



# Technical Bulletin

Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All	2008-2013	2.0L (CCTA, CBFA)	All	All	All

## Condition

15 12 01 July 23, 2012 2028302 Supersedes T.B. V151104 dated December 22, 2011 to remove European exhaust warning light reference in text and add additional model year applicability.

**Engine Rattling Noises after Start, Engine Doesn't Start, Timing Chain Slipped**

Customer may state:

- Rattling noises after engine start from front of the vehicle or engine compartment.
- Engine does not start.
- MIL ON

The following entries are logged in the engine control module (ECM):

DTC	Description
00022 P0016	Crankshaft Position vs. Camshaft Position Correlation
00808 P0328	Knock Sensor 1 Circuit High Input

## Technical Background

Timing chain tension may be incorrect due to tensioner.

As a result, the timing chain can skip and causing contact between the pistons and valves.

## Production Solution

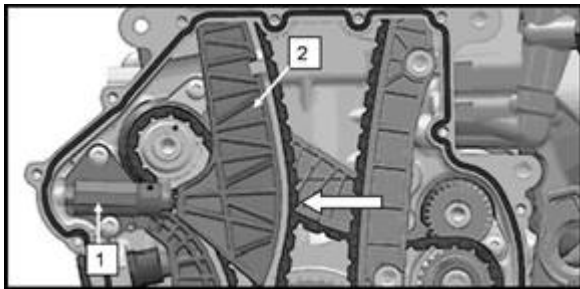
N/A



## Service

### If timing chain is suspect, perform the following:

- Complete the DTC entries according to guided fault finding (GFF).
- Remove the lower timing chain cover, see Repair Manual Group 15 in ElsaWeb.
- Check the timing chain tensioner as follows:
  - Compress the tensioning rail of the timing chain (Illustration 1, No. 2) by hand against the timing chain tensioner (Figure 1, No. 1).



Inset. 1: timing chain tensioner

Inset 2: tensioning rail the timing chain

arrow: Direction of pressure on the tensioning rail of the timing chain

**Figure 1)** section of the timing chain drive.

If the piston of the timing chain tensioner cannot be compressed by hand after several attempts (Figure 3, green arrow), further engine diagnosis is required.



### Tip:

Inspect intake camshaft and camshaft bearing for damage.

If the piston of the timing chain tensioner can be compressed in by hand (Figure 2, red arrow) the timing chain tensioner has failed, and further engine diagnosis may be required.



### Tip:

If engine noises or no start condition remain, inspect pistons and valves for contact damage. If engine damage is noted, cylinder head or engine may need to be replaced.

# Technical Bulletin



**Figure 2)**  
Timing chain tensioner incorrect



**Figure 3)**  
Timing chain tensioner correct

## Warranty

Information only.

## Required Parts and Tools

No Special Parts required.

No Special Tools required.

## Additional Information

**All part and service references provided in this Technical Bulletin are subject to change and/or removal. Always check with your Parts Dept. and Repair Manuals for the latest information.**