

# Technical Service Bulletin



## 21 MIL on (DTC P0299 - negative pressure deviation); turbocharger excessive wastegate play

21 14 18 2031245/7 June 6, 2014. Supersedes Technical Service Bulletin Group 21 number 13-16 dated July 9, 2013 for reasons listed below.

| Model(s)     | Year        | VIN Range | Vehicle-Specific Equipment |
|--------------|-------------|-----------|----------------------------|
| A4           | 2009 - 2012 | All       | Not Applicable             |
| A5           | 2009 - 2012 | All       | Not Applicable             |
| A5 Cabriolet | 2009 - 2012 | All       | Not Applicable             |
| Q5           | 2011 - 2012 | All       | Not Applicable             |

## Condition

| REVISION HISTORY |          |                                                                                                                                                                                                                                                 |
|------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision         | Date     | Purpose                                                                                                                                                                                                                                         |
| 7                | -        | Revised header data (Added model years)<br>Revised <i>Service</i> (Corrected TSB reference number)<br>Revised <i>Warranty</i> (Updated Claim Type and Damage Code)                                                                              |
| 6                | 7/9/2013 | Revised header data (Updated applicable vehicles)<br>Revised <i>Service</i> (Added Tip and new step)<br>Revised <i>Required Parts and Tools</i> (Removed parts; added line about necessary parts shown in ElsaWeb for turbocharger replacement) |
| 5                | 6/7/2013 | Revised header data                                                                                                                                                                                                                             |
| 4                | 4/4/2013 | Revised header data                                                                                                                                                                                                                             |
| 3                | 4/1/2013 | Revised header data                                                                                                                                                                                                                             |
| 2                | 3/6/13   | Revised <i>Warranty</i> (SRT times)                                                                                                                                                                                                             |
| 1                | 10/25/12 | Original publication                                                                                                                                                                                                                            |

All of the following conditions apply:

- MIL on.

**DTC P029900** (Negative Pressure Deviation) is stored as a static fault in the engine control module (ECM), J623 (address word 01).

## Technical Background

Under certain driving conditions, the linkage for the waste gate actuation can encounter excessive wear which leads to play at the waste gate flap. This leads to boost escaping through a loose flap, which sets **DTC P029900** (Negative Pressure Deviation).

## Production Solution

Not applicable.

## Service

### 1. Before beginning service:

- Address all other conditions, such as leaks/blockage in the intake system or additional DTCs
  - For sporadic, single occurrences of **DTC P029900** (Negative Pressure Deviation), delete the DTC and check if it reappears during road test.
  - If **DTC P023400** (Positive Pressure Deviation) is present, review TSB 2027082.
- After addressing these other conditions, check to see if the conditions listed in the *Condition* section of this TSB still apply. If the conditions do not apply, this bulletin does not apply.
- Do not replace turbo unless instructed to do so by GFF.
- Claims are subject to review or audit by Audi Warranty. Repairs performed when all conditions do not apply will not be reimbursed.
- Verify the condition by confirming that **DTC P029900** is stored in the ECM, and that the wastegate link plate has visible play in the direction of the actuating rod (Figure 1). Review the attached video clip for an example.



**Figure 1.** Worn eye on wastegate link plate allowing excessive play.

2. Remove turbocharger according to the instructions in ElsaWeb: *Repair Manual >> Engine / Engine Mechanical >> 21 Turbocharger, G-Charger >> Removal and Installation >> Turbocharger.*
3. Install clip **06J145220B** on a new, replacement turbocharger's link plate and actuating rod joint as illustrated (Figures 2 and 3).

**Tip:**

- The spring clip must not be overstretched. The maximum opening of the spring clip is 14 mm (Figure 4, 1).
- The spring clip must be replaced after every removal.



**Note:** Do not install clip on a used or pre-damaged turbocharger, as the same level of improvement as on a new part is not achieved.

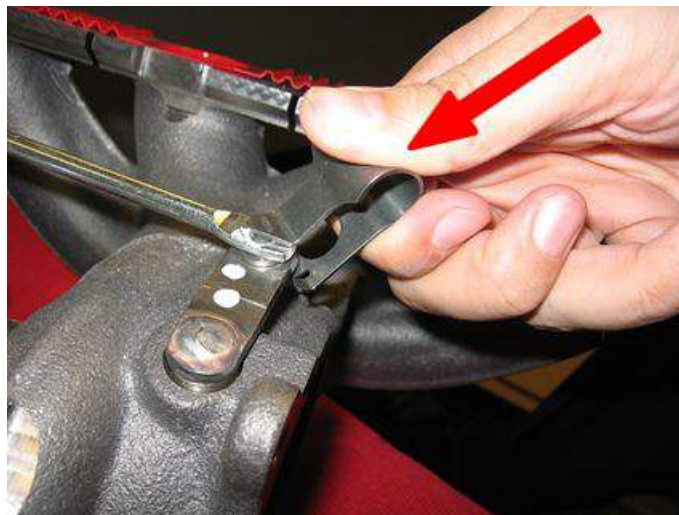


**Figure 2.** Fit the clip from the side.



**Figure 3.** Turn the clip counter clockwise till the lugs slot in.

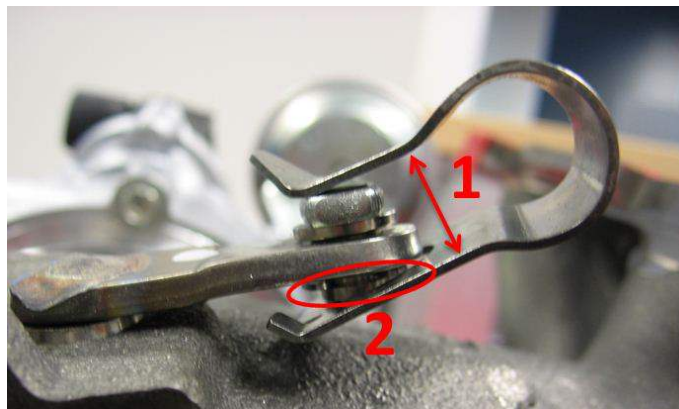


**Figure 4.** (1) Maximum opening of clip, (2) Position of original circlip

5. After fitting the spring clip, check for correct fit (Figure 5).

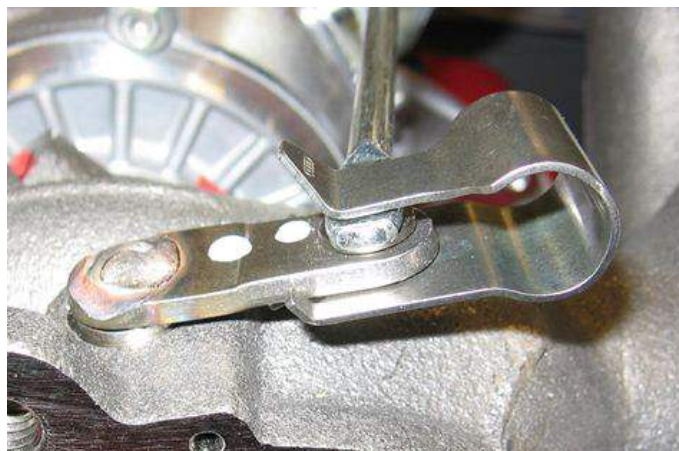


**Figure 5.** Correctly-fitted clip.

6. After fitting the spring clip, check the position of the original circlip (Figure 6, 2) and correct it if necessary.

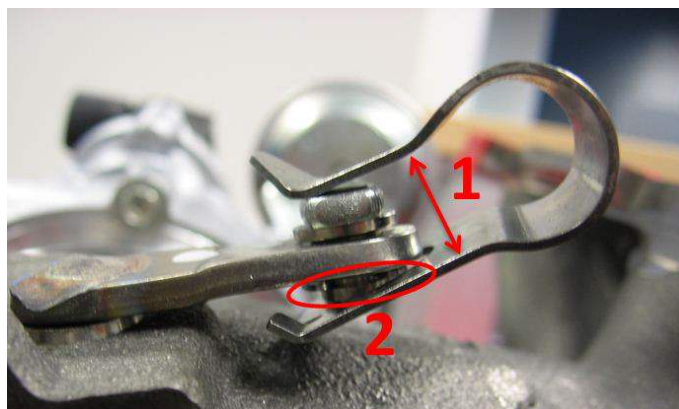


**Figure 6.** (1) Maximum opening of clip, (2) Position of original circlip

# Technical Service Bulletin



7. Install the new turbocharger according to the instructions in ElsaWeb: *Repair Manual >> Engine >> Engine Mechanical >> 21 Turbocharger, G-Charger >> Removal and Installation >> Turbocharger*.

The part numbers of the new turbocharger and the turbocharger that is being replaced should match unless otherwise noted in ETKA.

8. Clear DTC.

## Warranty

|                          |                                                                                                                                         |           |                                                |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------|
| <b>Claim Type:</b>       | 110 (Warr Ext Key U23 present and active)<br>or<br>1E2 (Warr Ext Key U23 present and active <u>AND</u> US1/US2 also present and active) |           |                                                |
| <b>Service Number:</b>   | 2130                                                                                                                                    |           |                                                |
| <b>Damage Code:</b>      | 0010 (For Claim Type 110)<br>0016 (For Claim Type 1E2)                                                                                  |           |                                                |
| <b>Labor Operations:</b> | Turbocharger remove + reinstall (Q5 only)                                                                                               | 2130 1913 | 420 TU                                         |
|                          | Turbocharger remove + reinstall (All others)                                                                                            | 2130 1913 | 370 TU                                         |
|                          | Turbocharger replace                                                                                                                    | 2130 5563 | 30 TU                                          |
|                          | Install clip on turbocharger                                                                                                            | 2130 2199 | 10 TU                                          |
| <b>Diagnostic Time:</b>  | GFF – Checking and clearing fault codes included in existing labor operations                                                           | 0150 0000 | Time stated on diagnostic protocol (Max 40 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 #2031245/7                                                                                                                   |           |                                                |

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.

# Technical Service Bulletin

---



## Required Parts and Tools

| Part Number | Part Description                                      | Quantity |
|-------------|-------------------------------------------------------|----------|
| 06J145220B  | Clip                                                  | 1        |
| 06H145702S  | Turbocharger                                          | 1        |
|             | Necessary parts for turbocharger replacement per Elsa |          |

## Additional Information

All parts and service references provided in this TSB (2031245) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.