Dynatech®
Competition Exhaust Systems

INSTALLATION INSTRUCTIONS

LIT-1027, REV 1

FORD RAPTOR

STAINLESS STEEL HEADERS

2014

4WD 6.2 LITER ENGINES

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.

PART NUMBERS

722-94210

722-94220

Congratulations on your purchase of the Dynatech system for the 2014 Ford Raptor. 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.

Parts Inventory List Headers Only:

- 1 ea. Left Side (driver side) Header
- 1 ea. Right Side (passenger side) Header
- 2 ea. OEM Style Stainless Steel Header Gaskets
- 16 ea.10 mm Header Bolts
- 3 ea. Wire ties
- 1 ea. Heat shield wrap
- 1 ea. Installation manual.

Parts Inventory Intermediate Tubes W/Cats Only:

- 1 ea. Crossover Tube W/ Cat
- 1 ea. Y-pipe W/ Cat
- 1 ea. 8mm bolt
- 1 ea. Nylon spacer
- 1 ea. Y-pipe extension tube
- 1 ea. Donut Gasket Skin Card
- 2 ea. 3" Graphite Donut Gaskets
- 8 ea. 5/16" x 18 x 1 ¾" Allen Head Cap Screws
- 8 ea. 5/16" x 18 Top Lock Hex Nuts
- 3 ea. Wire ties
- 3 ea. 3" Stainless Steel Band Clamps
- 1 ea. Installation manual
- 1 ea. O2 sensor extension

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 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 (5mm – 16mm).
- Ratchet and extensions.
- Torque wrench.
- Rubber Mallet or Dead Blow Hammer.
- Floor jack and safety stands or a hydraulic lift.
- Safety glasses or goggles.
- Small bottle of Anti-seize (sensor safe).
- Penetrating Fluid (optional).
- Fender pads (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 an opportune 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 loose some of the oil in both the oil pan and the oil tank.

Stock System Removal:

The Ford Raptor 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.

- Remove front tires.
- Remove all skid plates.

- Unhook and remove the front and rear O2 sensors.

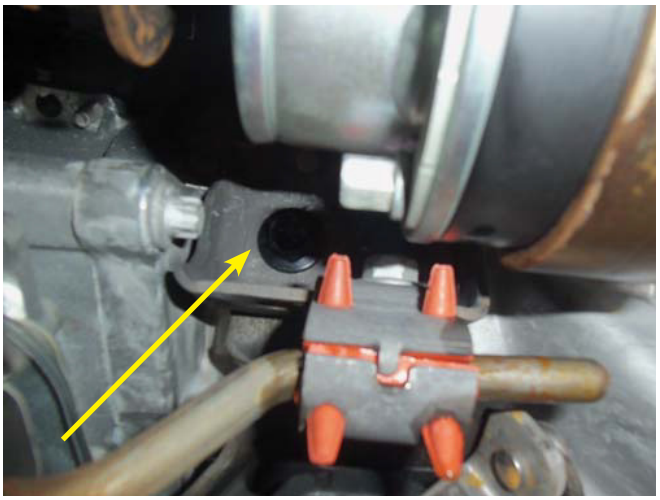
- Unbolt the back of the factory y-pipe.

- Loosen the clamp connecting the end of the resonator pipe and the front of the muffler pipe.

- Slide the muffler back in the hanger just enough to remove the resonator pipe and remove the resonator pipe. The resonator pipe will not be used it will be replaced by an extension tube that came with your kit.

- Unbolt the heat shield from the top of the transmission cross-member on both sides. Right side picture shown.

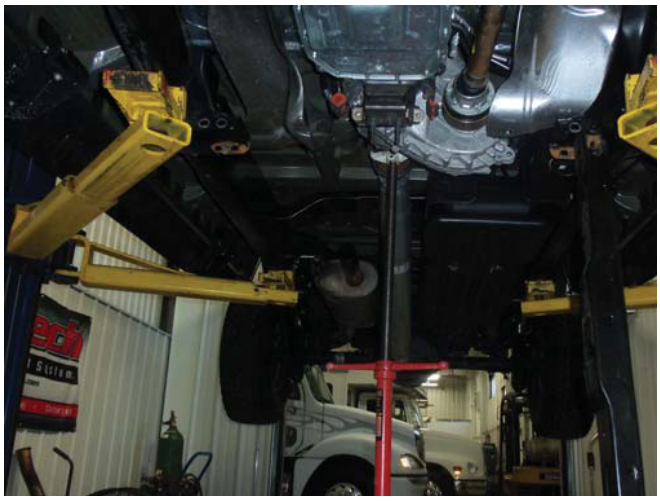
- Unbolt top half of the factory crossover pipe hanger mount on the left side. The new system will not use this hanger mount. You can leave off of the vehicle or reinstall after the factory crossover is removed.



- Remove the nuts on the transmission mount in preparation of the removal of the cross member.

- Support the transmission, raise slightly and remove the transmission cross-member.

- Unbolt cats and remove the factory y-pipe and crossover as a unit.

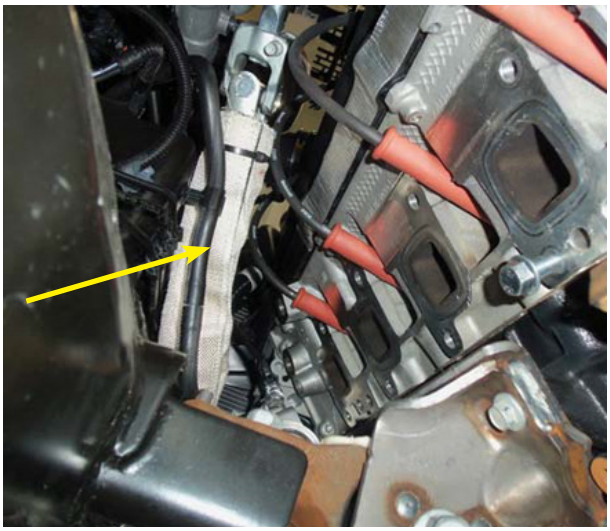


- Reinstall transmission cross member and let transmission back down. Torque transmission cross member bolts to factory specs. **Do not install the transmission mount nuts at this time.**

- Remove the starter.

Note: The removal of the right side manifold will require raising the engine. The left side will come out without having the engine raised. You can remove both sides with the engine raised or remove the left side with the engine down and then raise the engine to remove the right side. The following steps for the left side will be with the engine down.

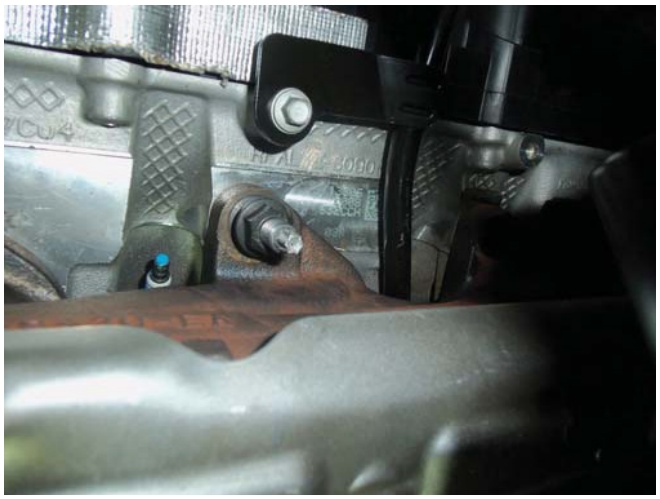
- Remove all of the nuts holding the manifold and remove the manifold. Remove all of the studs out of the head also; they will not used to install the header. Now that the manifold is removed install the supplied heat shield wrap around the steering shaft.



- Before the engine is raised you can go ahead and remove all of the nuts from the right manifold. Some of the nuts maybe easier to get to with the engine raised but not required. It is also recommended to remove the plug wire boots from the spark plugs and hang up out of the way to allow the header and dip stick tube to be installed without them getting in the way.

- Remove the nuts on the bottom of both engine mounts so the engine can be raised to provide the clearance needed to remove the right manifold. Once removed raise the engine until you have enough clearance to remove the manifold. **Note: you can raise the engine from the bottom like in the picture below or if you can't do it that way you can lift the engine from the top if necessary.**

- Remove the manifold, studs out of the head they will not be used to install the header and remove the dip stick tube.



- Let engine back down and torque motor mounts back to factory specs. Also reinstall the transmission mount nuts and torque back to factory specs.

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.

- Prepare each of the 16 header bolts with a small amount of anti-seize on the thread surfaces.

- Install the two bottom rear headers bolts with the gasket on both sides. Only screw the bolts one two or three turns.

- Hang the left header onto the rear bottom header bolts to hold it and install the rest of the bolts and torque to approximately 20 ft/lbs.

- Hang the right side header onto the rear bottom header bolts to hold it in place. Get the header close into position to put the rest of the header bolts in and feed the dip stick tube through the tubes and get the end of the tube started into the oil pan before installing the rest of the header bolts. Install the remaining header bolts and torque to approximately 20 ft/lbs. Push the dip stick to the rest of the way down and tighten back down. Reinstall spark plug boots.

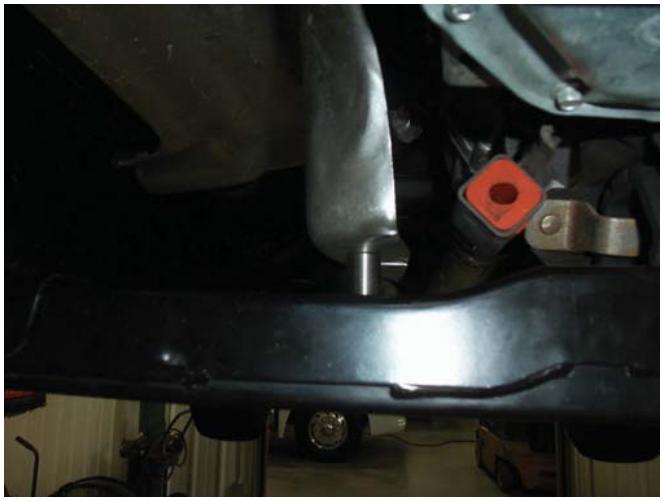
- Reinstall starter and torque to factory specs.

- Prepare the front O2 sensor threads only with a small amount of anti-seize. Be careful not to get any anti-seize on the sensor tip. Install the sensors in the header system in same relative location as they were removed.

- Install the left front O2 sensor into the collector at this time and connect back into the wiring harness. Wire tie sensor away from any moving or hot parts using one of the supplied wire ties.

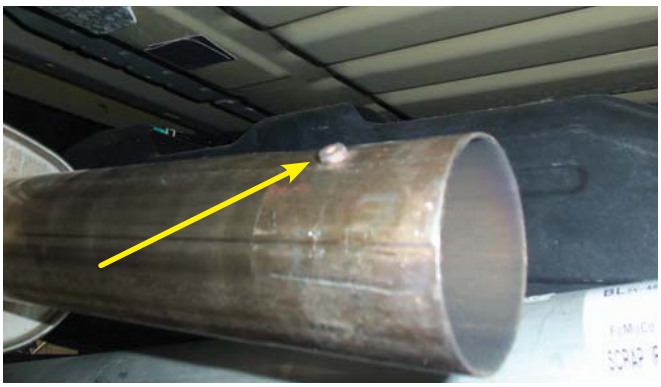
- The right heat shield above the transmission cross member will need to be modified to so the right front 02 sensor will clear when installed. Raise the heat shield up and install the sensor just a few threads so the heat shield can be marked and then cut. It can be cut with sheet metal snips or a grinder. Install the right front 02 sensor into the collector and connect back into the wiring harness and wire tie up if needed.

- Bolt the left side heat shield back down to the transmission cross member. Bolt the right side heat shield back down using the supplied longer bolt and supplied spacer, place spacer in between the heat shield and transmission cross member. This allows for additional clearance needed between the heat shield and the y-pipe.



- Install crossover and y-pipe. When tightening, place a wood wedge or something similar in between the left cat and transmission cross member to maintain adequate clearance between the two until system is fully tightened. Tighten enough to hold the system in place but do not fully tighten to allow for some adjustment until complete system is installed and adequate clearances have been achieved.

- Grind the locating pin on the end of the tube of the muffler off to allow the use of the supplied band clamp as the connection of the extension tube and muffler. After the pin is removed slide the band clamp over the end before installing the extension tube.



- Move the muffler back in its hanger far enough to install the extension tube but do not allow the mounts for the tailpipes to come out its hanger so it will stay in held up in place while installing the extension tube.

- Install the extension tube but do not fully tighten the band clamps.

- Install the left rear 02 sensor into the crossover pipe and plug it back into the harness and wire tie it up.

- Plug the supplied extension cable into the right rear 02 Sensor and install the sensor into the y-pipe. Route the cable over the heat shield and plug it back into the harness.

- Double check all clearances and then fully tighten the system starting at the collector and working your way back to the final band clamp at the end. Remove the wedge between the left cat and transmission cross member.

- Put all the skid plates back on and torque back to factory specs.
- Reinstall front tires and torque lug nuts back to factory specs.
- Reconnect the negative battery cable.

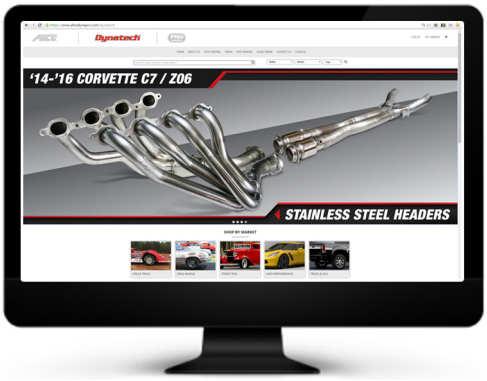
Final Checks

- 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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