



Technical Bulletin

9/03

Broken Or Bent Connecting Rods On 1997-99 Ford 3.8L VIN 4 & 4.2L VIN 2 Engines

The AERA Technical Committee offers the following information concerning broken or bent connecting rods on 1997-99 Ford 3.8L VIN 4 & 4.2L VIN 2 engines. Customers have complained about a ticking type noise, which sounds similar to valve train noise.

The cause of this noise has been determined to be actual contact between the undersides of a piston(s) contacting a crankshaft counterweight. This noise occurs as the result of a hydraulic condition, created by coolant entering the top of the combustion chamber. Liquid does not compress, so the rod is stressed to the point of bend or break. The coolant has entered the cylinder(s) from a leaking intake manifold gasket. It has been reported the leak occurs in the front of the engine.

Depending upon the amount of coolant leaking, a rod may be shortened up by a slight amount (.030" - .040" reported) or it may break into two pieces. High mileage engines with old style intake gaskets are most likely to experience this condition.

Cranking compression would be lower in the affected cylinder(s) if the rod(s) are bent and the engine still runs. The engine electronic controls misfire monitor has a wide range of coverage, so it may not show a fault code.

The Ford Motor Company upgraded the 1999 and newer intake gaskets on the assembly line, so the possibility of seeing the same failure in the 1999 and newer engines is reduced. Ford has replaced the original style side seal gaskets with a thicker sealing bead material. These side seal gasket beads are also larger and have been upgraded to eliminate the likelihood of any **internal** engine coolant leakage.

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