2005-09 Mustang 4.6L 3V Shorty Headers INSTRUCTION SHEET

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD RACING PERFORMANCE PARTS

Please contact the Tech Line for the most current instruction information (800) 367-3788
! ! ! PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION ! ! !

## OVERVIEW:

This kit is designed for the use in 2005-09 Mustangs with 4.6L 3V engines. The use of a floor hoist is recommended. If you do not have access to one, use a hydraulic floor jack and jack stands to raise the vehicle.

## ! ! ! CAUTION: JACK STANDS MUST BE USED ON A LEVEL SURFACE AND BE SECURELY SEATED. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR VEHICLE DAMAGE ! ! !

## PARTS INCLUDED IN KIT:

(16) Hex cap screws $8 \mathrm{~mm}-1.25 \times 20 \mathrm{~mm}$
(4) Studs 10 mm interference $\times 10 \mathrm{~mm}-1.50 \times 65 \mathrm{~mm}$
(4) $10 \mathrm{~mm}-1.50$ nuts
(1) Left header
(1) Right header
(2) Header gaskets
(1) Instruction Sheet

INSTALLATION INSTRUCTIONS:

## !!! PERFORM THE FOLLOWING WORK ON A COLD VEHICLE ONLY !!!

STEP 1: Disconnect battery cable.
STEP 2: Remove air cleaner assembly.

- Remove (1) fastener at air cleaner.
- Remove (1) vacuum line.
- Disconnect Mass Air Meter.

STEP 3: Raise vehicle and support.
STEP 4: Loosen clamps located between H pipe and tailpipe.
STEP 5: Remove exhaust manifold to H pipe nuts (2 per side).
STEP 6: Remove lower exhaust manifold nuts and studs (4 per side accessible from underneath).
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Factory Ford shop manuals are available from Helm Publications, 1-800-782-4356

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STEP 7: Disconnect CMS sensors located on catalytic converter (1 per side)
STEP 8: Disconnect passenger side HEGO sensor located between exhaust manifold and catalytic converter.
STEP 9: Remove H pipe.
STEP 10: Disconnect driver side HEGO sensor located on exhaust manifold.
STEP 11: Remove steering column pinch bolt at rack.
STEP 12: Remove steering column bearing nuts (2) located under dash on firewall.
STEP 13: Slide steering column up and off rack.
STEP 14: Remove dipstick (1 fastener on cylinder head).
STEP 15: Remove upper exhaust manifold nuts and studs (4 per side).
STEP 16: Remove exhaust manifolds (removable from underneath).
STEP 17: Remove HEGO sensor from driver side exhaust manifold.
STEP 18: Install HEGO sensor in driver side header and torque $47.5 \mathrm{~N}^{*} \mathrm{M}+/-7.2 \mathrm{~N}^{*} \mathrm{M}(35 \mathrm{lb}-\mathrm{ft}+/-5)$.
STEP 19: Install driver side header and gasket.
NOTE: Check clearance at H pipe flange to bell housing. Due to casting tolerance clearance if necessary.

STEP 20: Torque header bolts to $25 \mathrm{~N}^{*} \mathrm{M}+/-3.8$ ( $18.5 \mathrm{lb}-\mathrm{ft}+/-2.5$ ) ( 8 per side).
STEP 21: Install passenger side header and gasket.
STEP 22: Torque header bolts to $25 \mathrm{~N}^{*} \mathrm{M}+/-3.8$ ( $18.5 \mathrm{lb}-\mathrm{ft}+/-2.5$ ) ( 8 per side).
STEP 23: Install dipstick.
STEP 24: Torque dipstick fastener to $9.0 \mathrm{~N}^{*} \mathrm{M}+/-1.4$ ( $6.5 \mathrm{lb}-\mathrm{ft}+/-1$ ).
STEP 25: Install H pipe.
STEP 26: Install and torque header to H pipe nuts to $40 \mathrm{~N}^{*} \mathrm{M}+/-6$ (29.5 $\left.\mathrm{lb}-\mathrm{ft}+/-4\right)(2$ per side).
STEP 27: Position clamps (H pipe to tailpipe).
STEP 28: Torque clamp fasteners to $47.5 \mathrm{~N}^{*} \mathrm{M}+/-7.5$ ( $35 \mathrm{lb}-\mathrm{ft}+/-5$ ).

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STEP 29: Install steering column on rack.
STEP 30: $\quad$ Tighten steering column pinch bolt to $25 \mathrm{~N}^{*} \mathrm{M}+/-3.8$ ( $18.5 \mathrm{lb}-\mathrm{ft}+/-2.5$ ).
STEP 31: Install and torque steering column bearing nuts (2) located under dash on firewall to $9.0 \mathrm{~N}^{\star} \mathrm{M}+/-1.4$ ( $6.5 \mathrm{lb}-\mathrm{ft}+/-1$ ).

STEP 32: Connect HEGO sensors (1 per side) and CMS sensors (2) located on catalytic converters.
STEP 33: NOTE: Loosen engine mounts and transmission crossmember mounts and bias the engine and transmission assembly within the mounts to the RH side (pass side) of the vehicle. Location and torque values are shown below.

ENGINE MOUNT NUTS (2) (RH shown, LH similar).
Tighten to 63 Nm (46 lb-ft).


## TRANSMISSION CROSSMEMBER BOLTS (4)

Tighten the 4 crossmember-to-frame bolts to $62 \mathrm{Nm}(46 \mathrm{lb}-\mathrm{ft})$.


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STEP 34: Install air cleaner assembly.

- Torque fastener at air cleaner to $8.0 \mathrm{~N} * \mathrm{M}+/-1.2(6 \mathrm{lb}-\mathrm{ft}+/-1)$.
- Install vacuum line.
- Connect Mass Air Meter.

STEP 35: Connect battery.
STEP 36: $\quad$ Start engine and check for leaks.

