact within the head or causing the bolt to bottom out in the head before tightening up on the flange.

- Torque all the bolts after they have been hand started to prevent cross threading and torque to approximately 20 ft/lbs.

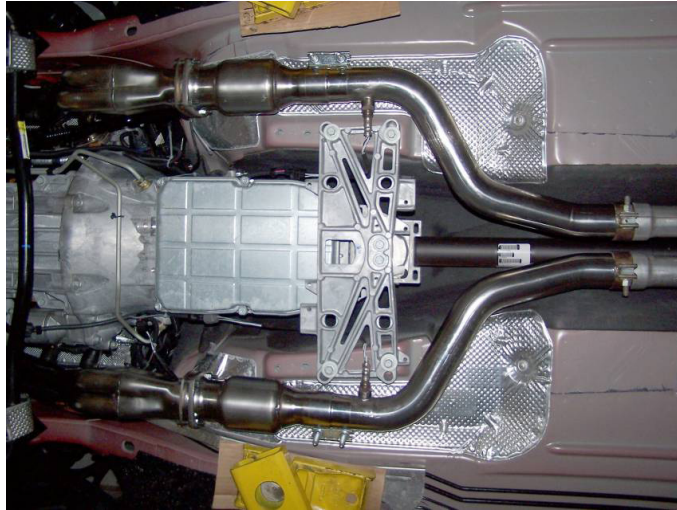


- After all bolts are fully tightened, lightly oil the o-ring on the dipstick tube and reinstall the oil dip stick tube into the block, and swing it around into place. Utilize one of the stock nuts that were used to fasten the manifold heat shield to the cast manifold and secure the oil dip stick tube bracket to the extended stud.
- This completes the installation of the headers.

- Next install the donut gaskets on the ends of the collectors.



- Slip a 2 ½” band clamp over the inlet end of the right (passenger) side tail pipe section and slip the assembly onto one of the supplied PowerCATs. Insert the tail pipe outlet into the right (passenger) side muffler inlet and swing into place so that the PowerCAT engages the right side donut gasket.



- Apply a small amount of anti-seize to each of the four (4) allen head bolts and start but do not tighten the accompanying nuts clamping the two rings together. They will be tightened fully at a later step.
- Slip a 2 ½” band clamp over the inlet end of the left (driver) side tail pipe section and slip the assembly onto one of the supplied PowerCATs. Insert the tail pipe outlet into the left (driver) side muffler inlet and swing into place so that the PowerCAT engages the right side donut gasket.
- Apply a small amount of anti-seize to each of the four (4) allen head bolts and start but do not tighten the accompanying nuts clamping the two rings together. They will be tightened fully at a later step.
- To start the tightening sequence, begin by checking the tail pipe clearance all the way at the back of the car. **Check for adequate clearance between the body and the tail pipe tips as they exit from beneath the vehicle. Check both the driver and passenger sides. If your vehicle is equipped with a cross brace place a wedge between it and the factory exhaust to maintain clearance during the tightening process.**



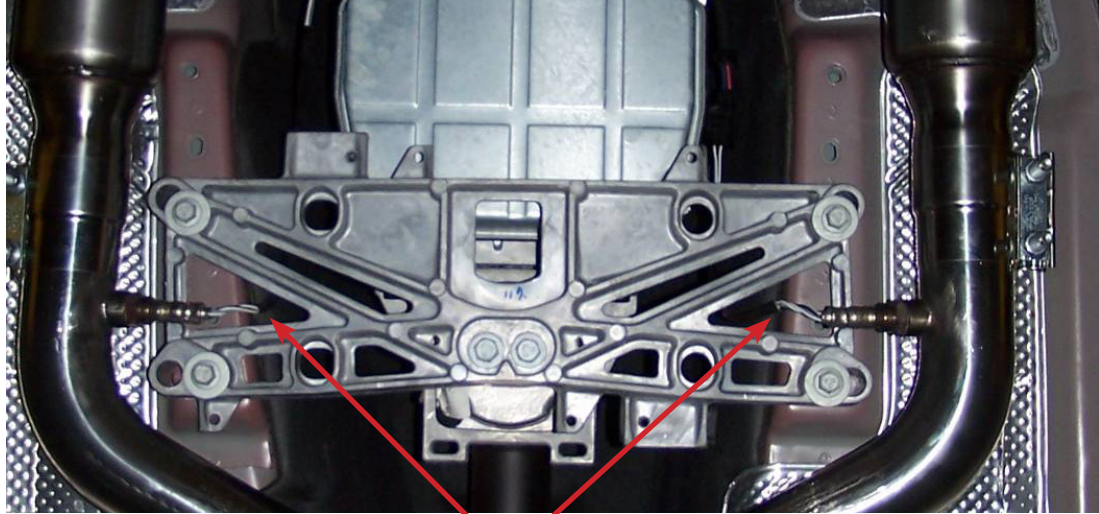
- Before installing the intermediate tubes it may be necessary to expand the end of the factory exhaust to allow a slip fit of the intermediate tubes.



- With adequate clearance assured, rotate the previously installed tubes so that they are more or less level in the vehicle and begin tightening the clamps beginning at the muffler inlets.
- Moving forward, tighten the stainless steel band clamps at the outlet ends of each of the PowerCATs, left and right.
- Finish the tightening sequence by equally tightening each of the four bolts and nuts clamping the PowerCATs and the collectors. Tighten up enough to adequately seal the joint between the PowerCATs, the donut gaskets, and the collectors. **Do not over tighten.**
- To finish the installation, plug in each of the four (4) O2 extension cables supplied with your kit into the connections on the main wiring harness.

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.

- Install each of the O2 sensors. Make sure that they are reinstalled into the same position that they came out of during disassembly. A small amount of anti-seize on the threads will help prevent galling during installation or removal. Make sure to keep the anti-seize off of the sensing surface. **(Use sensor safe anti-seize only)**



Rear sensors cable routing

- Tie the extension cables away from moving parts or where heat from the exhaust system could cause damage that might impair the operation or performance.
- Survey the entire bottom of the vehicle for oil leaks, loose wires/hoses, stray rags, or tools, etc.
- Reinstall coolant reservoir tank, cold air box, and engine cover.
- Reinstall the front wheels if removed earlier, and lower the vehicle off of the lift or jack stands.
- Reconnect the negative battery cable.

Final Checks

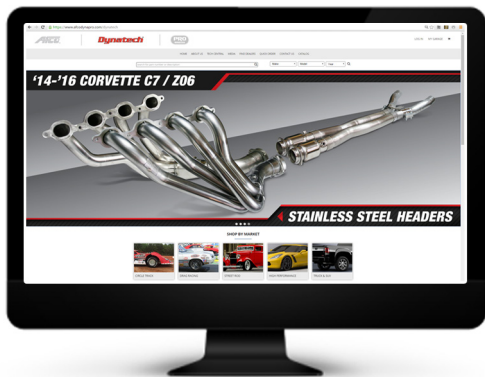
- Start the engine. Observe the “Check Engine Light”.

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.

- 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, re-tighten the fasteners around the clamp at issue. All fasteners should be rechecked after the system has gone through several thermal cycles.

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. We will use them to enhance our documentation.



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