



## WARRANTY NOTES

- 3) Retain all paperwork pertaining to the purchase of your Thorley product. Save your receipt!  
**Your limited warranty is not valid without a receipt of purchase.**
- 1) The utmost care is taken at Thorley Headers to maintain the highest standards of quality. However, Thorley Headers cannot control the installation of the product. For this reason, the Thorley Headers warranty covers only the replacement of the components - not the labor for the installation.
- 2) The use of any type of "header wrapping" voids the warranty. Using any sort of wrapping material on the headers destroys the tubing's ability to dissipate heat, causing very rapid deterioration of the metal and the subsequent failure of the headers.

## THY-470

### NISSAN/ SUZUKI 4.0L FRONTIER, PATHFINDER, XTERRA/ EQUATOR, 2005-14, 2/4WD

#### PARTS INCLUDED

Ref.	Description	Qty
1)	Driver Side Header	1
2)	Passenger Side Header	1
3)	M10x1.25x35mm Hex Flange Bolts	2
4)	M10x1.25 Hex Flange Nuts	2

#### TOOLS REQUIRED

Ref.	Description
1)	12mm, 14mm Wrenches
2)	12mm, 14mm Regular and Deep sockets
3)	Ratchet and Extensions
4)	Crescent Wrench, Torque Wrench and Rust Penetrant

#### LEGALITY NOTE

The installation of headers onto any vehicle must be performed in accordance with all governmental regulations that might pertain to the particular vehicle receiving the headers. Please call your Doug Thorley Headers distributor if there are any questions regarding the legality of the installation. **The Executive Order (“E.O.”) number for this part number is “PENDING”.**

#### INSTALLATION NOTES

- 1) It is important that you read the entire instruction sheet before initiating any installation.
- 2) Thorley headers are designed to fit only factory installed engine and transmission combinations. We cannot guarantee that Thorley headers will fit in the case of “engine swaps” or “transmission swaps”.
- 3) Due to restricted room in the engine compartment, your headers may come close to certain body and chassis components. This is normal for an installation of this type. However, a careful inspection must be completed to insure that the distances and placement are reasonable and logical, especially with regard to electrical, fuel, and brake components.
- 4) Because of the requirement to raise the engine to facilitate header installation, the engine mounts should be carefully inspected at that point of the installation. It is highly recommended that questionable or deteriorated engine mounts be replaced during the installation of the headers. In some cases, the engine mounts need to be loosened and repositioned to provide optimum header clearance from some components.
- 5) Because of car-to-car variations, **Thorley Headers strongly recommends that these headers be installed by a competent exhaust shop that has welding and fabrication capabilities.**

## INSTALLATION PROCEDURES

**WARNING!** - Do not rely on bumper jacks or chassis jacks for support during header installation. The subject vehicle should be raised and supported with jacking equipment and jackstands or ramps intended for undercarriage auto maintenance. It is extremely dangerous to work under an improperly raised and/or supported vehicle.

**WARNING!** - Make certain there is ample clearance around components such as brake lines, brake proportioning valves, fuel lines, hoses and pumps, and electrical components and wires. In some cases it may be necessary to relocate items that may be adversely affected by exhaust system heat.

**NOTE:** These procedures are documented on factory standard-equipped vehicles with original configuration compliance. Any modification of the subject vehicle may dictate modification to these procedures.

- 1) Disconnect the battery.
- 2) Raise the front of the vehicle approximately 24 inches and support it with jack stands or other suitable supports. (**WARNING!** - Do not rely on bumper jacks or chassis jacks for support during header installation. The subject vehicle should be raised and supported with jacking equipment and jackstands or ramps intended for undercarriage auto maintenance. It is extremely dangerous to work under an improperly raised and/or supported vehicle.)
- 3) Disconnect the O2 sensor harness from the motor. Remove the front two O2 sensors from each side of the catalytic converter pipes.
- 4) Remove the catalytic converter pipes. Be careful not to damage the factory gaskets as they will be reused with the new headers.
- 5) Begin to remove the passenger side manifold bolts. Retain all hardware as it will be reused with your new headers.
- 6) *To remove the passenger side manifold and heat shield it will be necessary to raise the motor up approximately 2". To do this you first must find a suitable place to support the engine. Then remove the main center bolt, the two bolts attached to the engine and the engine mount heat shield.*

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- 7) Remove both manifolds from the bottom of the vehicle.
- 8) While the passenger side is still jacked up, install the new headers along with the factory gaskets from under the vehicle. Snug the nuts down but do not tighten fully at this time.
- 9) Lower the engine back down until satisfied with the engine alignment. Then, install the main bolt, heat shield and the two bolts attaching the mount to the engine. Torque all bolts to factory specs.
- 10) Next, install the driver side header using the factory gasket. Snug the nuts down but do not tighten fully at this time.
- 11) Now reinstall the catalytic converter pipes with the factory crush (O-ring) gasket in place. Attach the assembly to the header using one supplied M10-1.25x35mm bolt and M10-1.25 nut along with the two factory nuts. Leave the connection loose at this time.
- 12) Once you are satisfied with the alignment of all the components, you may begin tightening everything down starting at the header first. Tighten down the header nuts starting in the middle working your way outward. Torque to factory specs.
- 13) Then tighten the connections at the catalytic converter pipes.
- 14) Reconnect both of the O2 sensor harnesses and reinstall both O2 sensors.
- 15) Check the header for proper clearance from any hoses or lines and that all connections along the exhaust system are tighten down properly. Wipe excess oil, grease and fingerprints off the headers with acetone or equivlant.
- 16) Reconnect the battery. Start the engine and check for leaks.
- 17) Re-torque all hardware to factory specs after approximately 20 minutes of operation.