



'06-UP CHEVY TRAILBLAZER SS/ GMC Envoy Denali
w/5.3 & 6.0 liter LS-X
STAINLESS STEEL EXHAUST SYSTEM
PART # 715-23510, 715-23520 & 715-23530

(LIT 1011)

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 too close to the header/exhaust system.)

Dynatech competition exhaust products are not covered under any warranty either expressed or implied.

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.

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. (see page 16)

Installation Instructions

Congratulations on your purchase of the Dynatech / SuperMaXX exhaust system for the Chevrolet Trailblazer SS. We believe, and think you will agree that 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.

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.

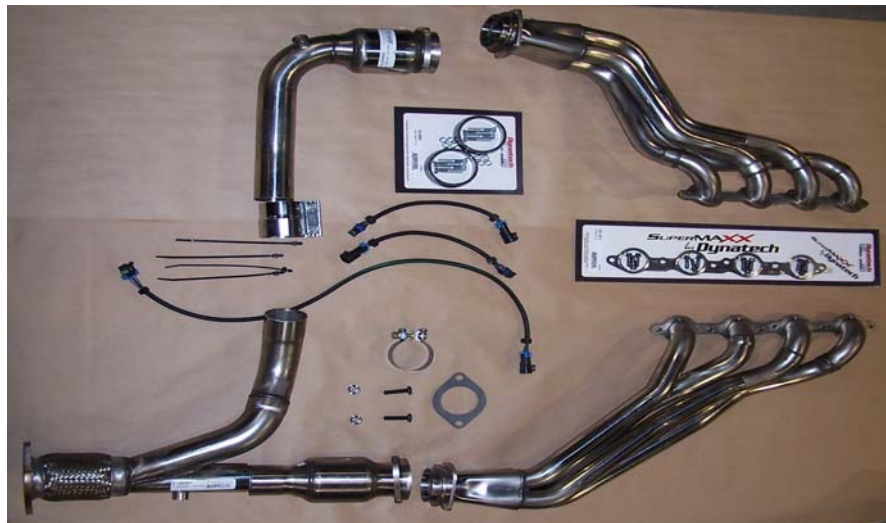


What's in your new header system kit?

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

Parts Inventory List:

- 1 ea. Left Side (driver side) Header
- 1 ea. Right Side (passenger side) Header
- 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. Header Gasket / Header Bolts Skin Card
 - 2 ea. OEM Style Stainless Steel Header Gaskets
 - 12 ea. 8mm Header Bolts
 - 2 ea. Dynatech Decals
- 1 ea. Left Side (driver side) Cross-Over Tube
- 1 ea. Right Side (passenger side) "Y"-Pipe Assembly
- 1 ea. 2 1/2" Stainless Steel Band Clamp
- 1 ea. Single Bolt Clamp
- 3 ea. O2 Extension Cables
- 1 ea. Outlet flange Hardware Skin Card
 - 2 ea. M10-1.5 X 40MM Hex Head Bolt
 - 2 ea M10-1.5 Serrated Flange Nuts
 - 1 ea. Y-Pipe Outlet Flange Gasket
- 9 ea. Cable Ties
- 3 ea Heat Shields



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
- Penetrating Fluid (optional)
- Cotton Gloves (optional)

Before You Get Started:

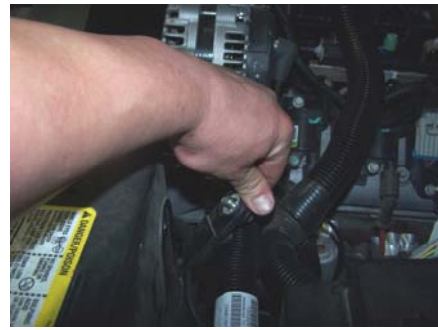
- Take inventory of all the parts in your new system. Make sure each piece is accounted for prior to taking your vehicle out of service.
- Look at the tool and supply list to make sure you have all the needed tools and supplies before you don't taking your vehicle out of service.

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.

Place the vehicle up on jack stands or a hydraulic lift to provide access to the bottom of the vehicle. Dynatech strongly suggests using a hydraulic lift. 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 as shown in the pictures below.



- 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 and properly supported with jack stands or hydraulic lift.
- Remove the inner fender panels from both the left and right side of the vehicle.



Under the Hood:

- Loosen the bolt holding the oil dip stick tube bracket to the right (passenger) side head.



- Remove the spark plug wires from both the coil packs and the spark plugs. (do not pull on the wires, pull on the boots)
- Remove the spark plugs from both engine banks. Be careful not to crack the insulators during removal.
- Unplug coolant temperature sensor located on the left front (drivers) side cylinder head.



Under the Vehicle:

Note: Proper operation of the 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.

- Begin removal of the stock system by disconnecting the Right front (passenger) O2 sensor at the main wiring harness connections. Likewise disconnect the two (2) rear sensor connections.

- Unbolt the front of the front driveshaft in the case the 4WD models and move it as far to the left as possible, this will allow enough room to unplug the Left front (driver side) O2 sensor, unplug the Left O2 sensor at this time.



- Loosen and remove the two (2) nuts that hold the rear bellows flex joint together. Use penetrating fluid to help with the removal of the nuts if necessary



- Remove the heat shields from the floor board and the left side frame rail. This may not be necessary but will make the stock y-pipe removal a little easier.



- To facilitate the complete removal of the portion of the exhaust between the cast manifolds and the muffler inlet, you must completely remove the rear transmission mount and cross member. Use penetrating fluid where necessary to help with nut/bolt removal.
 - Begin by temporarily supporting the rear of the transmission.
 - Remove the left rear O2 sensor wiring from the cross member.
 - Loosen and remove the nuts holding the rear transmission mount to the cross member.
 - Loosen and remove the bolts holding the cross member into the side frame rails and lower the cross member out of the vehicle.



- Remove the front rubber muffler hanger



- Next, loosen and remove the three (3) nuts on both the left (driver) side and right (passenger) side down tubes and remove y-pipe. Penetrating fluid may be helpful.



- Remove front drive shaft to allow for clearance to install left side header during a later step.



- Remove all four (4) of the O2 sensors from the stock exhaust system. Be careful not to ruin the threads during removal. Threads have been known to gall during disassembly. If this occurs, your only choice is to replace any damaged parts with new ones. As each sensor is removed, mark it accordingly so that it may be replaced in the same relative location during reassembly.



- Now that the stock system is removed, reinstall the cross member by reversing the steps on the top of page 7 and lower the transmission back down. Remove the temporary transmission support and proceed to the steps to remove the cast manifolds.
- Remove the six (6) bolts holding the stock cast manifold to head on the left (driver) side. Several of the bolts are easier to get to through the fender well as opposed to the top or bottom of the engine. The manifold should come out the top of the engine bay.
- Remove the six (6) bolts holding the stock cast manifold to head on the right (passenger) side. Several of the bolts are easier to get to through the fender well as opposed to the top or bottom of the engine. The manifold should come out the top of the engine bay.



- This completes the stock system removal process. Survey the area for stray rags, tools, nuts and bolts, etc. prior to proceeding to **“Installing Your New SuperMaXX Header System”**.

Installing Your New SuperMaXX Header System:

- Connect the supplied O2 extension cables for the right (passenger) side front and rear, left (drivers) side front O2 sensor to the main wiring harness.
- Reinstall all heat shields if removed.
- Connect the Velcro strips on one side of each of the supplied aluminized heat shields. Wrap this assembly around the rubber boot on the steering shaft as depicted. Then secure by connecting the remaining Velcro strips. Finish up by connecting two of the tie wraps together and wrapping them around the boot and hat shield on both the top and bottom.

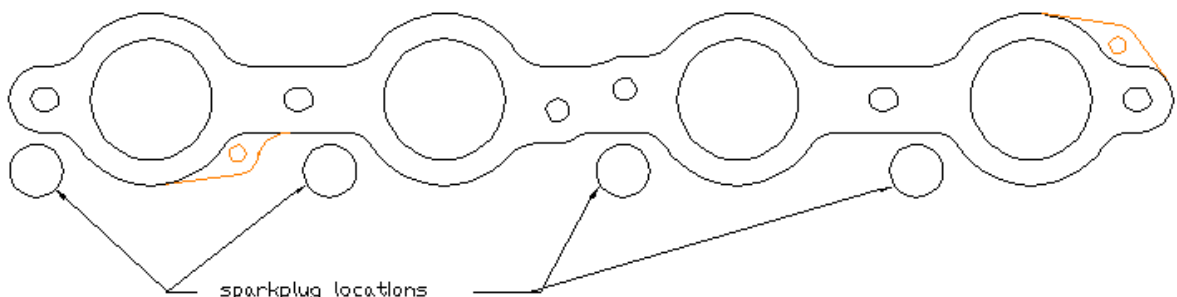
Picture is looking from over
the frame on the left side.
(Driver side)



- Begin the installation of your new system by orienting the OEM style gasket as show below. This prevents gasket-to-spark plug boot interference. Place a small amount of anti-seize on each of the six (6) header bolts provided.

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.



- Install the left (driver) side header from the underside of the vehicle. Start each bolt by hand to help prevent cross threading. After **two** bolts in the left side header have been started, **install the driveshaft** (this will allow enough swing in the header to reinstall driveshaft). After the driveshaft is reinstalled start and tighten all remaining left side header bolts and torque to approximately 20 ft/lbs.



- Move to the right (passenger) side. Orient the OEM style gasket as show above. This prevents gasket-to-spark plug boot interference. Place a small amount of anti-seize on each of the six (6) header bolts provided.
- **Note: some models may require the removal of the starter. Most times if this is necessary-remove the snap-on wire guard on the solenoid and remove the starter mounting bolts. Do not remove the wiring.** Install the right (passenger) side header from the underside of the vehicle. Start each bolt by hand to help prevent cross threading. After all bolts in the right side header have been started, reinstall the starter by installing and tightening the mounting bolts before fully tightening header. Wrap the main cable with the small heat wrap and secure with a tie wrap. Loosen the small wire and swivel out of the way and retighten so that the header heat will not affect the starter operation. Then snap the cover back in place. Finish the header installation by tightening each bolt and torque to approximately 20 ft/lbs.



- Support transmission again and remove cross member.
- Reinstall the rubber muffler hanger to the mount on the frame.



- Begin the installation of the rear portion of the system by slipping the 3.0" donut gaskets over the ends of both collectors.
- Retrieve four (4) hex head bolts and top-lock hex nuts from the skin card pack. Put a small amount of anti-seize on each of the bolts. Slip a PowerCAT up to the mating surface of the collector and converter of the right (passenger) side and start the nut and bolts through the clamping rings. Equally tighten these nuts and bolts so that the converter is self supporting but not fully tightened.
- With the converter semi-aligned and self supporting, slide a 2 1/2" single bolt band clamp over the end of the converter and install the y-pipe. Install the y-pipe gasket and install bolts and nuts but do not fully tighten.



- Reinstall the cross member and lower transmission and bolt all cross member bolts and transmission mounts back up at this time. Also reinstall wiring that runs along cross member
- Retrieve four (4) hex head bolts and top-lock hex nuts from the skin card pack. Put a small amount of anti-seize on each of the bolts. Bolt the PowerCAT crossover tube to the left (driver) side header and start the nut and bolts through the clamping rings. Equally tighten these nuts and bolts so that the converter is self supporting but not fully tightened.



- With the cross over tube in place, slip the 2 ½" stainless band clamp over the outlet end of the cross over tube and connect to the y-pipe. Tighten the band clamp bolts until the y-pipe and crossover tube are self supporting



- Begin the aligning and tightening process by snugging up all of the clamps and bolts from the collectors back. Each joint or clamp must be free enough to allow for movement during the rest of the process.
- Typically, to properly align the system, the front exhaust hanger should be nearly vertical with respect to the ground.
- With clearance assured, tighten the two (2) serrated nuts of the bellows joint.
- Tighten the band clamp and the single bolt clamp securely and then equally tighten the four (4) hex bolts and nuts on each converter. The band clamp should be tightened down against the hard stop to provide the required stretch of the band around the tube connections.
- Before proceeding to the O2 sensor installation, recheck all the clearance issues and the bolt and clamp tightness.

Note: Proper operation of the 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.

- Observing the marks previously made on the sensors, reinstall each sensor in the appropriate position. A small amount of anti-seize on the threads only will help prevent galling of the threads during removal or installation.
- After installing and tightening each of the system's O2 sensors (4), reconnect each of the connections at the main wiring harness. Make sure to reinstall the small blue "keeper clip" to complete the connection.
- Before moving back to the top of the engine, inspect each of the O2 sensor wires to make sure they are up out of the way from possible heat damage or moving parts.
- Recheck all the clamps and joints for tightness and that clearances have been maintained.
- With the inner fender panels still removed install the spark plugs on both the left and right banks of the engine.
- Make sure the oil dip stick tube is clean, apply a small amount of engine oil to the dip stick o-ring. Slip the tube down between the header tubes and into the hole in the block. Reinstall the bolt attaching the dip stick tube bracket to head and tighten, then reinstall the dip stick in the tube.

- Reinstall the coolant temperature sensor wire in the left (driver) side head
- At this time reinstall the inner fender panels on both sides of the vehicle.
- Install the front wheels and lower the vehicle to the ground. Torque wheel nuts to the factory specs.
- Install the spark plug wires to both the spark plugs and the coil packs on both engine banks.
- Survey the entire engine bay for oil leaks loose wires/hoses, stray rags or tools, etc.
- Reconnect the negative battery cable.

Finishing up the installation:

Final Checks:

- Start the engine. Observe the “Check Engine Light”. It **should not** come on.

Note: In some instances you may experience a check engine light. We have found some models to record a slow heat response or temperature error which in turn sets off the check engine light. This has no adverse effect on the performance or operation of the engine but can be annoying. Most tuner shops have software such as LS-1 edit that can by-pass this code for a nominal fee. We can refer you to a tuner if needed.

- 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.
- Valve train noise is more pronounced a tubular header system and may be readily heard. Do not mistake this for an actual exhaust leak.

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

Congratulations! That wasn't so bad, and now you have the highest quality, best performing exhaust system available installed on your vehicle. And you did it yourself!





975 Hyrock Blvd • P.O. Box 608 • Boonville, IN 47601

Phone: (800) 848-5850 • Fax: 812-897-6264

www.dynatechheaders.com

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. We will use them to correct and enhance our documentation to the benefit of all customers.