

# **Dynatech**<sup>®</sup>

Competition Exhaust Systems

## **INSTALLATION INSTRUCTIONS**

**LIT-1031, REV 1**



## **FORD F150**

**STAINLESS STEEL HEADERS**

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.

**'11 - '14**  
**5.0 LITER ENGINES**

### **PART NUMBERS**

**722-52210**

**722-53210**

**722-52220**

**722-52230**

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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 F150. 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](mailto: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 system kit?

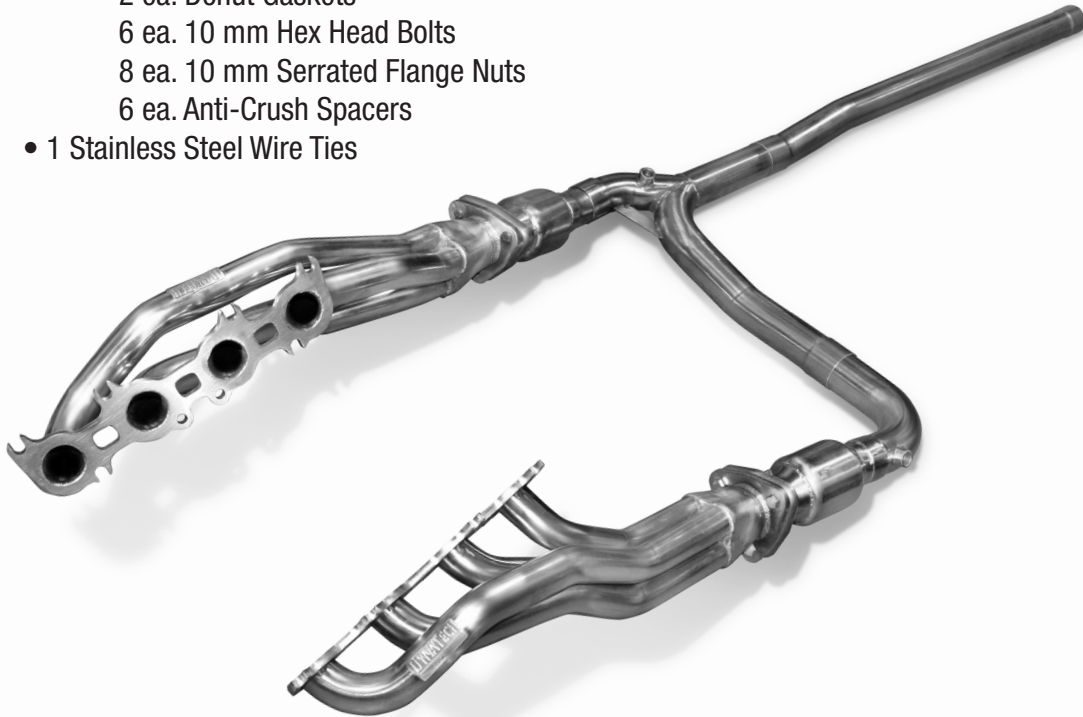
Your exhaust system should contain all of the following parts.  
Please inventory each part prior to proceeding with the installation.

### Header Parts Inventory List:

- 1 ea. Left Header
- 1 ea. Right Header
- 1 ea. Header Gasket /Bolts Skin Card
  - 2 ea. Multi-Layer Stainless Gaskets
  - 16 ea. 10 mm Header Bolts
- 2 Stainless Steel Wire Ties

### Intermediate Section Parts Inventory List:

- 1 ea. Catalytic Converter w/Cross-over Tube Assembly. (left side)
- 1 ea. Catalytic Converter (right side)
- 1 ea. "Y" - Pipe Assembly
- 1 ea. "Y" - Pipe Extension
- 2 ea. Rear O2 Sensor Extension
- 3 ea. 2 ½" Stainless Steel Band Clamps
- 1 ea. 2 ½" Stainless Steel Single Bolt Band Clamp
- 1 ea. Donut Gasket Skin Card
  - 2 ea. Donut Gaskets
  - 6 ea. 10 mm Hex Head Bolts
  - 8 ea. 10 mm Serrated Flange Nuts
  - 6 ea. Anti-Crush Spacers
- 1 Stainless Steel Wire Ties



## **Safety Notes:**

For your safety, please allow the engine to cool for a minimum of 90 minutes before starting the removal of your current exhaust manifolds/system and beginning the installation process.

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 surface possibly preventing permanent stains on the headers 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 O<sub>2</sub> 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
- Penetrating Fluid (optional)
- Cotton Gloves (optional)
- Fender pads (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.



## Stock System Removal

1. Unhook the negative battery cable.
2. Remove front wheels.
3. Remove left and right wheel wells.
4. Remove the bolts holding the heat shields onto the manifolds on both sides. *Note: This will provide access needed to the top manifold nuts when removing the manifolds.*
5. At this time, remove and manifold nuts and studs you can access before working under the vehicle.
6. Remove the heat shield bolts on both sides of the transmission cross member. *Note: If you can remove the heat shields do it at this time however it may be easier to try to remove them after the manifold is loose.*



Figure 01

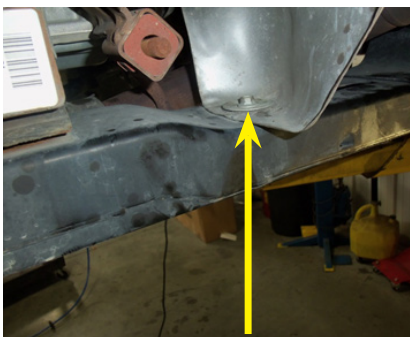


Figure 02

7. Unplug the front and rear O2 sensors. *Note: You can remove all of the sensors now or after the factory system is removed.*
8. Loosen the flange nuts that hold the factory crossover pipe and y-pipe to the factory manifolds. Leave them on just enough to hold the crossover and y-pipe in place while removing the transmission cross member in an upcoming step.

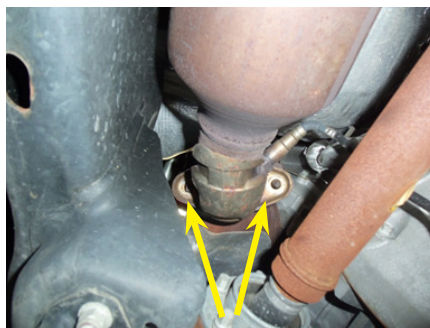


Figure 03

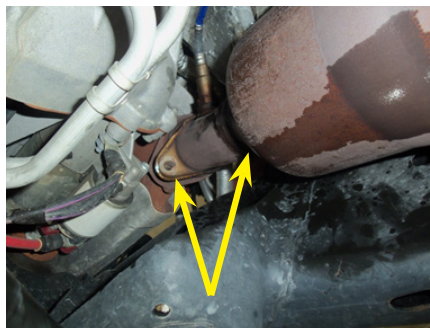


Figure 04

9. Unbolt the end of the factory pipe from the factory resonator.



Figure 05

10. Support the rear of the transmission in preparation of the stock converters and y-pipe.



Figure 06

11. Remove the nuts from the bottom of the transmission that holds it to the cross member.

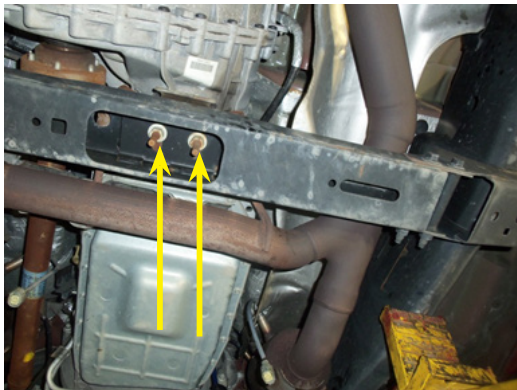


Figure 07

12. Unbolt the hanger rod mounts from both sides of the transmission. You can bolt them back on after the factory system removal or leave them off. They will not be needed for your new Dynatech system.



Figure 08

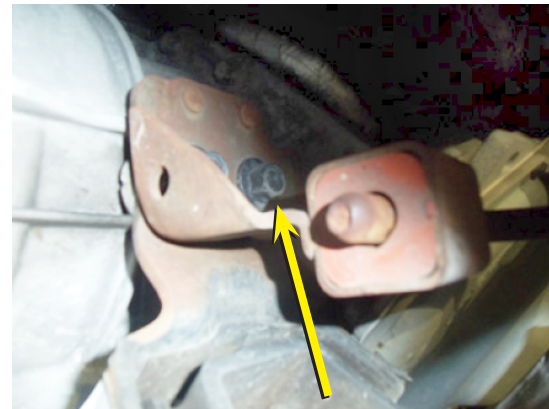


Figure 09

13. With the transmission supported from step #10 remove the transmission cross member bolts and remove the cross member.
14. Remove the flange nuts from the manifolds and remove factory crossover and y-pipe.

15. Reinstall transmission cross member and bolt back up and torque to factory specs. Do not reinstall the nuts that bolt the transmission to the cross member at this time.

16. Bolt heat shields back up to transmission cross member.

17. Remove the factory resonator at this time.



Figure 11



Figure 10



Figure 12

18. To remove the right side manifold it is necessary to lift the right side of the engine up a few inches. It is also helpful to remove the starter for additional room to remove the manifold but you can try to remove it after the right side of the engine is lifted up.

*Note: The starter does not have to be removed to install the header.*



Figure 13





Figure 14

19. Unbolt the rest of the manifold nuts and remove the left and right manifolds and any remaining studs.
20. Let the right side of the engine back down and torque motor mount bolts back to factory specs.
21. Reinstall the nuts that bolt the transmission to the cross member and torque back to factory specs.
22. Prepare the header bolts.



Prepare each of the 12 header bolts with a small amount of anti-seize on the thread surfaces.

23. Place the header gasket in the correct position on the head and start all of the bottom header bolts approx. 1/2 way in.
24. Install the left and right header letting the bottom of the headers flange rest on the preinstalled header bolts.
25. Install all of the top header bolts on both sides and torque all header the bolts. Tighten to approximately 18-20 ft/lb torque.
26. Install the donut gasket and the left cat to the header and fully tighten. This will allow movement to align everything once the right side cat is installed to the y-pipe.



Install one spacer per stud to ensure proper connection with Y-pipe. (Both headers)

Figure 15

27. Put the supplied single bolt clamp onto the inlet end of the y-pipe and slide the y-pipe into the left converter outlet.

*Note: Do not tighten the single bolt clamp up at all at this time.*





Figure 16

28. Slide a supplied stepped band clamp onto each end of the y-pipe. Use the single bolt band clamp to connect the catalytic converter to the y-pipe.
29. Slide the outlet end of the left side converter into the y-pipe. Install the donut gasket and right side converter but do not fully tighten. Install one spacer per stud to ensure proper connection with y-pipe. (Both headers)



Figure 17

30. Align the system, keep adequate clearance for the y-pipe and crossover around the transmission cross member.

*Note: still do not fully tighten the system until the y-pipe ext. tube is installed.*

31. It is recommended to remove the clocking tab for the resonator from the inlet tube of the muffler to ensure a proper seal of the band clamp. Remove the tab with a die grinder or a sander.

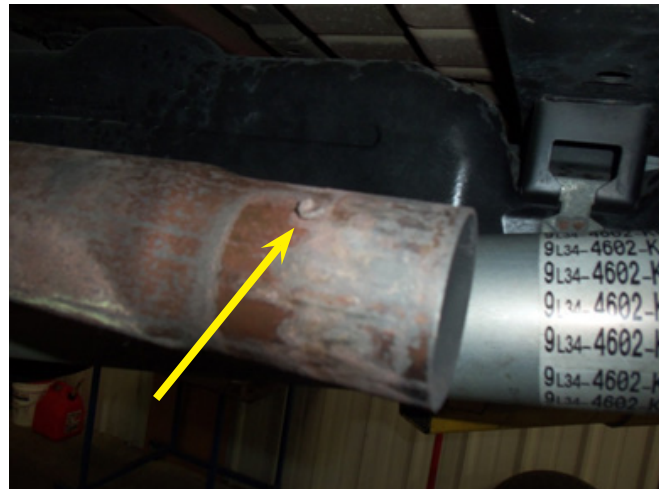


Figure 18

32. The muffler and rear part of the exhaust will slide back enough to install the y-pipe extension tube. Before installing the tube put the last stepped band clamp onto the inlet end of the muffler tube.



Figure 19

33. Install the extension tube with the bent end connected to the y-pipe. It may be necessary to rotate the tube somewhat to achieve proper alignment. Slide the muffler inlet tube and rear part of the exhaust back towards the front of the vehicle at least 1 inch into the expanded outlet end of the y-pipe extension tube.



Figure 19

34. Double check all clearances of the crossover converter y-pipe and extension tube. If everything is satisfactory fully tighten system, tighten the single bolt clamp connecting the left side converter to the y-pipe last.

35. Install and plug back in the front O2 sensors at this time.
36. Plug the rear O2 sensor extensions into the rear O2 sensors and install the rear O2 sensors. Route the wires on both sides behind the heat shields and plug back in.
37. Check the front and rear O2 sensor wires for clearance after initial installation and use the supplied wire ties if needed to tie back any part of the wire that is too close to the headers or intermediate section or moving parts.



Figure 19

38. Reinstall the left and right wheel well.
39. Reinstall the front tires and torque lug nuts back to factory specs.
40. Reinstall negative battery cable.

## Final Steps & Checks:

- Check all work for completeness, bolts tightened, connectors connected, lines replaced and clamped etc. Check that no wires or lines are close to the headers where heat damage could occur or near moving parts where they could be pinched or cut. Check for misplaced tools and rags and check for oil leaks etc.
- Once again, verify that all hoses, cables, electrical lines, fuel lines, hydraulic lines, or any other objects are not in contact with, or located too closely to your installed system. (Nothing should be allowed to touch or be located close to the header/exhaust system.)
- 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](mailto:dynatechcs@dynatechheaders.com).**

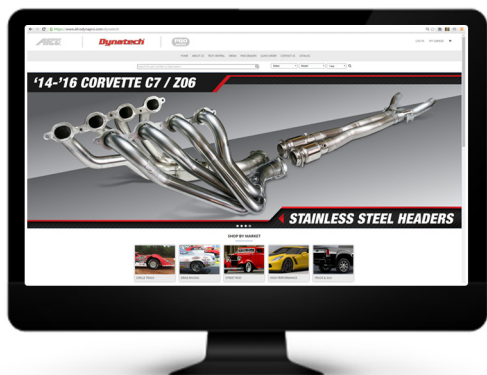
- Listen for any exhaust leak “ticking” sounds. Check around each clamp and gasketed joint for leaks. If any are found, check to see that the gasket is properly installed and the joint or clamp is tightened properly.

**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, retighten 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](mailto:dynatechcs@dynatechheaders.com). We will use them to enhance our documentation.*

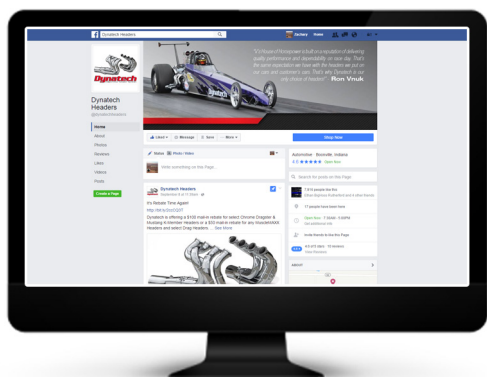






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