



Chevrolet C-5 Corvette Header System (115-736300S/115-737300S) Installation Instructions (*Lit 991*)

Congratulations on your purchase of the Dynatech / SuperMAXX C-5 Corvette exhaust system. 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 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 pictoral information should guide you during the removal and installation process leading to a completely satisfactory install of your new header system.

What's in your new header system kit:

- 1 ea. Left Side Header
- 1 ea. Right Side Header
- 2 ea. **PowerCAT** Catalytic Converters
- 1 ea. Left Side Interim Tube
- 1 ea. Right Side Interim Tube
- 1 ea. X-Pipe Assembly
- 4 ea. 2 ½ Stainless Steel Band Clamps
- 12 ea. 8mm x 30 x 1.25 Header Bolts
- 8 ea. 5/16 x 18 Allen Head Bolt and Nut Assembly
- 2 ea. 5/15 x 18 Hex Head Bolt and Nut Assembly
- 2 ea. 10mm x 40 Hex head Bolt and Nut Assembly
- 1 ea. Header Cross Brace Mounting Bracket
- 2 ea. Stainless Steel OEM Style Header Gaskets
- 2 ea. 3" Donut Gaskets
- 2 ea. Tail Pipe Flange Gasket
- 2 ea. Air Tube Flange Gasket
- 2 ea. O2 Sensor Extension
- 4 ea. Tie-Wraps



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.

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 your vehicle while removing and 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 of the header's stainless steel surface possibly preventing permanent stains on the headers themselves.

Required and Optional Tools

- 7/8" Open End Wrench (O2 Sensor Removal)
- Assorted Metric Sockets (10mm-17mm)
- ½" Socket
- 5/8" Sparkplug Socket
- 3/8" Ratchet and Extensions
- Assorted Metric Combination Wrenches (10mm – 17mm)
- 10mm Combination Ratchet Wrench (Highly Recommended but not Required)
- ½" Combination Wrench
- ¼" Allen Wrench
- Torque Wrench
- Assorted Screw Drivers
- Assorted Pliers and Diagonal Cutters
- Floor Jack and Stands or Hydraulic Lift
- Safety Glasses or Goggles
- Cotton Gloves (optional)
- Small Container of Anti-Seize



Stock System Removal

Under the Hood:

- Place the vehicle up on jack stands or a hydraulic lift to provide access to the bottom of the vehicle.
- For safety and to protect your car's electrical system, remove the ground cable from the negative battery terminal.
- Carefully remove the fuel rail covers, from both the top left and right sides of the engine. To remove the right side cover – remove the oil filler cap first. Reinstall the cap after the cover is removed

We'll work on the right side (passenger side) of the engine first.

- On the right side of the engine (passenger side) remove the bolt holding the oil dipstick tube to the exhaust manifold. On 2001 and newer C-5's, remove the dipstick tube hold down bolt out of the head itself as opposed to the exhaust manifold.
- Pull the dipstick tube and dipstick out of the hole in the engine block and set aside for re-installation during a later step.
- Remove the sparkplug wires from both the coil packs and sparkplugs.
- Remove the sparkplugs from the right side engine bank (passenger side).
- Remove the bolts from the air tube flange and remove the air tube flange gasket.
- Disconnect the plug connecting the coil packs to the main wiring harness and two (2) press-on hoses. Loosen and remove the bolts holding the valve cover to the head. Lift the valve cover with the coil packs still attached off the right side engine bank (passenger side) and cover the exposed valve springs with several shop towels to prevent contamination.

*** *On 2001 and newer C-5's, the entire coil pack must be removed as a unit to get to the valve cover hold down bolts***

Now switch to left side (driver side) of the engine.

- Remove the bolts from the air tube flange and remove the air tube flange gasket from the air tube on the left side engine bank (driver side).
- Remove the clamp holding the air tube/gulp valve assembly to the hose, remove the assembly and set it aside for re-installation during a later step.
- Remove the sparkplug wires from both the coil packs and sparkplugs on plugs # 1 & # 3. Remove the sparkplug wires from the coil packs on #5 and # 7.
- Remove the two (2) rear coil packs from the valve cover and lay on top of the valley cover.

*** *On 2001 and newer C-5's, the entire coil pack unit should be removed to give more hand and maneuvering clearance. Disconnect the plug wires on all left (driver side) bank cylinders from both the coil packs and the spark plugs.***

- Remove the sparkplug wires from the balance of the sparkplugs.
- Remove the sparkplugs from the left side engine bank (driver side)
- Loosen the alternator drive belt at the belt tensioner and slip the belt off the alternator pulley.
- Remove the alternator mounting bolts and lay the alternator on the front of the engine. (This is necessary to provide clearance while removing the stock manifold.)

Under the Vehicle:

- Disconnect the two (2) forward O2 sensors at the plug.
- Remove the forward O2 sensors carefully. They are fragile – handle with care.
- Remove the rear O2 sensors carefully. Take care not to twist the wires too much. They are fragile and are expensive to replace.
- Remove the six (6) nuts holding the down tubes from the manifolds.
- Remove the two (2) bolts holding the stock mufflers to the exhaust tubes on both the left and right side.
- Hold the rear of the stock exhaust tubes up in position as the rear spring mounted bolts are removed.
- Remove the two (2) bolts from the back side of the bell housing and lower the stock system to the ground. Remove stock parts from beneath the car.
- Remove the two (2) bolts holding the starter. The starter should sit in position without dangling from the starter wires but still be loose.

Back Under the Hood:

- Remove the right side (passenger side) manifold bolts and lift the manifold out of the vehicle.
- Remove the left side (driver side) manifold bolts and lift the manifold out of the vehicle.

Congratulations you've completed the removal of the stock system.

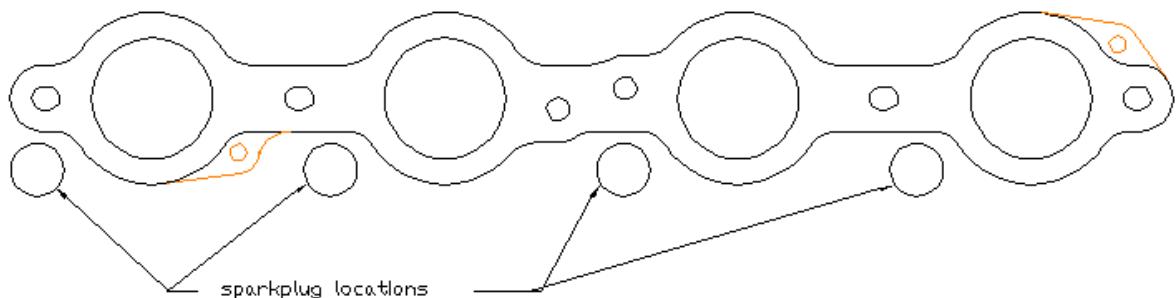
Installation of your new SuperMAXX Exhaust System:

Note: *The majority of the C-5 Corvette models we have encountered have 4 pin, in-line connectors for the front O2 sensors. We have included in all of our C-5 header kits extension cables with in-line connectors installed. If your application requires a different connector configuration, please contact us to purchase the cable compatible with your application.*

- It is best to install the O2 sensor extensions at this time while there is nothing in the way.
- Begin installation by lowering the right side (passenger side) header into the engine bay from the top side. The header has to twist and wind down through the opening to miss the A/C lines etc. The tab on the lower part of the header must be passed by the starter. The starter will have to be moved, in order for the tab to slip by.
- Prepare the six (6) header bolts with a small amount of anti-seize for the right side header.
- Pull the header back up into position, install the gasket (see the picture below to avoid gasket and sparkplug interference problems), and start the header bolts by hand to prevent cross-threading. The bolts should be fully installed but not tightened at this time.

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.



- The left side header installs from the underneath the vehicle. Carefully slip the header up between the head surface and the steering shaft. Be extremely careful of the wires in the harness for the oil filter, bonding strap, and O2 sensor. The ground strap may have to be removed or repositioned to allow the header to pass by it.
- Prepare the six (6) header bolts with a small amount of anti-seize for the left side header.
- Pull the header into position, install the gasket (see the picture above to avoid gasket and sparkplug interference problems), and start the header bolts by hand to prevent cross-threading. The bolts should be fully installed but not tightened at this time.
- With the headers installed and the bolts fully installed but not yet tightened, loosely install the cross-brace to the bell housing bracket and install the bolts through the tabs on the headers to the cross-brace.

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. We suggest this is a good time to change to a new sensor. Factory replacement AC Delco pieces can be purchased at your local GM dealer, or most parts stores offer Bosch 15703 for the 97-2002 models.

- Re-install the forward O2 sensors at this time. Use the supplied wire tie-wraps to secure the O2 sensor leads up out of the way and off the headers where heat may be a problem. Be sure to install the sensors in the correct side. They will install either way. Install them left side to left side and right side to right side.
- Next install the donut gaskets on the ends of the collectors and install the two (2) PowerCATs. Pull the ring clamps together with the supplied allen head bolts and nuts. Use a $\frac{1}{4}$ " allen wrench and a $\frac{1}{2}$ " combination wrench to snug up all eight (8) bolts and nuts. Leave the clamps loose enough to turn around the gasket by hand. They will be tightened fully at a later step.
- When the PowerCATs are snugged up enough to support their own weight, slip the band clamp on each of the two (2) interim tubes and slide them into the outlet ends of the catalytic converters. Orient the interim tubes so that the O2 sensor bungs point toward the center of the car at approximately 45°. The band clamps can be snugged up but do not fully tighten at this time.

- Slip the remaining two (2) band clamps over the outlet ends of the interim tubes and install the x-pipe assembly by slipping the x-pipe inlets over the outlet ends of the interim tubes. Install the tail pipe gaskets between the tail pipe and muffler flanges with the bolts and nuts provided.
- Align the spring hangers on the x-pipe cross brace and start the bolts. Run them all the way in but do not fully tighten them. All bolts will be tightened during the alignment steps.
- The entire system should now be loosely installed with all bolts in place but not tightened. Carefully inspect all areas of the system with regard to frame and wiring clearance, bolts and clamps in the proper location, etc.

Aligning and tightening your new exhaust system:

- Begin the alignment and tightening process by tightening the header bolts on both the left side and right side to approximately 15 ft/lbs of torque. These bolts should be re-torqued after the system has gone through several thermal cycles and as necessary after that.
- With the header bolts torqued, tighten the bolts holding the cross brace bracket to the bell housing, then the cross brace, and finally the two (2) header tab bolts to the cross brace.
- At this point, the collectors should be approximately level in the tunnel as well as centered in the tunnel.
- Now the tightening procedure moves to the rear of the vehicle. With someone helping to hold the muffler tips level and centered in the body opening, begin tightening each flange and clamp as you move forward in the vehicle. Start with the muffler/x-pipe connection (left and right), next tighten the two (2) spring hangers at the x-pipe cross brace, then proceed to the rear interim tube clamps and then the front interim tube clamps. Finally, tighten the four (4) bolts on both of the donut gasket clamps. This completes the tightening process. Check to make sure that the muffler tips remain level and centered in the body opening. If for some reason they are not as desired, loosen the system, reposition and retighten.
- To finish up under the vehicle, re-install the two (2) rear O2 sensors, and make one final check on clearances between the system and frame and wiring components.

Putting it all back together:

- Re-install the alternator. Reposition the alternator in the mounts and install the mounting bolts.
- Follow the belt routing chart on the left fender and re-install the alternator drive belt.
- Install the sparkplugs in the left engine bank. (Now is the time to check the gap and to install new plugs if needed)
- Re-install the coil packs previously removed, taking care to place the studs in the proper position to accept the fuel rail cover that will be installed later.
- Re-install the sparkplug wires on the coil packs and the sparkplugs.
- Locate the air tube flange gasket and bolt the air tube/gulp valve assembly to the flange on the header. With the air tube assembly in place and tightened down, reconnect the rubber tube to the steel line and tighten the clamp.
- Carefully re-install the fuel rail cover over the left engine bank.

- Move to the right side. Remove the towel covers off of the valve train and re-install the right side valve cover. Tighten the bolts on the valve cover. Reinstall the coil packs (on the 2001 and newer) and reconnect the coil pack connector to the wiring harness and the two (2) push-on hoses.
- Install the right side air tube gasket and install/tighten the bolts holding the air tube flanges together.
- Install the sparkplugs in the right engine bank. Now is the time to check the gap and to install new plugs if needed.
- Slip the oil dipstick tube into the hole in the block and insert/tighten the bolt holding the tube bracket to the header bung. Reinstall the bolt into the head on vehicles 2001 and newer.
- Insert the oil dipstick. Now is a good time to check your oil level.
- Re-install the sparkplug wires on the coil packs and the sparkplugs.
- Carefully re-install the fuel rail cover over the right engine bank. Remove the oil filler cap to install the right side cover and then re-install the oil filler cap
- Survey the entire engine bay for oil leaks loose wires/hoses, stray rags or tools, etc.
- Reconnect the negative battery cable.

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.

As mentioned earlier in the text, 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**