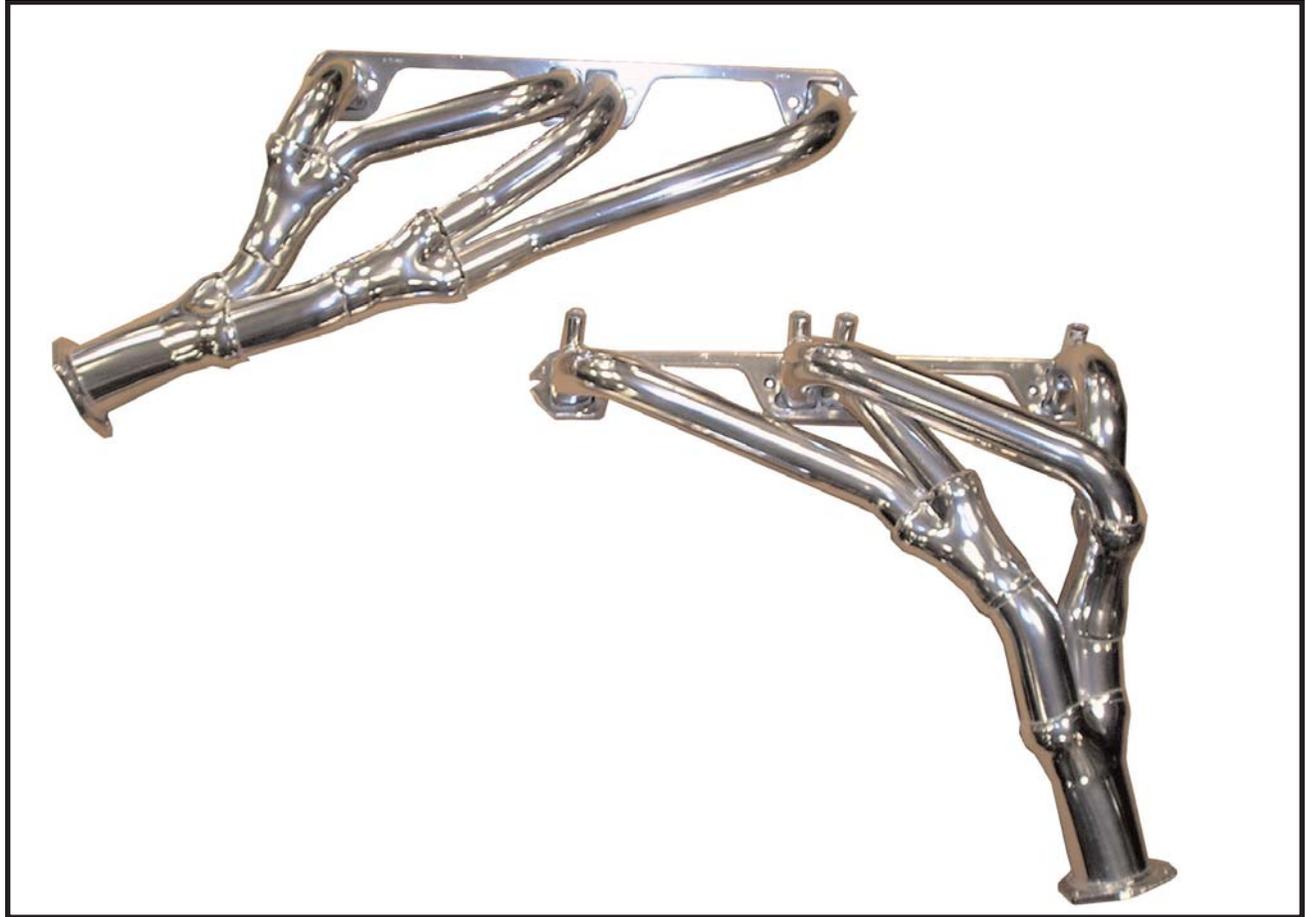


JEEP 304-401
72-92 J-SERIES PICKUP,
WAGONEER, CHEROKEE



PARTS INCLUDED

Ref.	Description		Ref.	Description	
1)	Right side header	1	7)	3/8"-16 x 1" Header bolts	12
2)	Left side header	1	8)	3/8"-16 x 2 1/2" Hex head bolts	6
3)	Hot air pickup	1	9)	3/8"-16 Hex nuts	6
4)	Header gaskets	2	10)	3/8" Flat washers	12
5)	2-1/2" Collector gaskets	2	11)	5/16-18x1" Header bolts	12
6)	2 1/2" Spacers	2			

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TOOLS REQUIRED

Ref. Description	Ref. Description
1) Heating torch	9) 3/8", 7/16" Deep sockets
2) Mig welder	10) 15mm Deep socket
3) Cut-off saw	11) 5/8" Spark plug socket
4) Sawzall	12) Ratchet and extensions
5) 3/8", 7/16", 9/16", 1/2", 3/4", 7/8" Wrenches	13) Pliers
6) 10mm, 13mm Wrenches	14) Crescent wrench
7) 9/16" Line (flare nut) wrench	15) Torque wrench
8) 5/16", 7/16", 1/2", 9/16" Sockets	16) Rust penetrant
9) 3/8", 7/16" Deep sockets	

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) 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.

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INSTALLATION NOTES

- 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 hot air pickup from the air filter. Remove the air filter assembly.
- 4) Remove the spark plug wires and the spark plugs.
- 5) Spray all exhaust system-related fasteners with a liberal amount of rust penetrant and allow to soak to prevent possible breakage of bolts.
- 6) Remove the engine oil dipstick support bracket from the driver side valve cover and carefully remove the dipstick tube from the side of the block.

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INSTALLATION PROCEDURES

- 7) Unbolt and remove the stock manifolds.
 - 8) Clean all traces of carbon deposits from the cylinder head exhaust port surfaces.
 - 9) Reinstall the dipstick tube. Reinstall the dipstick tube support bracket onto the valve cover fastener.
 - 10) Attach the entire connector pipe assembly using the appropriate supplied collector gaskets and hardware. Do not fully tighten at this time.
 - 11) Starting in the center of the header flanges and working toward the ends, tighten the header bolts to 35 ft/lbs.
 - 12) Tighten the connector pipe hardware to 35 ft/lbs.
 - 13) Reinstall the spark plugs and spark plug wires.
 - 14) Reinstall the air cleaner and install/attach the supplied hot air pickup.
 - 15) Reconnect the battery. Start the engine and check for leaks.
 - 16) Because the header bolts will initially stretch when hot, we recommend adhering to the following steps:
 - a) Retighten the header bolts to factory specs after approximately 20 minutes of operation.
- (Note: Remember the engine will be hot at this time. Protect yourself accordingly.)
- b) Check and retighten the header bolts to factory specs after the first month of operation.