

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

TECHNICAL BULLETIN	
	May 2000 TB 1794
Mfg:	FORD
Model:	RANGER
Liter:	4.0L
V I N:	X
Year:	90-08

Valve Train Noise On
1990-00 Ford 4.0L VIN X Engines

The AERA Technical Committee offers the following information on valve train noise on 1990-00 Ford 4.0L VIN X engines. Unacceptable valve train noise has been reported shortly after engine re-assembly during cold engine start-up. The source of this noise has been associated with pre-mature rocker arm and push rod wear. The cause of this wear may be resulting from the incompatibility of the related components.

Rocker arm sockets and push rod ball ends should provide equal mating surfaces, i.e. machined with similar radiuses and diameters. The ends of push rods are sometimes referred to as "ball ends". The push rods for these engines do not have true "5/16 ball ends". Their ends and rocker arm sockets are unique to this engine family.

The percentage of "mated" area between the rocker arm socket push rod end and the valve spring pressure contributes to the amount of load on that mated area. The lower the percentage, the higher the load factor becomes on the remaining mated area. At some point when the load over-rides the capability of engine lubricants to prevent component damage, wear will start and it may not be visible to the naked eye.

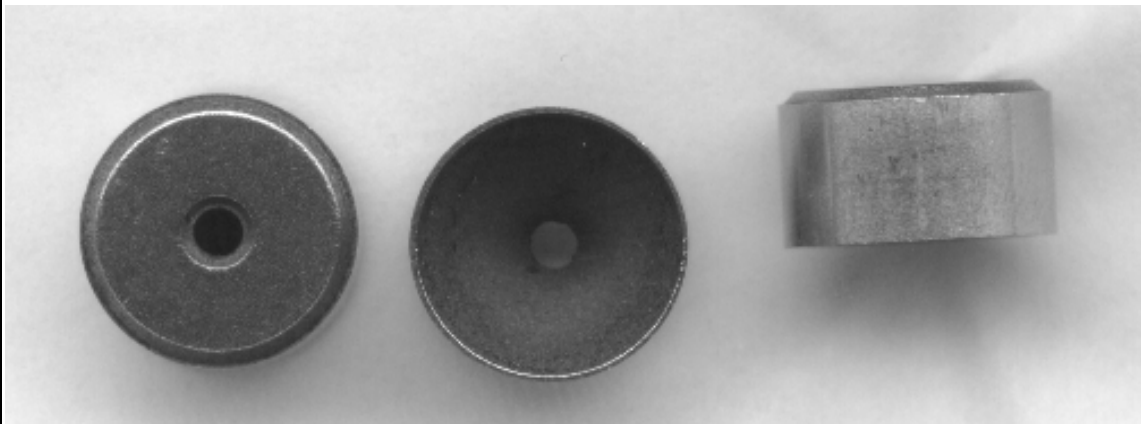
To resolve this condition an updated ball socket has been developed. This correctly radiused socket requires machining and installation into the previously worn rocker arm. Since the introduction of this ball socket repair has occurred, rockers that would have been discarded are now rebuilt and reused. To install the insert the worn rocker arm must be first machined to the correct depth and provide .001" press fit. AERA is currently aware of only one manufacturer of this product.

The AERA Technical Committee

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Bulletin Diagram: TB 1794 CAPS		
		

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