

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

TECHNICAL BULLETIN	
	July 1999 TB 1672R
Mfg:	FORD
Model:	WINDSTAR
Liter:	3.8L
V I N:	4
Year:	96-03

Revised Head Bolt Torque Procedure On
1996-03 Ford 3.8L VIN 4 Engines

The AERA Technical Committee offers the following information on revised head bolt torque procedure used on 1996-99 Ford 3.8L VIN 4 engines. Premature failure of the head gasket may occur along with engine coolant leakage if this procedure is not observed. If coolant leakage is not addressed, failure may result when the engine is allowed to continue operating.

To reduce the likelihood of this condition, Ford now offers a revised head bolt torque procedure. Correctly following the steps listed below and observing the sequence shown in Figure 1 will help in preventing head gasket failures.

- Step 1) 15 ft/lbs. (20 Nm)
Step 2) 30 ft/lbs. (40 Nm)
Step 3) 37 ft/lbs. (50 Nm)
Step 4) Long bolts: (One Bolt at a time)
a) Loosen long bolt and back out 2 to 3 turns.
b) Retorque long bolt 30-37 ft/lbs (40-50 Nm).
c) Rotate long bolt an additional 175-185° degrees.
d) Go to the next bolt in sequence.

- Short bolts: (One Bolt at a time)
a) Loosen short bolt and back out 2 to 3 turns.
b) Retorque short bolt 15-22 ft/lbs (20-30 Nm).
c) Rotate short bolt an additional 175-185° degrees.
d) Go to the next bolt in sequence.

Caution: Do not loosen all of the bolts at one time. Work on one bolt at a time in the sequence shown in Figure 1. Failure to loosen bolts in proper sequence could cause the cylinder head to warp. **Note:** This procedure can also be used on

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Reference:	
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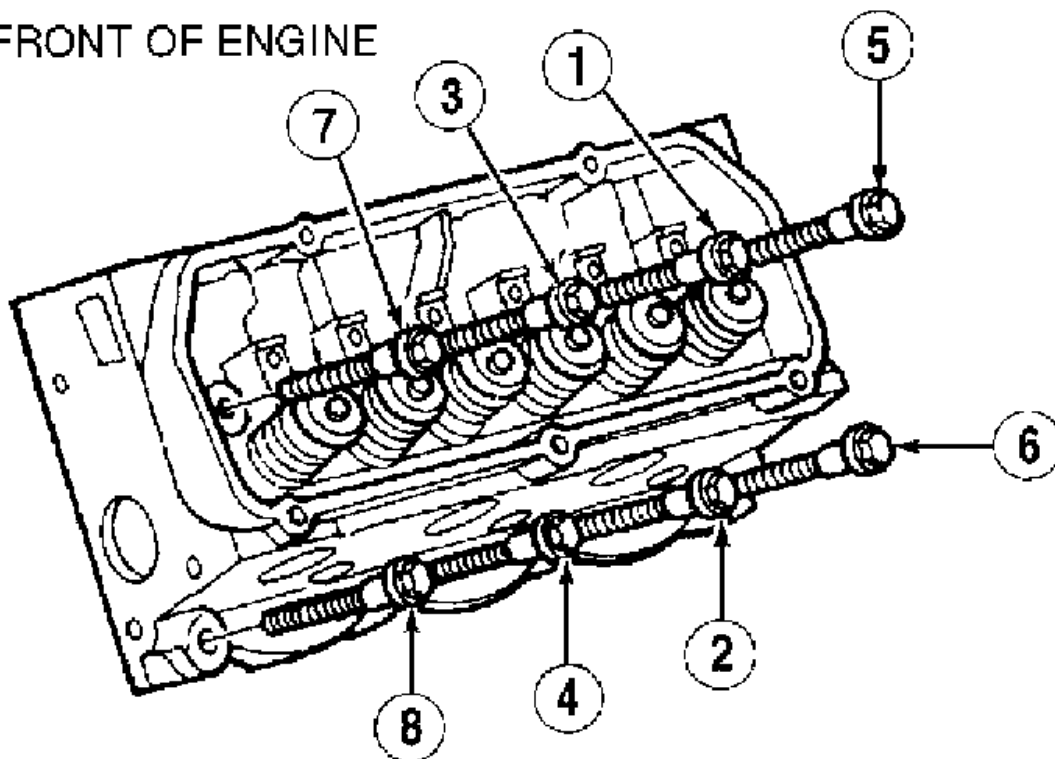
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1994 Continental, 1994-95 Taurus/Sable and 1995 Windstar equipped with a 3.8L FWD engine.

The AERA Technical Committee

Bulletin Diagram: Untitled Graphic #2393 for TB 01672R

← FRONT OF ENGINE



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Reference: