

Enginetech Inc
For Technical Assistance Call:
1-800-410-3664 ext 340 or ext 237

TECHNICAL BULLETIN	
	January 1998 TB 1530
Mfg:	TOYOTA
Model:	4-RUNNER
Liter:	3.0L
V I N:	3V-ZE
Year:	88-95

Camshaft Removal/Installation Caution On
1988-95 Toyota 3.0L, 3VZE Engines

The AERA Technical Committee offers the following caution on camshaft removal/installation on 1988-94 Toyota 3.0L, 3VZE engines. This engine is a single overhead cam (SOHC) design and the camshaft is retained by five individual caps. To prevent camshaft damage, a specific removal/installation sequence must be observed.

The camshafts for this engine have a narrow thrust ring to control end play of the camshaft. This thrust collar may fracture or break during removal/installation, if the following procedures are not followed.

To remove the camshaft, refer to Figure 1 below and gradually loosen each bolt in the sequence shown. Loosen the bolts one to two turns at a time only, until the valve spring pressure on the cam lobes has been eliminated. Loosening the cap bolts at the rear of the cam first may allow that end to raise, fracturing the thrust ring.

To install these camshafts, refer to Figure 2 below and gradually tighten each bolt 1-2 turns in the sequence shown. Tighten those bolts in several steps until a final torque of 12 ft. lbs. is achieved.

One AERA member has indicated replacing numerous camshafts because of broken or fractured cam thrust collars. Those camshafts would have been considered for reuse if one of those conditions did not exist.

The AERA Technical Committee

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Reference:	
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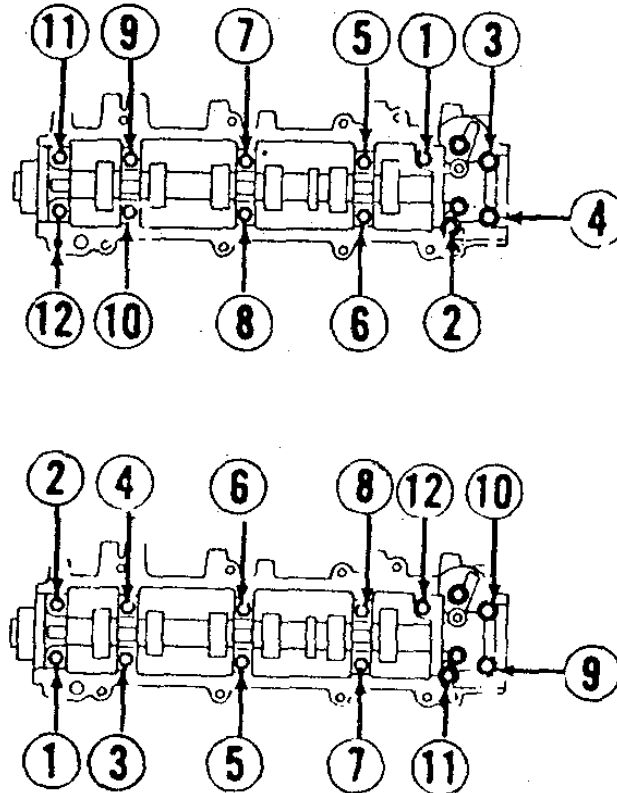
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Bulletin Diagram: Untitled Graphic #2285 for TB 01530



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