

HEADER INSTALLATION INSTRUCTIONS

D6679

1996-2004 FORD Mustang, 4.6L, 2 Valve

PART NUMBER: D6679

PerTronix® thanks you for choosing **DOUG'S HEADERS**, the best fitting, highest quality header on the market. In order to realize the full potential of our good fit, please read and understand these instructions completely prior to starting work.

CHECK TO MAKE SURE YOU RECEIVED THE PROPER PARTS FOR YOUR APPLICATION. THE HEADER NUMBER WILL BE STAMPED ON THE ENGINE FLANGE. IF YOU ARE UNSURE YOU HAVE RECEIVED THE PROPER PARTS CALL BEFORE YOU START WORK.

BE SURE TO WORK SAFE! WHENEVER YOU WORK UNDER THE VEHICLE BE SURE THAT IT IS LOCATED ON LEVEL, SOLID GROUND AND IS SUPPORTED BY ADEQUATE SAFETY STANDS!

REMEMBER: HOT ASPHALT WILL NOT SUPPORT MOST JACK STANDS!

Many factors affect the installation of headers, some of which are broken or aftermarket motor mounts, accidents that impact the configuration of the frame, and/or the installation of different engines or aftermarket cylinder heads. Most installations require some welding. If you are uncomfortable with welding operations, we recommend that you contact a professional exhaust system specialist to install your new headers.

Attention Customers breaking in new engines: Due to the extreme heat generated during the break-in process, the appearance of the ceramic coating may be altered in certain areas. The protection characteristics and thermal barrier properties of the coating is never compromised. It is recommended that a cast iron manifold or old set of headers be used for this process.

Notice: The coating of these headers can be marred or scratched during installation. If the header needs to be returned and is damaged, you will be charged for recoat.



WARNING: These headers are legal for Off Highway use (except in California or states that have adopted California emission standards) or Racing use (which may never be used on a Highway), or for use on pre emission controlled motor vehicles/motor vehicle engines (pre 1966 domestic vehicles certified to California standards, pre 1968 domestic vehicles certified to Federal standards and all pre 1968 Foreign vehicles) **Only**.

Note: X-Pipe Part No. D921 is recommended to be used and installed with this header

Note: SPECIAL COMPONENTS NEEDED FOR ASSEMBLY:

Oxygen Sensor Simulator Part # RPM003020

May be purchased from: [RPM Outlet.com](http://RPMOutlet.com) 281-261-6244

DISASSEMBLY

1. Disconnect the negative battery cable from the battery.
2. If a car lift is not available, raise the vehicle 2 feet or higher and support it with adequate safety stands (axle stands preferred). Make sure the vehicle is on a flat solid surface and is stable.
3. Apply penetrating oil to all nuts and bolts to be removed.
4. Disconnect the E.G.R. tube from the throttle body.
5. On Cobra models, remove the upper tower support bracing.
6. Remove the bolt from the oil dipstick tube.
7. Remove the oil filter.
8. On hard-top models, remove the A-arm brace.
9. Disconnect the (4) O² sensor wires from the H-pipe. Remove the R/S O² sensor next to the starter motor.
10. Remove the H-pipe assembly.

11. Disconnect the E.G.R. tube from the rear of the manifold (left side).
12. Disconnect the steering shaft. Note: A disconnected steering shaft must not be rotated more than 360 degrees.
13. Remove the O² sensor bracket from the engine mount (left side).
14. Remove the engine mount nut. Raise the engine on the left side and remove the mount. Cut a slot in the motor mount as shown in Figure 2. Modify the mount stud as shown in Figure 1.
15. After the mount has been modified, insert it back into the engine bay. Do not mount at this time.
16. Disconnect the A.I.R. tube from the front of the manifold, if applicable (left side).
17. Remove the manifold (left side). Remove all the manifold studs. Note: Some manifold bolts are only accessible by lifting the engine on one side after the engine bolts are removed.
18. Remove the A.I.R. tube from the front of the manifold if applicable (right side).
19. Remove the starter.
20. Remove the engine mount nut. Raise the engine. Loosen and remove the manifold (right side).
21. Remove all of the manifold studs (right side).
22. On standard shift models, remove the clutch fork shield (left side).
23. Clean the cylinder head surface which mates to the header. Use a gasket scraper and wire brush to make sure that the surface is absolutely clean.

ASSEMBLY

1. Apply anti-seize to all header bolts being used.
2. Apply a THIN film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to the head side of the supplied gaskets and glue them to the heads. Masking tape can be used to help stick the gaskets to the heads.
3. Apply a THIN film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to the header side of the right side header gasket.
4. The right side header must go on first.
5. Install the top #3 & #4 header bolts. (See Figure 3). Note: Some header flange bolt holes are slotted for the ease of bolt installation and are not intended to be installed before the header is inserted into the engine bay. Only the bolts specified in the installation procedure should be installed before the header is inserted into the engine bay.
6. Raise the engine on the right side and insert the header into the engine bay.
7. If applicable, reconnect the A.I.R. tube on the front of the header at this point.
8. Lower the engine down on the right side. Slip the header onto the installed bolts and start the #4 lower bolt.
9. Install and snug all the accessible bolts on the right side of the head at this point.
10. Raise the engine on the right side. Install and tighten all the remaining bolts.
11. Lower the right side of the engine down onto the engine mount. Install the mount bolts, but don't tighten at this time.
12. With the engine in the lowered position, unlock the steering wheel.
13. Swing the steering shaft back and to the left for access to the engine bay. Note: a disconnected steering shaft must not be rotated more than 360 degrees.
14. Install the #2 bottom bolt and the #4 top bolt. (See Figure 4). Note: Some header flange bolt holes are slotted for the ease of bolt installation and are not intended to be installed before the header is inserted into the engine bay. Only the bolts specified in the installation procedure should be installed before the header is inserted into the engine bay.
15. Apply a THIN film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to the header side of the left side header gasket.
16. Insert the rear section of the left side header into the engine bay.
17. Insert the front section of the left side header into the engine bay. (See Photo 2.)
18. Swing the steering shaft between the two sections. The steering shaft is telescopic. (See Photo 3.)
19. Apply a THIN film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to the slip joints.
20. Slide the two split sections of the header fully together at the slip joint.
21. Raise the engine slightly.
22. Install the rear engine mount bolt and screw it in until approximately ¼" from tight.
23. Do not install the engine mount behind the bolt at this point.
24. Slip the slotted header flange over the installed bolts, leaving the steering shaft loose.
25. Lower the engine.
26. Start and snug a few of the header bolts.
27. Raise the engine. Install and tighten all accessible header bolts.
28. Slide the slotted engine mount behind the rear bolt and install the front engine mount bolts.
29. Lower the engine. Install and tighten all the remaining header bolts.

30. Tighten the header bolts evenly to a final torque of approximately 25 ft. lbs.
31. Install and tighten the engine mount nut (right side).
32. Tighten all the engine mount bolts.
33. Install the starter motor and tighten. Install the wires on the starter and tighten.
34. Install the steering shaft and tighten the bolt.
35. Install and tighten the engine mount nut (left side).
36. Tighten all the engine mount bolts, reconnecting any ground straps to the studs.
37. Install the oil filter.
38. On standard shift models, install the clutch fork shield (left side).
39. On hard-top models, install the A-arm brace.
40. Install the E.G.R. tube at the rear of the engine to the header.
41. Install the O² sensors to the headers, if applicable.
42. Install the cold air inlet tube to the throttle body and the air cleaner.
43. Install the E.G.R. tube to the throttle body.
44. Reconnect the battery.
45. Make sure all of the other fasteners are tightened.
46. Connect the negative battery cable.

IMPORTANT CHECK LIST

- Inspect the steering shaft for proper installation.
- Be sure that all brake lines and fuel lines are clear of headers and/or connector pipes.
- All spark plug wires, battery cables, or other electrical components should be clear of headers and/or connector pipes.
- If removed, make sure the dipstick is installed properly and that it has been replaced.
- Double-check the tightness of all bolts including brackets and accessories.
- Perform these checks again after the first 1000 miles.

PARTS LIST

Qty.	Description
1	Right side header
1	Left side header
2	Header gaskets
1	Decal: DOUG'S HEADERS
1	Hardware kit:
16	Flanged header bolts
16	Lock-washers
2	O ² Extension Harnesses

START THE ENGINE

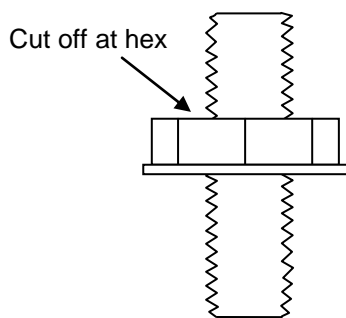
Start the engine and allow it to warm up to operating temperature.

Caution! Hot parts! Wear protective clothing as needed.

Check for any unusual noises or exhaust leaks. If everything is OK, stop the engine and tighten all bolts while the engine is still warm.

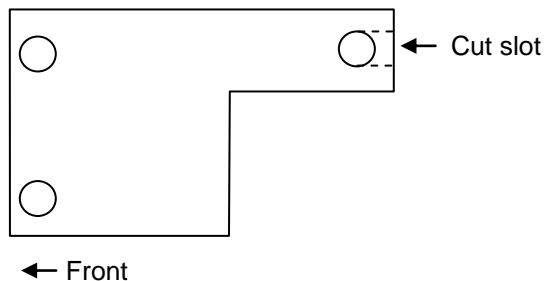
NOTE: Check the bolts periodically to make sure they have not loosened. Re-tighten after the first 500 miles and then again at 1000 miles.

Figure 1



REAR MOTOR MOUNT STUD

Figure 2



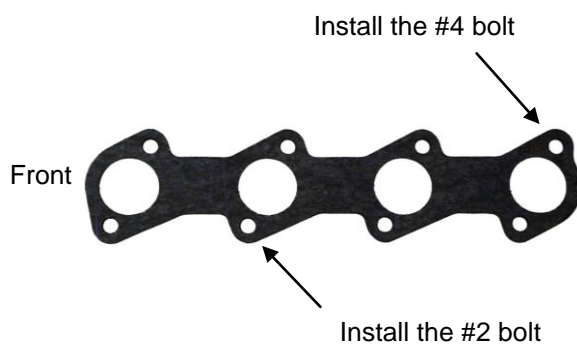
MOTOR MOUNT

Figure 3



RIGHT SIDE

Figure 4



LEFT SIDE



PHOTO #1



PHOTO #2



PHOTO #3