

Enginetech Inc
Tech Assistance 800-410-3664 ext. 340 or 237

TECHNICAL BULLETIN	
	July 1999 TB 1704
Mfg:	FORD
Model:	MUSTANG
Liter:	4.6L
V I N:	W, X
Year:	91-09

Timing Chain Installation Procedure On
1991-99 Ford 4.6L VIN W,6 & 9 SOHC Engines

The AERA Technical Committee offers the following information regarding timing chain installation procedures on 1991-99 Ford 4.6L VIN W,6 & 9 SOHC engines.

To properly install the timing chain on this engine, Ford offers the following information. DO NOT rotate engine with the timing chain(s) removed due to the possibility of engine damage occurring.

1. Install all spacers, camshaft sprockets and retaining bolts and tighten to 81-95 ft/lbs.
2. Camshaft Positioner, Part #T92P-6256-A, should be installed on the flat areas of the camshaft, see figure 1, if not already installed. CAUTION: Install crankshaft sprocket hubs with halves facing each other, see figure 2.
3. Install crank sprocket for left timing chain. Locate the two copper timing links on the timing chain. If links are not visible, fold the timing chain in half, see figure 2, and mark each end link for timing purpose.
4. Make sure that number one piston is at TDC. When at TDC, the crankshaft keyway should be 45° from vertical (see figure 3) and point towards the camshaft.
5. Install the left timing chain onto the crankshaft and camshaft sprockets making sure that the copper links line up with the timing marks on the gears as seen in figure 4. Install the crankshaft sprocket for the right timing chain.
6. Install the right timing chain making sure that the copper links are in line with the timing marks on the sprockets. Crankshaft Positioner, Part #T93P-6256-A, should be installed to prevent the crankshaft from moving.
7. Lubricate the tensioner arms and install them in the correct location. Chain guides should also be installed.
8. The chain tensioners must be bled down so that the tensioner plunger is

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- compressed in the housing before installation can occur. Install tensioner into a soft-jawed vise and using a small pick, see figure 5, hold the ratchet lock away from the ratchet stem. Slowly close the vise to depress plunger.
9. With the tensioner plunger compressed in the housing, install a paper clip into the hole on the housing to hold the ratchet lock mechanism in place. Make sure that the ratchet stem is even with the tensioner housing before installation of the paper clip as shown in figure 5.
 10. Using a "C" clamp, or suitable tool, remove all slack in the timing chain by applying pressure to the tensioner arm. With pressure being held on the arm, install both chain tensioners and retaining bolts on the cylinder block. Tighten all bolts to 15-22 ft/lbs.
 11. Remove the paper clips from both chain tensioners. Make sure that all timing marks are still in alignment. To check the accuracy of valve timing, remove the number one spark plug. Using a dial indicator, check for valve lift. Maximum valve lift should occur at 114° after TDC.

The AERA Technical Committee

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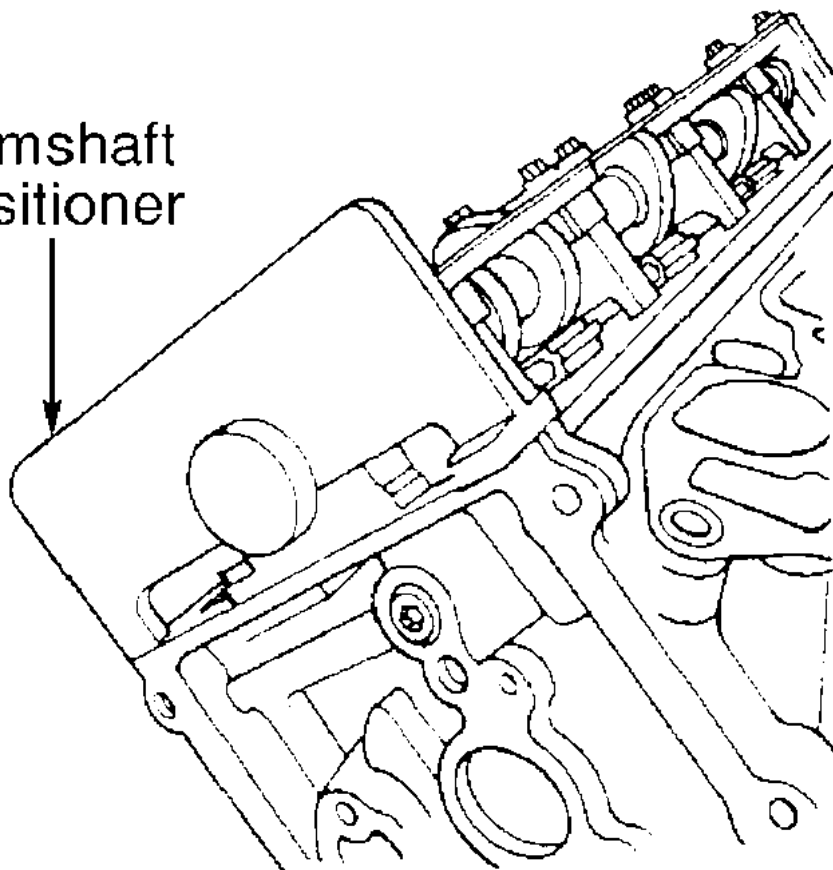
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Bulletin Diagram: Untitled Graphic #2409 for TB 01704

Camshaft
Positioner



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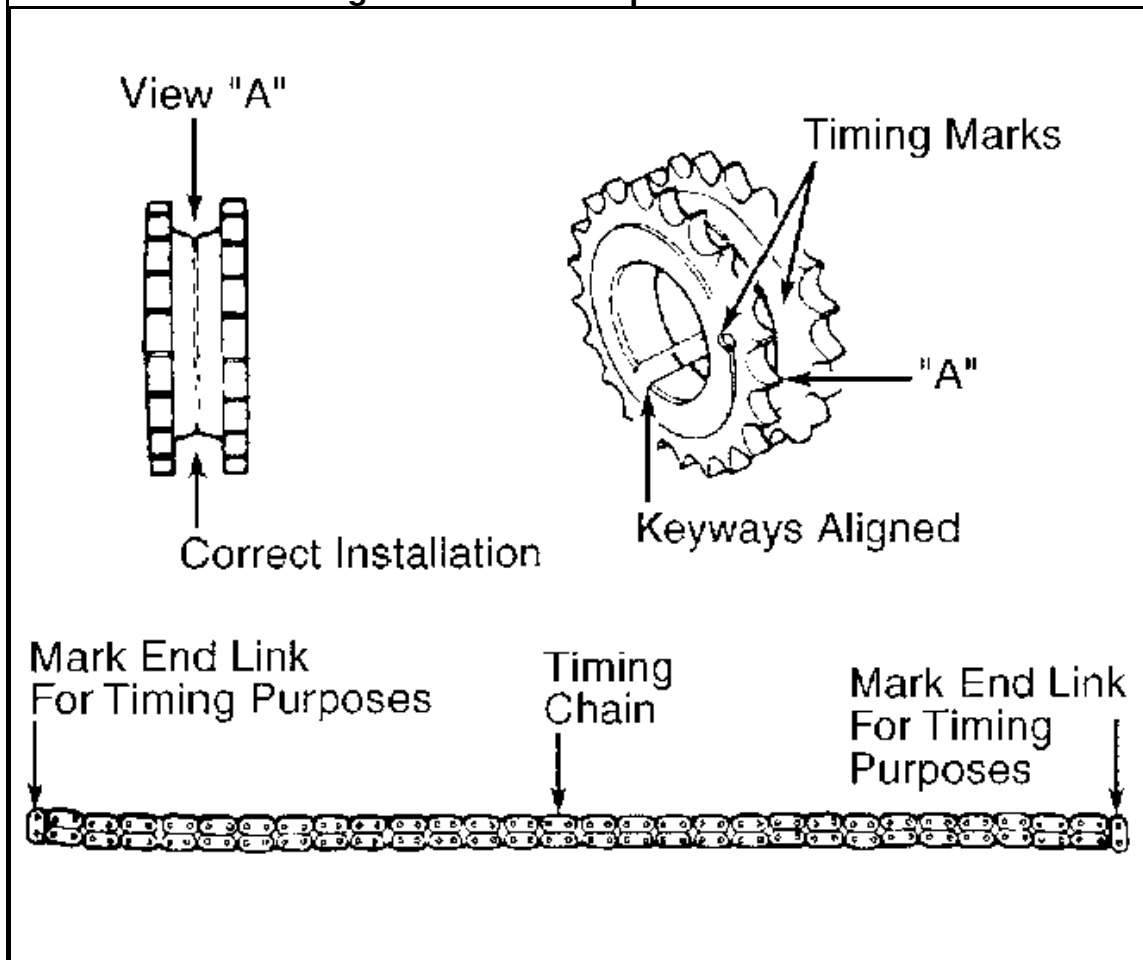


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Bulletin Diagram: Untitled Graphic #2410 for TB 01704



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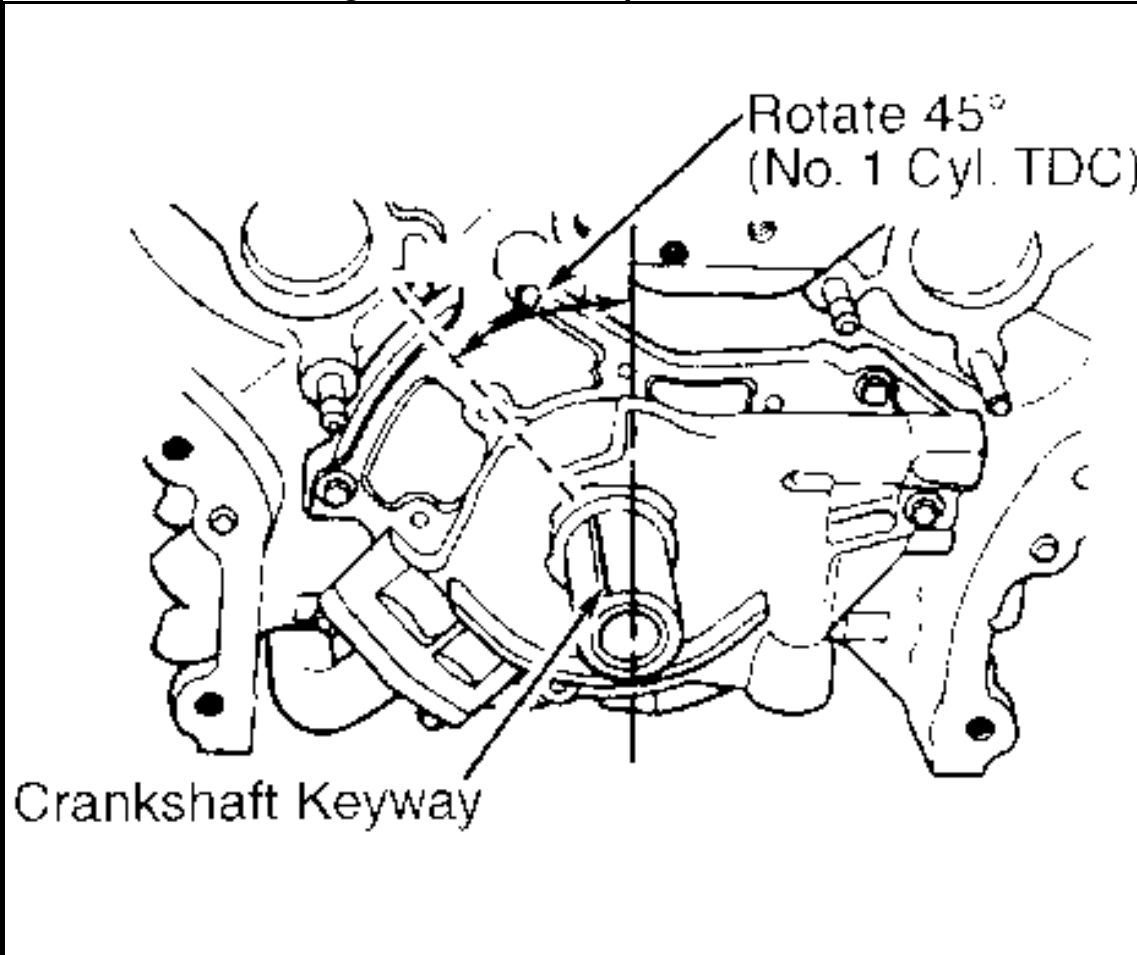


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VIN: W, X
Year: 91-09

Bulletin Diagram: Untitled Graphic #2411 for TB 01704



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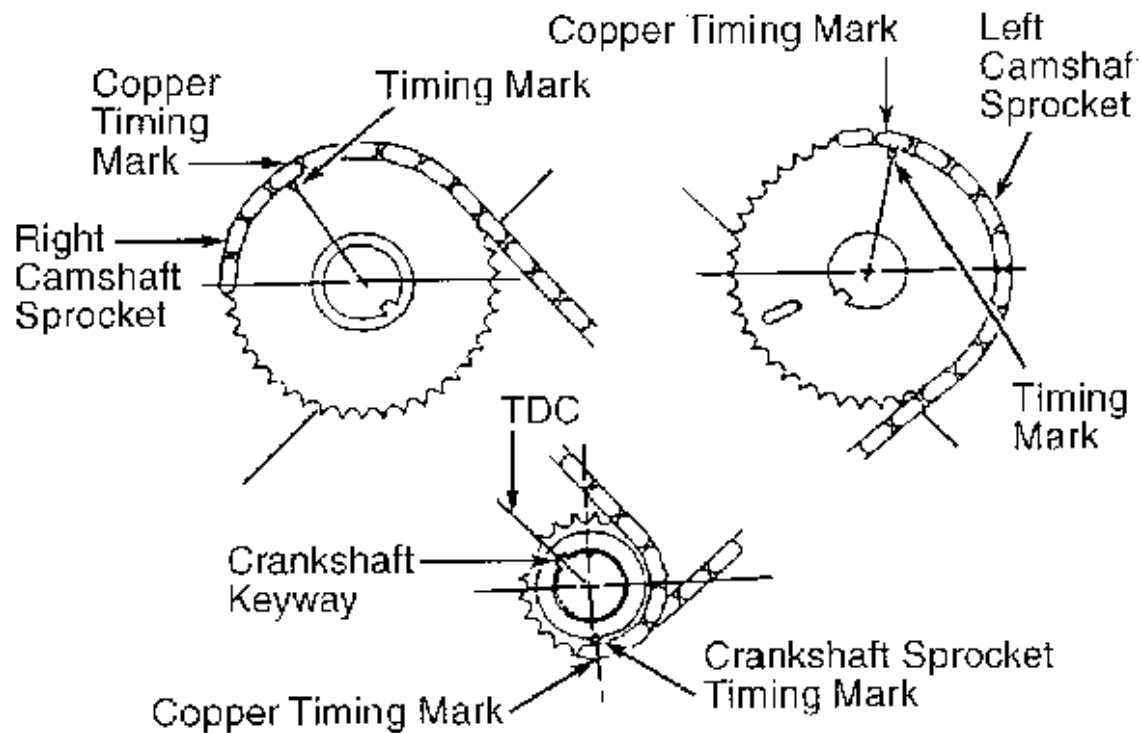


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Bulletin Diagram: Untitled Graphic #2412 for TB 01704



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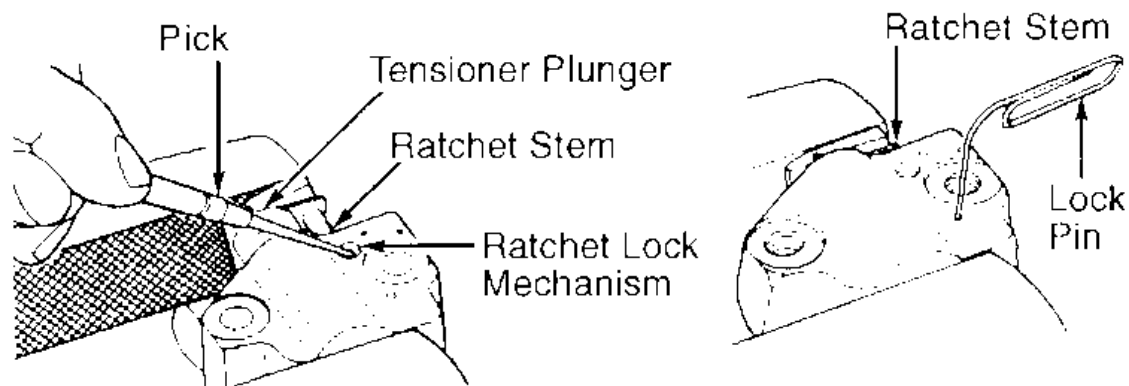


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