

TOYOTA 3.4L (2000-04) TACOMA / (1999-02) 4RUNNER (2000-02) TUNDRA,
(1995.5-1999.5) TACOMA/4RUNNER w/EGR, 2/4WD



PARTS INCLUDED

Ref.	Description	Qty
1)	Driver Side Header Assembly	1
2)	Passenger Side Header Assembly	1
3)	Y-pipe Assembly	1
4)	Wiring Harness Relocator Bracket	1
5)	Large Crush Gasket	1
6)	Weld-on 2 Bolt Flange (thy-507 only)	1
7)	Adapter Assembly (thy-507-s only)	1
8)	Egr Tube Assembly (thy-507-s only)	1
<u>THY-507 HARDWARE KIT</u>		
9)	M10-1.25X55mm Hex Flange Bolts	4
10)	M10-1.25X35mm Hex Flange Bolts	2
11)	M10-1.25X25mm Hex Flange Bolts	6
12)	M10-1.25 Hex Flange Nut	2

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PARTS INCLUDED cont

Ref.	Description	Qty
13)	10mm Flat Washer	6
14)	M6-1.00X14mm Hex Flange Bolt	1
15)	M6-1.00 Hex Flange Nut	1
16)	O2 Sensor Block-off Plate	1
17)	O2 Sensor Flange Gasket	1
18)	Weld-on 2 Bolt Flange (thy-507 only)	1
19)	Adapter Assembly (thy-507-s only)	1
20)	Egr Tube Assembly (thy-507-s only)	1
<i>THY-507-S HARDWARE KIT</i>		
21)	M8-1.25X25mm Hex Flange Bolts	2
22)	M10-1.25X55mm Hex Flange Bolts	4
23)	M10-1.25X35mm Hex Flange Bolts	4
24)	M10-1.25 Hex Flange Nut	4
25)	8mm Flat Washers	2
26)	10mm Flat Washer	8
27)	M6-1.00X14mm Hex Flange Bolt	1
28)	M6-1.00 Hex Flange Nut	1

TOOLS REQUIRED

Ref.	Description	Ref.	Description
1)	3/8" Drive Ratchet and Extensions	6)	15mm Deep Socket
2)	7/8" Box wrench or O2 Sensor Socket	7)	5/8" Spark Plug Socket
3)	9/16" Line (flare nut) Wrench	8)	Pilers
4)	5/16", 7/16", 1/2", 9/16" Sockets	9)	Crescent Wrench
5)	3/8", 7/16" Deep Sockets	10)	Torque Wrench
		11)	Rust Penetrant

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WARRANTY NOTES

- 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.
- 3) The chrome plating applied to all Thorley headers is a high-nickel chrome finish applied to retard corrosion. This is a "heat" chrome to preserve the metal. This finish is not "show chrome" intended for the sake of appearance. This high-nickel chrome turns colors and approaches black as it cooks into the metal. The brilliance of the chrome finish is not covered under the warranty. Contamination of the surface by foreign substances may produce other color patterns. This can be prevented by routine cleaning.
- 4) 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.

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 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 D-540-4.**

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".

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- 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. This header installation will require welding.***

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.)

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- 3) Remove air intake track and all hoses and wires associated.
- 4) Unbolt the O2 sensor being careful not to damage it, then remove the catalytic converter pipe.
- 5) Remove the intake chamber stay bracket from the Driver side manifold and cylinder head (if applicable). Retain all the stock hardware.
- 6) Unbolt the exhaust manifolds (in some cases it will be necessary to remove the exhaust manifold studs from the cylinder heads). Retain all stock hardware as you will reuse some of it later in the installation.
- 7) (On EGR equipped vehicles) Remove the EGR tube between the brake booster and the cylinder head.
- 8) To remove the factory cross-over pipe you must first remove the four bolts near the tail shaft of the transmission mount after supporting the transmission using a floor jack. You then must raise the transmission approximately 2". Make sure that all sensors and wiring harnesses are out of the way so you do not crush them. With the transmission still jacked up you will need to use a pry bar to pry the engine/transmission forward about 1/4" to 1/2". At this point the cross-over pipe will almost fall right out. Once the cross-over is out, you may then drop the transmission back into its mount and tighten the four bolts to the manufacture's torque specs.
- 9) Installation: First install the Y-pipe, feeding it through from the passenger side.
- 10) If you removed the manifold studs, replace them now along with the factory supplied manifold gaskets. Install the driver's side header from the top. Start all factory nuts but do not tighten at this time. Use the supplied relocation bracket to relocate the "L" shaped wiring harness retainer and flatten out the original bracket to accommodate the new two hole extension bracket. You will need to reuse the original 6mm bolt and the supplied 6mm bolt and nut.
- 11) While the header is loosely installed, reinstall the factory intake chamber stay bracket if applicable using the stock hardware.
- 12) If your truck is an automatic, you may need to relocate your TV cable. Take the time to visually check for any hoses or wiring that may come in contact with the driver side header during operation.

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- 13) Next, Install the factory gaskets and any studs that you may have removed. Install passenger side header from the top using the supplied M10-1.25X25mm bolts instead of the factory studs. Leave the bolts loose at this time.

Helpful Hint: Remove the inner fenderwell shield and using a long extension and a universal socket to get to the hard to reach nuts and bolts. This will shorten installation time.

- 14) Start all supplied hardware connecting Y-pipe to the headers leaving them loose at this time.
- 15) You may now tighten the header nuts to factory specs starting in the center working your way outward. Repeat for the opposite side.
- 16) Before you begin to tighten the Y-pipe you will need to adjust for the best fit and seal. When satisfied with the positioning, tighten the Y-pipe the the headers.
- 17) Reinstall the O2 sensor using the supplied nuts or the O2 sensor Block-off plate in conjunction with the supplied gasket if your vehicle is a Non-California spec.
- 18) (On EGR equipped vehicles) Install the new EGR tube using supplied hardware.
- 19) (On EGR equipped vehicles) Install the Adapter pipe using the supplied hardware.

(Note: The following only applies to Non-EGR equipped vehicles.)

- 20) At this time you will need to cut your catalytic converter off of the stock headpipe. This is done one of two ways depending on your vehicle.

California Spec. vehicles: The preferred method to cut your pipe is using a band saw or hacksaw. You will need to cut your pipe at 3/8" to 1/2" after the weld but before the original O2 sensor mounting flange. This will leave a stub just in front of the catalytic converter for welding on the supplied 2-bolt flange. Using a rat tail file, deburr the pipe inside and out. (Shown on Pg. 6)

Non-California Spec. vehicles: The preferred method to cut your pipe is using a band saw or hacksaw. You will need to cut your pipe at 1-7/8" below the weld of the merge collector measuring on the top of the tube and a 1-3/4" below the weld measuring on the bottom of the tube in front of the catalytic converter. This will leave a stub just in front of the O2 sensor flange for welding on the supplied 2-bolt flange. Using a rat tail file, deburr the pipe inside and out. (Shown on Pg. 6)

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California Spec. Catalytic Converter Configuration



Non-California Spec. Catalytic Converter Configuration



- 21) Once you made your cut, you may now mock up the Cat. and the supplied 2-bolt flange and tighten all nuts and bolts. You will reuse the factory hardware at the rear of the Cat.
- 22) Position the pipe until satisfied with the positioning and tack weld the flange in three or four spots.
- 23) Then remove the entire assembly and finish welding the new flange to the Cat. Once the pipe has cooled down, reinstall it using the supplied crush gasket and tighten down all hardware (Shown Below).
- 24) Again, inspect all hoses and wiring for adequate clearance. Also, make sure all hardware is securely fastened.
- 25) Reinstall the air intake and related pieces. Reconnect the battery.
- 26) Start the engine and check for any leaks.
- 27) Re-torque all hardware to factory specs after approximately 20 minutes of operation.