

2004-05 FORD F150 4.6L 2V TRITON 2/4WD



PARTS INCLUDED

Ref.	Description	Qty
1)	Driver Side Header Assembly	1
2)	Passenger Side Header Assembly	1
3)	Header Gasket	2
4)	M8 X 1.25 X 25mm Flange Head Bolt	16
5)	8mm Star Lock Washers	16
6)	3/8"-16 X 2 1/2" Hex Head Bolts	4
7)	3/8"-16 Hex Nuts	4
8)	3/8" Flat Washers	8
9)	3/8" Split Lock Washers	4
10)	M6 X 1.00 X 16mm Flange Head Bolt	1

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TOOLS REQUIRED

Ref.	Description	Ref.	Description
1)	12mm Wrenches (various lengths)	6)	5/8" , 13/16" Spark Plug Sockets
2)	1/4" and 3/8" Ratchet and Extensions	7)	Rust Penetrant
3)	7/32", 5mm, 8mm, 13mm, 15mm Deep Sockets	8)	Torque Wrench
4)	8mm, 10mm, 12mm, 14mm Wrenches		
5)	7/16" Sockets (shallow and deep)		

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.

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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. This part number is considered a legal replacement part on vehicles that have a catalytic converter, as long as all original emission control devices are connected and functioning properly. As a result, **the Executive Order (“E.O.”) number for this part is D-540-3.**

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.

NOTE: All Thorley headers featuring air injection options are designed to accept the most readily available original equipment manufacturer's looms. Should your stock looms not match the fittings on the headers, or should you suspect that your original looms will not survive the re-installation onto the Thorley headers, your local Ford parts department may be able to provide replacements using these part numbers:

INSTALLATION PROCEDURES

- 1) Disconnect the battery.
- 2) Raise the vehicle at least 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.) With jack stands in place, remove both front tires.
- 3) Starting on the driver side, remove the air box.
- 4) Disconnect the the exhaust system from the manifold and remove the O2 sensor (use caution when removing the O2, unplug first, twisting the wires could damage the O2)

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- 5) Remove the engine oil dipstick and mounting tube by unbolting and gently wiggling out of the block.
- 6) Using crescent wrench or 1-1/4" open end wrench, loosen EGR tube from manifold.
- 7) Remove the studs/ nuts from the cylinder head using a 5mm socket and Ratchet. Then remove the stock manifold.
- 8) Prep the surface of the head by cleaning all carbon deposit using a Scotch Brite pad.
- 9) Using a 8mm socket, remove dip stick tube mounting bolt, and remove the dip stick tube.
- 10) Remove the EGR fitting from the factory manifold and install it on the new header.
- 11) To install the driver side header you must remove the catalytic converter assembly from the transmission crossmember assembly. Use a 15mm socket wrench at the slip joint. Loosen nut and remove from truck. Set factory crossover pipe aside, you will use this again.
- 12) Slip the driver side header through the bottom of the truck. Once the header is aligned, use supplied gasket and head bolts and tighten all bolts to 35-40 ft. lbs. Tighten the EGR tube assembly to the new header. (It may be necessary to loosen to top fitting while reinstalling the EGR assembly)
- 13) Next reinstall catalytic converter assembly, using supplied 3/8" x 2-1/2" bolts and hardware tighten the header to the connector pipe.
- 14) Install the factory dipstick tube using supplied M6 X 1.00 X 15mm bolt. Then retighten the EGR tube assembly.
- 15) Make sure all bolts are securely fastened on the driver side.
- 16) Remove the inner fenderwell on the Passenger side.
- 17) From the top snug the header down using the supplied flanged head bolts.
- 18) Remove all studs and nuts from the cylinder head.
- 19) From underneath the vehicle you will need to unbolt and remove the starter assembly.

- 20) Remove the exhaust manifold.
- 21) Remove transmission dipstick tube (you will lose fluid so drain in a clean bucket to reuse or buy new trans. fluid, see manufacturer's specs proper trans. fluid types).
- 22) It may be necessary to loosen A/C condenser nuts to allow movement for the header to pass through.
- 23) Removing the tire may be helpful upon installation, support the truck with jackstands.
- 24) Install the header, collector end first, through the fenderwell. Once the header is in, rest it on the frame.
- 25) Reinstall the transmission dip stick at this time.
- 26) With the gasket in place, install the top three bolts from the back of the engine with enough clearance for the flange.
- 27) Start all bolts and tighten starting in the center and working outward.
- 28) Next, reinstall the fenderwell and tire/wheel and tighten the A/C condenser nuts.
- 29) Install the factory connector pipe using the supplied 3/8"X2-1/2" long bolts.
- 30) Reinstall the O2 sensors.
- 31) Double check all work, check all bolts to make sure everything is tightened and no wires are resting on the header.
- 32) Reconnect battery and start the engine. After engine is started check for leaks.
 - a) Retighten the header bolts to 35 ft/lbs after approximately twenty minutes operation. (Note: Remember the engine will be hot at this time. Protect yourself accordingly.)
 - b) Check and retighten the header bolts to 35 ft/lbs after the first month of operation.
 - c) Follow the "Relearning Process" as described in your Owner's Manual.