

# Technical Service Bulletin



## 01 MIL on (DTC P2293, P0087)

01 13 18 2013147/12 August 1, 2013. Supersedes Technical Service Bulletin Group 15 number 11-22 dated May 31, 2011 for reasons listed below.

| Model(s)  | Year      | VIN Range | Vehicle-Specific Equipment      |
|-----------|-----------|-----------|---------------------------------|
| A4        | 2005-2006 | All       | 2.0TFSI engine, engine code BPG |
| A3        | 2006-2007 | All       | 2.0TFSI engine, engine code BPY |
| A4        | 2007      | All       | 2.0TFSI engine, engine code BWT |
| Cabriolet | 2007      | All       | 2.0TFSI engine, engine code BWT |

## Condition

| REVISION HISTORY |            |  |
|------------------|------------|--|
| Revision         | Date       | Purpose  |
| 12               | -          | Revised header data (Updated customer codes, added DTCs)           |
| 11               | 5/31/2011  | Revised <i>Warranty</i>  |
| 10               | 4/6/2011   | Revised <i>Warranty</i><br>Revised <i>Required Parts and Tools</i> |
| 9                | 7/14/2010  | Revised header data (Controlling TSB display in ElsaWeb)           |
| 8                | 11/20/2008 | Revised Title to include Repair Group                              |

- MIL on.
- **DTC P2293** (Fuel pressure regulator 2 performance) is stored in the engine control module (ECM).
- The following DTCs may be stored in combination with DTC P2293:
  - **DTC P0087** (Rail fuel pressure too low)
  - **DTC P1093** (Fuel trim 2, bank 1 malfunction)

## Technical Background

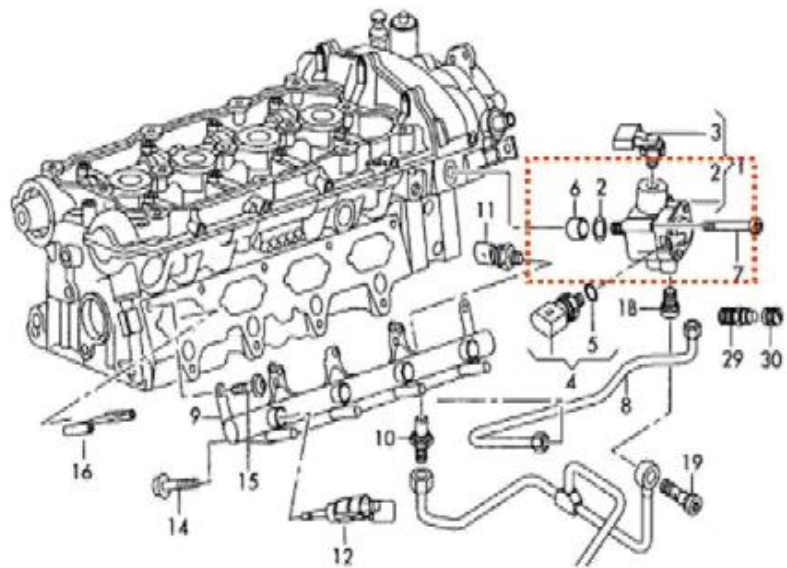
Excessive wear of the cam lobe (in the intake camshaft) that drives the high pressure fuel pump limits the maximum pump piston lift, causing fuel rail pressure fluctuations. The wear on the cam lobe also leads to wear in the base of the high pressure fuel pump cam follower.

## Production Solution

Increased surface hardening of the camshaft lobe for the high pressure fuel pump.  
Improved intake camshafts have part number **06F109101B**.

## Service

1. Remove the high pressure fuel pump and visually inspect:
  - The base surface of the cam follower (Figure 1, 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 shows normal wear (Figure 2, C) or is a new part (Figure 2, D), the cam follower and cam shaft should not be replaced because excessive wear is not present.



**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 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.

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.



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

5. If the intake camshaft is replaced because of excessive wear, also replace the engine oil and the oil filter.

## Warranty

When procedure applies to vehicles under warranty, use the following:



**Note:**

Only one of the following scenarios will apply; see table below:

1. DTCs P2293, P0087 *not* present within 10/120 extension (outside of NVLW)
2. DTCs P2293, P0087 present, repair as technical bulletin

**Scenario 1:**

|                          |   |           |       |
|--------------------------|---|-----------|-------|
| <b>Claim Type:</b>       | 110   |           |       |
| <b>Service Number:</b>   | 1505 – within NVLW<br>S651 – within 10/120 extension (outside of NVLW)  |           |       |
| <b>Damage Code:</b>      | 0018  |           |       |
| <b>Labor Operations:</b> | GFF (Retrieve and clear codes) - DTCs P2293, P0087 <i>not</i> present within 10/120 extension (outside of NVLW) | 0150 0000 | 20 TU |
| <b>Claim Comment:</b>    | As per TSB #2013147/12  |           |       |

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## Scenario 2:

|                          |  |  |           |        |
|--------------------------|--|--|-----------|--------|
| <b>Claim Type:</b>       | 110  |  |           |        |
| <b>Service Number:</b>   | 1505 – within NVLW<br>S651 – within 10/120 extension (outside of NVLW) |  |           |        |
| <b>Damage Code:</b>      | 0018   |  |           |        |
| <b>Labor Operations:</b> | <b>A3</b>  | Camshaft remove & install  | 1505 2017 | 520 TU |
|                          |  | Perform Oil Change   | 1730 1999 | 20 TU  |
|                          |  | High Pressure Pump (if necessary)  | 2463 9999 | 50 TU  |
|                          | <b>A4</b>  | Camshaft remove & install  | 1505 1967 | 420 TU |
|                          |  | Lock Carrier remove & install  | 5038 0900 | 160 TU |
|                          |  | Auto Trans   | 5038 0902 | 130 TU |
|                          |  | Manual Trans   |           |        |
|                          |  | Perform Oil Change   | 1730 1999 | 20 TU  |
|                          |  | High Pressure Pump (if necessary)  | 2463 9999 | 50 TU  |
|                          |  | GFF (Retrieve and clear codes)   | 0150 0000 | 20 TU  |
|                          |  | Road test prior to service procedure   | 0121 0002 | 10 TU  |
|                          |  | Road test after service procedure  | 0121 0004 | 10 TU  |
|                          |  | Technical diagnosis at dealer's discretion<br>(Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details) |           |        |
|                          | <b>Claim Comment:</b>  | As per TSB #2013147/12   |           |        |

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.

## Required Parts and Tools

Please refer to ETKA for required parts and tools for each model.

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## Additional Information

All parts and service references provided in this TSB (2013147) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.