

# HEADER INSTALLATION INSTRUCTIONS D3327

### **APPLICATION** 98-99 CAMARO, 98-99 FIREBIRD & T/A, LS-1

The product accompanying this document has been granted a California Air Resources Board (CARB) exemption, an "E.O." number, or is a direct or consolidated replacement part. It is 50-state legal, when installed on the appropriate vehicles per the manufacturer's application guide.

**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.

# DISASSEMBLY

- 1. Disconnect the negative battery cable from the battery.
- If a car lift is not available, raise the vehicle 2 feet or higher and support it with 2. adequate safety stands. Make sure the vehicle is on a flat solid surface and is stable.
- Remove A.I.R. and E.G.R. tubes from exhaust manifolds. 3.
- Note the spark plug wire locations and remove them from the spark plugs. Use a twisting motion while pulling the spark plug boot off of the spark plug. Be very careful not to damage the spark plug boot and do not pull on the wire itself.
- 5. Remove spark plug wire looms, plugs and any brackets attached to the manifolds.
- Remove the spark plugs. 6.
- Remove the dipstick and tube.



- 8. Disconnect the right side E.G.R. bolts and gasket.
- 9. Remove all four O<sup>2</sup> sensors.
- 10. Remove the Y-Pipe from the vehicle.
- 11. Remove the right side catalytic converter.
- 12. Remove the left side catalytic converter.
- 13. Remove the exhaust manifold bolts and remove the exhaust manifolds.
- 14. Replace the spark plugs finger tight so debris will not get into the cylinders while cleaning the head surface. We recommend the use of a gasket scraper, wire brush, and sanding block to adequately clean the surface.
- 15. After cleaning is complete remove the spark plugs again.

# **ASSEMBLY**

- Apply a <u>THIN</u> film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to each side of the header gaskets and stick the gaskets to the header flanges. Masking tape can be used to help hold the gasket to the header.
- 2. Starting from below, work the right header up into position.
- 3. Using the supplied header bolts and lock-washers, apply a small amount of anti-seize to the bolts and start the most restrictive bolts first but do not tighten yet.
- 4. Reinstall the dipstick tube and dipstick (some reforming of the dipstick tube is required).
- 5. Starting from below, work the left header up into position.
- 6. Using the supplied header bolts and lock-washers, apply a small amount of anti-seize to the bolts and start the most restrictive bolts first but do not tighten yet.
- 7. Tighten header bolts to a final torque of 18 ft/lbs on Aluminum heads or 25 ft/lbs on Iron heads.
- 8. Install the spark plugs and attach the appropriate wire to the spark plug and reattach the spark plug wire looms. It may be necessary to reroute wires to clear the headers.
- 9. Apply a <u>THIN</u> film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to each side of the E.G.R. gasket and reinstall the E.G.R. fitting with the supplied 5/16" bolts, nuts and lock-washers. (Note: Install Flange Block Off if E.G.R. not used on this vehicle).
- Apply a <u>THIN</u> film of Ultra Copper Hi-Temp Sensor-Safe Silicone Sealer to each side of the A.I.R. gaskets and reinstall the A.I.R. fittings with the supplied 5/16" bolts, nuts and lock-washers.
- 11. Reinstall left side O<sup>2</sup> sensor at left header collector. Reroute wires away from exhaust system as needed.
- 12. Reinstall the left-side catalytic converter to the header using the proper gasket supplied.
- 13. Reinstall left side catalytic converter O<sup>2</sup> sensor. Reroute wires away from exhaust system as needed
- 14. Reinstall the right side collector flange gasket and Y-Pipe with the right side catalytic converter.
- 15. Tighten all exhaust system fasteners to the correct torques.
- 16. Reinstall the two remaining O<sup>2</sup> sensors on the right side.
- 17. Connect the negative battery cable.

### START THE ENGINE

Start the engine and allow it to warm up to operating temperature. Check for any unusual noises or exhaust leaks. If every thing 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

### IMPORTANT CHECK LIST

- 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 dipstick tube was removed, make sure it is installed properly and that the dipstick has been replaced.
- Double-check the tightness of all bolts including brackets and accessories.

# **PARTS LIST**

Qty	Description
1	Left side header
1	Right side header
2	Header gaskets
2	Gasket, flange, 3 bolt
1	Gasket, E.G.R.
2	Gasket, A.I.R.
12	Bolt, header, 8mm x 1"
18	Lock-washers, 5/16"
6	Bolt, 5/6"-18 x 1"
6	Nut, 5/6"-18
6	Screw, cap, hex head, 3/8"-16 x 1-1/4
6	Lock-washer, 3/8"
1	Flange Block Off
1	Sticker (C.A.R.B., E.O., D-57-19)



#### WARNING

This label is required to aid in passing the California smog check program. This label must be installed in an underhood location that is readily visible.