

# **SUPERMAXX**

BY

## **Dynatech**

Competition Exhaust Systems



### **Camaro / Firebird LS-1 F-Body Header System**



**115-732300S Model Years 1998 and 1999**

**115-732325S Model Years 2000 and Later**

## **Installation Instructions**



Congratulations on your purchase of the Dynatech / SuperMAXX LS-1 F-Body header 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 prior to getting started. 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.

**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.

# **SUPERMAXX**

## **What's in your new header system kit?**

- Driver Side Header (1)
- Passenger Side Header (1)
- PowerCAT Catalytic Converter (2)
- Driver Side Exhaust Tube (1)
- Passenger Side Exhaust Tube (1)
- Y-Pipe Assembly (1)
- 2 ½" Stainless Steel Band Clamps (4)
- Gasket Skin Card (1)

Stainless Steel OEM Style Header Gaskets (2)

8mm x 30mm x 1.25 Header Bolts (12)

Air Tube Gaskets (2)

EGR Tube Gasket (1)

- Donut Gasket Skin Card (1)

3" Donut Gaskets (2)

5/16" x 18 Allen Head Bolt and Nut Assy (8)

- O2 Sensor Extensions (2)
- Tie-Wraps (4)

Part number 115-732300S is designed to fit the 1998 through 1999 Camaro/Firebird F-Body. Part number 115-732325S is for the 2000 and up Camaro/Firebird F-Body. The miscellaneous parts provided in the kit are common to both systems and can be used interchangeably with either system. The headers and tail pipe portion of the kit differ from one part number to another in the placement of the emission fittings only. In the case of part number 115-732325, the EGR Tube is used only on the 2000 models and therefore the provided gasket will be used only on that model.

## **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 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 the header's stainless steel surface possibly preventing permanent stains on the header themselves.

## **Required and Optional Tools**

- 7/8" Open End Wrench (O2 Sensor Removal)
- Assorted Metric Sockets (10mm-17mm)
- 1/2" Socket
- 5/8" Spark Plug Socket
- 3/8" Ratchet and Extensions
- Assorted Metric Combination Wrenches (10mm – 17mm)
- 10mm Combination Ratchet Wrench (Highly Recommended but not Required)
- 1/2" Combination Wrench
- 1/4" 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
- Hand operated tailpipe expander capable of expanding tubes to slide over 2 3/4" stock. These are available at stores such as AutoZone and other parts stores for rent or purchase **(Highly Recommended)**

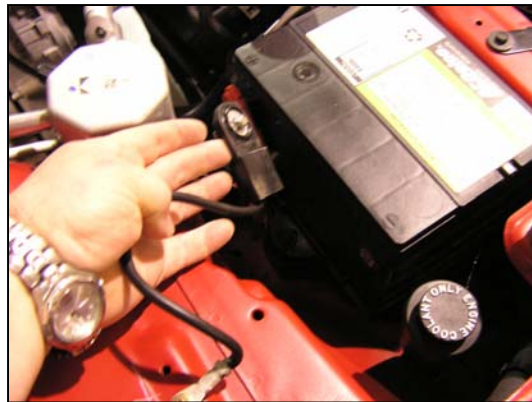
## **Before You Get Started:**

- 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 have an operating vehicle to run to the store.

## **Stock System Removal**

### **Under the Hood (Preliminary Removal Steps)**

- 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 3 feet off the ground to allow for insertion of the headers from below.
- For safety and to protect your car's electrical system, remove the ground cable from the negative battery terminal.



- Begin the removal of your old system by removing the two 8mm bolts from the air tube flanges on either side of the engine and propping the steel lines up out of the way for re-installation later in the process.

- Remove the two bolts or nuts, whichever is present, from the EGR boss in the stock manifold. On the '98 and '99 models, this line is located near the front of the manifold on the passenger side. On the 2000 model, the boss is located near the bottom center of the passenger side stock manifold. The 2001 and up models do not use the EGR fitting.
- Remove the spark plug wires from each of the 8 plugs and coil packs. Set them aside for now.
- On the passenger side engine bank, remove the bolt that holds the dipstick tube bracket to the head and pull the dipstick tube along with the dipstick out of the engine block. Put the assembly aside for re-installation later in the process.

### **Under the Vehicle (Removing the Stock System)**



- Apply some penetrating oil on the clamp nut/bolt and loosen the clamp holding the tailpipe to the factory Y-pipe.
- Apply some penetrating oil on the bolts of the two bolt flange clamps at the rear of the catalytic converters on both the passenger side and the driver side and remove the nuts or studs whichever comes loose.
- Remove the four bolts that hold the small sheet metal cross brace to the bottom of the car and set the cross brace aside for re-installation later in the process.
- Separate the factory Y-pipe from the catalytic converters and the muffler inlet pipe and remove it from beneath the vehicle. The muffler and inlet pipe should be self supporting with no need to block it up.



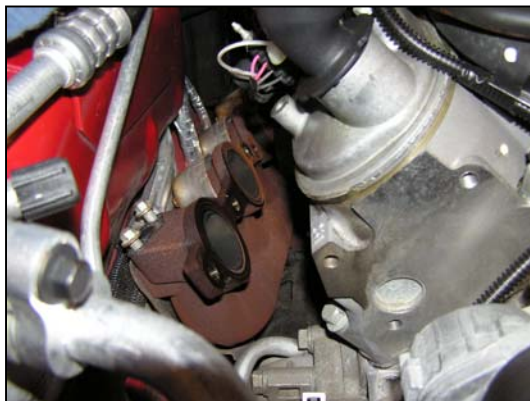
- Loosen and remove the rear O2 sensors from the catalytic converters on both sides. **O2 sensors are delicate electronic components and should be handled very carefully. Take extra care in not contaminating the sensing end with shop towel lint, fingerprints, oil, etc.**
- Unplug the front O2 sensor leads.
- Loosen and remove the front O2 sensors from the system on both sides. **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, fingerprints, oil, etc.**
- Apply some penetrating oil on the bolts and nuts that hold the catalytic converters to the cast factory manifolds on both sides. Loosen the three bolts/studs and remove the catalytic converter along with its gasket from both sides of the engine.

**Note:**

*The spark plugs on the passenger side engine bank do not need to be removed for the removal of the cast factory manifold or for the installation of the new header. However, this might be the opportune time to change plugs if you deem necessary. They are easily removed and replaced at the time. If you choose install the new plugs at this time be careful not to crack or break them during the header installation. While the driver side plugs do not need to be removed prior to removing the factory cast manifolds they must be taken out to provide clearance for the installation of the header. Now is the time to remove them.*

- Remove spark plugs from the driver side engine bank as mentioned in the note above.
- It is easiest to remove the rear-most manifold bolts from each side of the engine from the bottom. Remove the 2 rear manifold bolts at this time.

## **Back Under the Hood (Final Removal Steps)**



- Remove the balance of the six manifold bolts for the passenger side cast manifold. being careful not to damage the spark plugs if installed, lift the manifold and gasket up and out of the engine bay.

- Remove the balance of the six manifold bolts for the driver side cast manifold. Lift the manifold and gasket up and out of the engine bay.

## Congratulations!

### You've completed the removal of the stock system.

### Installation of you new SuperMAXX Exhaust System:

#### Up and Down, Back and Forth

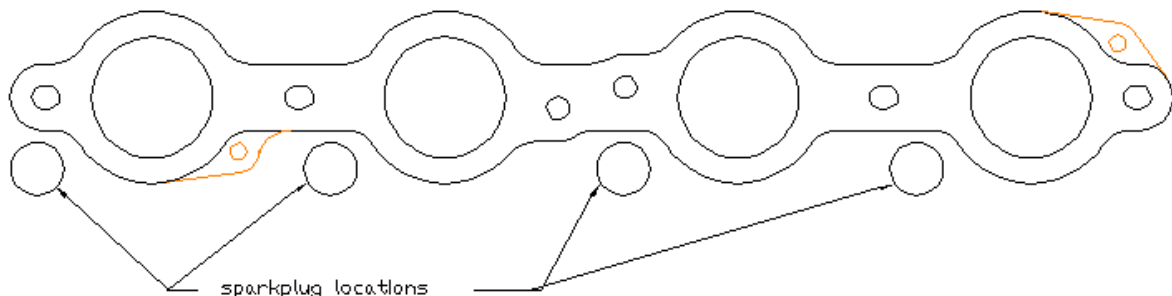
- Locate and install the O2 sensor extensions supplied in your kit. Nothing is in the way at this time allowing you to install the connectors and “keepers” with plenty of room to work.

**Note:** *A small amount of anti-seize on the bolt and spark plug threads in the following steps will really help protect the aluminum head from possible galling. Anti-seize is inexpensive compared to repairing or replacing your cylinder head.*

**Note:** *If your header kit is being installed on a 2000 model with EGR emission fittings, you will need to remove the small brass pipe plug in the center of the EGR flange on the header and discard it. This plug must remain installed on all other models.*

#### 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.



- A little help from your friends will come in handy at this point. Slip the passenger side header up from the bottom side of the vehicle. Be careful of the spark plugs if they are installed. Paying very close attention to the gasket installation diagram below, have a helper install the gasket and start at least two of the header bolts while the header is supported from below. Screw the header

bolts in by hand as far as possible but **do not fully tighten** and don't forget the anti-seize.

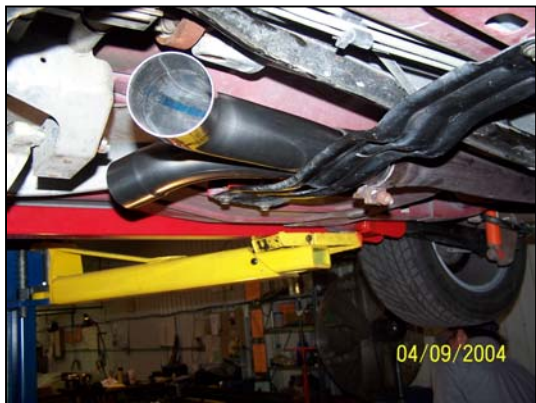
- Start and screw in by hand, the balance of the six header bolts. Remember the rear-most bolt is most easily installed from below.
- Fully tighten and torque each header bolt to 15-18 ft/lbs. Over tightening may cause damage to the aluminum head.
- The passenger side heat shield clearance is fairly close. You may have to reform the appropriate portion of the heat shield to provide addition clearance.
- If the sparkplugs are not installed, install each of the passenger side plugs at this time. All but the very rear-most plug can be installed from the top side. It too can be installed in this manner, but may be easier from the bottom side.
- Re-install the dipstick tube, reversing the order in which it was removed. Make sure the end of the tube that slides into the block is clean. It helps to lubricate the O-ring with a little grease or oil to make it slide into the block easier.
- Re-install the spark plug wires to the coil packs and spark plugs. A little silicone spray or high temp grease will help the wires slide on the plugs and coil packs with less effort.
- Re-attach the air tube along with a new gasket provided in the kit. Don't forget the anti-seize.
- If necessary re-attach the EGR tube along with a new gasket provided in the kit. This should be for the '98 through 2000 models only. **On the 2000 model only, you must remove the small brass plug from the center of the EGR flange on the header and discard it prior to attaching the EGR tube. If the plug rounds out while trying to remove it – just drill it out with an 11/32 drill bit.**
- Recheck all of the fittings, wires, and bolts on the passenger side.
- If you need to change the oil and filter, now is a great time to get it done.
- Once again a little help from your friends will come in handy at this point. Slip the driver side header up from the bottom side of the vehicle. Paying very close attention to the gasket installation diagram above, have a helper install the gasket and start at least two of the header bolts while the header is supported from below. Screw the header bolts in by hand as far as possible but **do not fully tighten** and don't forget the anti-seize.
- Start and screw in by hand, the balance of the six header bolts. Remember the rear-most bolt is most easily installed from below.
- Fully tighten and torque each header bolt to 15-18 ft/lbs. Over tightening may cause damage to the aluminum head.
- Install each of the driver side spark plugs at this time. All but the very rear-most plug can be installed from the top side. It too can be installed in this manner, but may be easier from the bottom side.
- Re-install the sparkplug wires to the coil packs and spark plugs
- Even though clearance has been built into the system – make sure the clearance around the steering shaft is adequate.
- Re-attach the air tube along with a new gasket provided in the kit. Don't forget the anti-seize.



## Installing the Rest of the System



- Slide a 3.0" donut gasket over the end of each collector making sure the flat side of the donut is pushed up tight against the collector stop ring.



- Slip the outlet end of the Y-Pipe assembly into the inlet of the stock muffler inlet tube. It will probably be pretty tight. **Use a hand operated tailpipe expander if necessary to enlarge the tube just enough to easily slip the Y-Pipe outlet into joint. It doesn't take much.** Do not tighten the clamp at this time.
- With the Y-Pipe in place, re-install the sheet metal cross member and tighten the mounting bolts.
- Slip the stainless steel band clamp over the short end of the passenger side exhaust tube (single bend tube) and slide it into the appropriate Y-Pipe expansion. Snug the clamp up just enough to hold the two parts together allowing some slip for alignment.



- Slip the stainless steel band clamp over end farthest away from the O2 sensor bung on the driver side exhaust tube and slip it into the remaining Y-Pipe expansion. Snug the clamp up just enough to hold the two parts together allowing some slip for alignment.
- Slip a stainless steel band clamp over the inlet to the passenger side exhaust tube and slip on a catalytic converter. Snug the clamp up just enough to hold the two parts together allowing some slip for alignment.
- Slip a stainless steel band clamp over the inlet to the driver side exhaust tube and slip on a catalytic converter. Snug the clamp up just enough to hold the two parts together allowing some slip for alignment.



- Raise the passenger side exhaust tube assembly and connect it to the passenger side collector. Install the 4 clamp bolts and nuts (a little anti-seize wouldn't hurt), snugging them up enough to hold the alignment but still loose enough slip to allow for realignment if needed. Raise the driver side exhaust tube assembly and connect it to the driver side collector. Install the 4 clamp bolts and nuts (a little anti-seize wouldn't hurt), snugging them up enough to hold the alignment but still loose enough slip to allow for realignment if needed.
- Align the entire system and tighten the clamps while holding the components in place.
- Tighten the clamp bolts on the collector-to-catalytic converter joint.

Note: *A small (repeat small) amount of anti-seize on the O2 sensor threads (threads only) will make assembly and, if needed, disassembly easier.*

- Re-install the rear O2 sensors in both sides of the exhaust tubes.
- Re-install the front O2 sensors in both driver and passenger side headers
- Use the tie-wraps included with your header kit to tie the O2 sensor leads away from the headers and out of the way of moving parts.
- Survey the entire under-body and engine bay area for oil leaks, loose hoses/wires, 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.

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](http://www.DynatechHeaders.com)