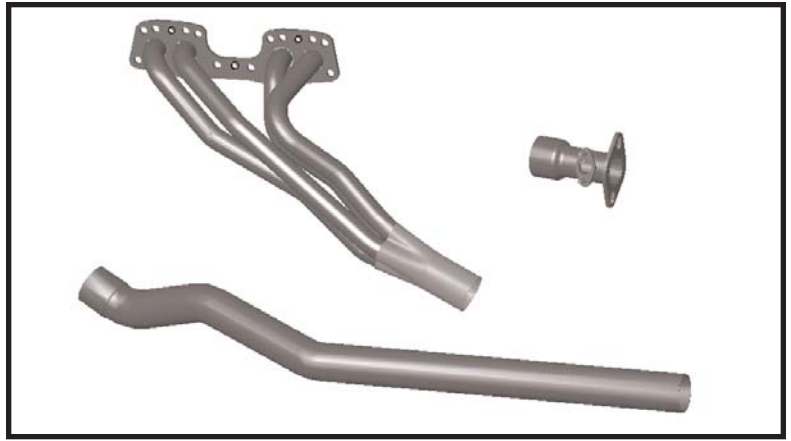


DOUG THORLEY HEADERS

BY SUMMIT INDUSTRIES

THY-504

TOYOTA 20R/22R
88-95 2WD PICKUP



PARTS INCLUDED

- 1 - Header
- 1 - Downpipe
- 1 - Connector pipe assembly
- 1 - Hot air pickup
- 1 - Header gasket (9542)
- 1 - 2-bolt gasket (9004)
- 2 - 2-1/2" Muffler clamps
- 2 - EGR gaskets (9008)
- 1 - Oxygen sensor gasket (9002)

HARDWARE INCLUDED

- 2 - 3/8"-16 x 1-1/4" Hex head bolts
- 2 - 3/8"-16 Hex nuts
- 2 - 3/8" Star lock washers
- 4 - 3/8" Flat washers
- 2 - 5/16"-18 x 3/4" Hex head bolts
- 2 - 5/16"-18 Hex nuts
- 2 - 5/16" Star lock washers
- 2 - 5/16" Flat washers
- 1 - 12mm Copper crush washer
- 1 - M10x1.25x25mm Hex head bolt

TOOLS REQUIRED

- 3/8", 7/16", 9/16", 1/2", 3/4", 7/8" Wrenches
- 10mm, 13mm Wrenches
- 9/16" Line (flare nut) wrench
- 5/16", 7/16", 1/2", 9/16" Sockets
- 3/8", 7/16" Deep sockets
- 15mm Deep socket
- 5/8" Spark plug socket
- Ratchet and extensions
- Pliers
- Crescent wrench
- Torque wrench
- Rust penetrant
- High-temp sensor-safe silicon sealer (rated at 600 degrees+)

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.

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WARRANTY NOTES

- 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.**

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.

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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 exhaust pipe from the exhaust manifold and the catalytic converter. Remove the exhaust pipe support bracket from the bellhousing.
- 4) Disconnect the air injection tubing from the engine. Disconnect the air injection tubing bracket at the rear of the engine.
- 5) Remove and retain the oxygen sensor.
- 6) Remove the stock exhaust manifold.
- 7) Clean all traces of carbon deposits from the cylinder head exhaust port surfaces.

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- 8) (Note: The use of high-temp sensor-safe silicon sealer between the header flange and header gasket is highly recommended.) Install the header and supplied header gasket from above the vehicle using the stock nuts. *Note: Depending on the vehicle may have to install the copper crush washer between the cylinder head and the new header located in the center of the flange towards the bottom. Plug the hole using the supplied M10x1.25x25mm bolt.* Tighten the stock nuts to 35 ft/lbs.
- 9) Attach the supplied downpipe to the header collector using the supplied 2-1/2" muffler clamp. Do not fully tighten.
- 10) Attach the supplied connector pipe assembly to the downpipe using the 2-1/2" muffler clamp. Use the supplied 2-bolt gasket in conjunction with the stock gasket, and 3/8"-16 x 1" hex head bolts, nuts, and washers to mount to stock system. (See Illustrations, Figure 1 for a view of the assembled system.) **Note: You may have to cut your downpipe 12-1/2" for standard-cab / short bed truck.**
- 11) Reinstall all original-equipment emission controls with the supplied gaskets.
- 12) Using the supplied gasket and 5/16"-18 X 3/4" hex head bolts, nuts and washers, reinstall the oxygen sensor from the top into the fitting on the connector pipe and reconnect the wiring.
- 13) Tighten all muffler clamps at this time.
- 14) Reconnect the battery. Start the engine and check for leaks.
- 15) Re-torque all hardware after approximately 20 minutes of operation.

Figure 1 (Assembled view)

