

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

TECHNICAL BULLETIN	
	July 2001 TB 1903
Mfg:	FORD
Model:	F-SERIES
Liter:	4.2L
V I N:	2
Year:	97-08

Revised Head Bolt Torque Procedure On
1997-2001 Ford 4.2L VIN 2 Engines

The AERA Technical Committee offers the following information on revised head bolt torque procedure used on 1997-2001 Ford 4.2L VIN 2 engines. Premature head gasket failure may occur along with engine coolant leakage if the procedure described below is not observed. If internal or external coolant leakage is not corrected, failure may result when the engine is allowed to continue operating.

This engine uses a MLS (multi-layered steel) head gasket and requires a surface finish of 30 Ra or less. This gasket and head assembly also requires a very detailed head bolt torque procedure. Before installing the heads, obtain a set of new head bolts as these bolts are intended for one time use.

To install this assembly correctly, following the steps listed below, observing the sequence shown in Figure 1. Doing so, will minimize the likelihood of head gasket failures due to improper clamping load. Before installation, lubricate all bolts with clean Super Premium SAE 5W-30 Motor Oil XO-5W30-QSP or equivalent meeting Ford specification WSS-M2C153-G.

Step 1) Torque all bolts in sequence to 14 ft/lbs. (19 Nm)

Step 2) Torque all bolts in sequence to 29 ft/lbs. (39 Nm)

Step 3) Torque all bolts in sequence to 36 ft/lbs. (49 Nm)

Step 4)

Long bolts: (One Bolt at a time in sequence 1,3,5,7)

a)* Loosen long bolt and back out 3 revolutions.

B)* Retorque long bolt 30-36 ft/lbs (41-49 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 in sequence 2,4,6,8)

a)* Loosen short bolt and back out 3 revolutions.

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- 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 with one bolt at a time in the sequence shown in Figure 1 below. Failure to loosen bolts in proper sequence may cause the cylinder head to warp excessively.

The AERA Technical Committee

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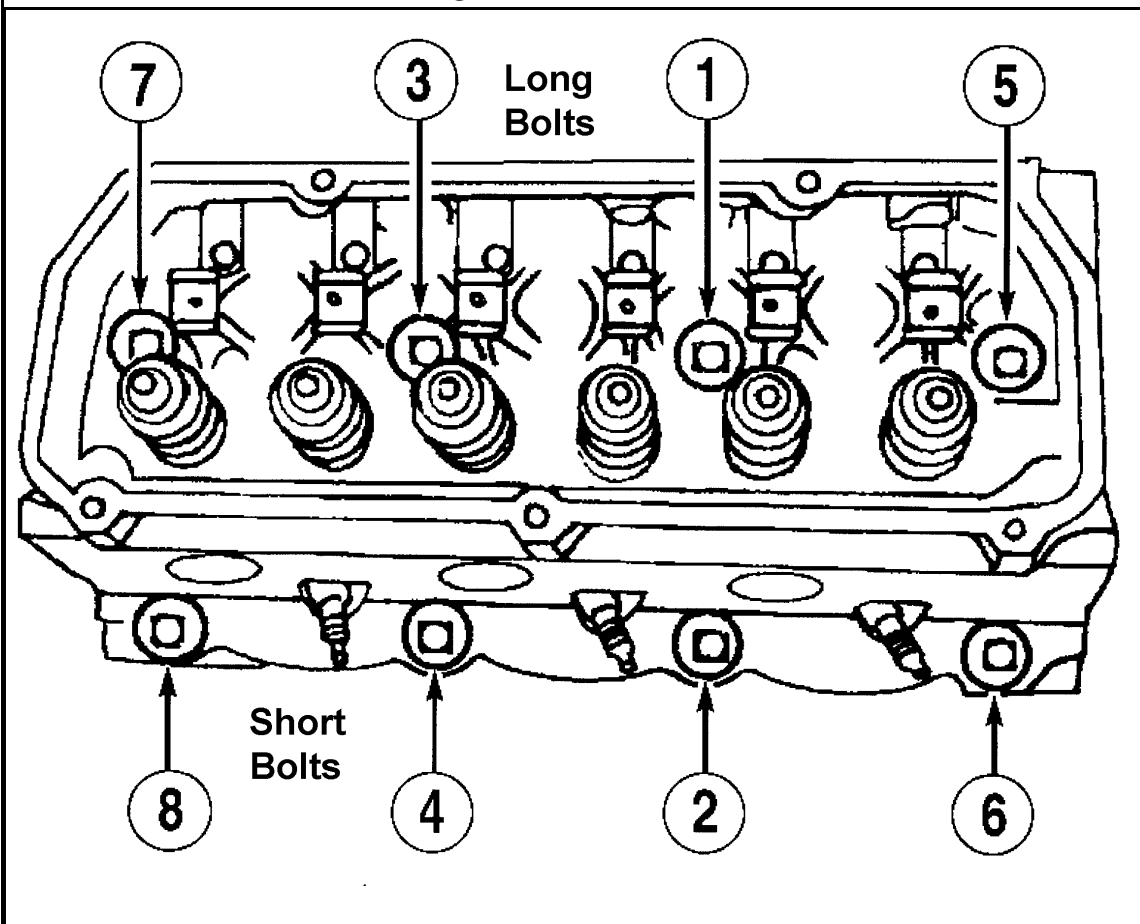


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Bulletin Diagram: FIGURE 1, CYLINDER HEAD TORQUE SEQUENCE - CYLINDER HEAD



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