



Technical Service Bulletin

MIL on (DTC P2293 in ECM)

15 07 02 June 18, 2007 2013147/4. Supersedes Technical Service Bulletin Group 21 number 06-04 dated Dec. 11, 2006 due to addition of description of one of the main conditions that can result in the storage of P2293.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A3	2006 – 2007	All	2.0TFSI Engine
A4	2005 – 2007	All	
A4 Cabriolet	2007	All	

Condition

MIL on. The following DTC is stored in the ECM data memory:

- P2293 (Fuel pressure regulator 2 performance)

at times in combination with:

- P0087 (Rail fuel pressure too low)
- P1093 (Fuel trim 2, bank 1 malfunction)

Technical Background

Excessive wear of the cam lobe (in the intake camshaft) that drives the high pressure fuel pump. This limits the maximum pump piston lift, causing fuel rail pressure fluctuations. The wear on the cam lobe also leads to wear in the base of the high pressure fuel pump cam follower.

Production Solution

Increased surface hardening of the camshaft lobe for the high pressure fuel pump.

Improved intake camshafts have part number 06F 109 101 B.

Service

Technical Service Bulletin

1. Remove the high pressure fuel pump and visually inspect:
 - The base surface of the cam follower (Figure 1, Point 6) in contact with the camshaft lobe.
 - The tip of the high pressure fuel pump plunger.
 - The high pressure fuel pump camshaft lobe.

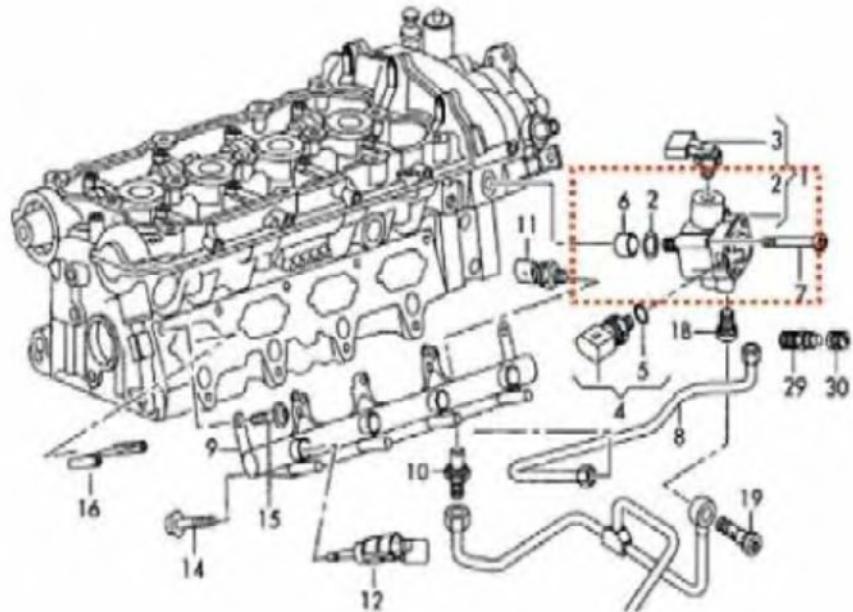


Figure 1. The high pressure fuel pump.

2. If the base of the cam follower looks like Figure 2, C or Figure 2, D, no excessive wear is present. The cam follower and camshaft should not be replaced.



Figure 2. Cam followers in various stages of wear: holed base (A), excessive wear (B), normal wear (C), and new part (D).

3. If the cam follower base surface is excessively worn so that its surface is concave (Figure 2, B) or altogether missing (Figure 2, A), or if the high pressure fuel pump camshaft lobe shows excessive wear (Figure 3), replace the intake camshaft and the cam follower.



Figure 3. Excessive wear on the lobe for high pressure fuel pump in the intake camshaft.

Technical Service Bulletin

4. The high pressure fuel pump must be replaced only if the tip of the plunger shows excessive wear (Figure 4). This condition is only possible if the cam follower base is holed and the plunger tip has come in direct contact with the camshaft lobe.
5. If no excessive wear can be found in the high pressure fuel pump cam follower or intake camshaft lobe, or if the damage is found in camshafts with part number 06F 109 101 B, please create a Technical Assistance Contact Ticket under the Concern Type Engine and Engine Electronics in ElsaWeb. Attach the complete diagnostic log to the contact, and call the Audi Technical Assistance Center (Audi Helpline) for further assistance.



Figure 4. Excessive wear marks on the tip of the high pressure fuel pump plunger.

Warranty

When procedure applies to vehicles within the New Vehicle Limited Warranty, use the following:	
Claim Type:	W2
Part Identifier:	1505
Damage Code:	1505 18 002 2
Labor Operations:	See ElsaWeb for appropriate labor operation
Diagnostic Time:	Diagnostic time reimbursement follows guidelines printed in Section 2.2 of the <i>Audi Warranty Policies and Procedures Manual</i>
Claim Comment:	As per TSB #2013147/4
All warranty claims submitted for payment must be in accordance with the <i>Audi Warranty Policies and Procedures Manual</i> . Claims are subject to review or audit by Audi Warranty.	

Required Parts and Tools



Technical Service Bulletin

Part Number	Part Description	Quantity
06F 109 101 B	Intake Camshaft	1
06D 109 309 C	Cam Follower	1

All parts and service references provided in this TSB are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.