



Technical Service Bulletin

23 MIL on, DTCs P0087, P0088, and/or P0191 stored in the ECM - TDI only

23 19 51 2036668/5 July 1, 2019. Supersedes Technical Service Bulletin Group 23 number 17-40 dated March 29, 2017 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A3	2013, 2015	All	TDI
A6	2014, 2016	All	TDI
A7	2014 - 2016	All	TDI
A8	2013, 2016	All	TDI
Q5	2014 - 2017	All	TDI
Q7	2013 - 2015	All	TDI

Condition

REVISION HISTORY		
Revision	Date	Purpose
5	-	Revised title Revised <i>Warranty</i> (Added Note and Tip)
4	03/29/2017	Revised header data (Added model years 2014 - 2016 and models A6, A7, Q5)
3	06/30/2015	Revised header data (Removed model years 2009 - 2012; added model years 2015 - 2016) Revised title (Updated service number)

Customer states:

- MIL on.
- No start or runs rough.

Workshop findings:

One or more of the following DTCs is stored in the engine control module, J623 (address word 0001):

- **DTC P0087** (Fuel Rail/System Pressure - Too Low).
- **DTC P0088** (Fuel Rail/System Pressure - Too High).



Technical Service Bulletin

- **DTC P0191** (Fuel Rail Pressure Sensor "A" Circuit Range/Performance).

Technical Background

When diagnosing a MIL on, no-start, or rough running concern on a common rail diesel vehicle, and no root cause is found after checking all other components and following all GFF diagnostic procedures, it may be necessary to check for metallic particles in the High-Pressure Fuel Pump.

Production Solution

No production change required.

Service



Note:

Removing the N290 fuel metering valve to inspect for metallic particles should only be considered as the last step after all GFF diagnostic procedures have been performed, including testing supply volume to the high-pressure fuel pump (a low-pressure side) and checking for internal leakage from the injectors and N276 pressure regulating valve.



Note:

Before the N290 fuel metering valve is removed, the area surrounding the valve (Figure 1) must be sprayed with a cleaner and dried with compressed air to ensure that all debris is removed from the area.

Fuel system components may be damaged if any debris enters the fuel system.



Figure 1. The area surrounding the valve.



Technical Service Bulletin

1. Remove the N290 fuel metering valve and inspect the valve and valve bore for the presence of metallic particles (Figure 2). Proceed with the appropriate section below.

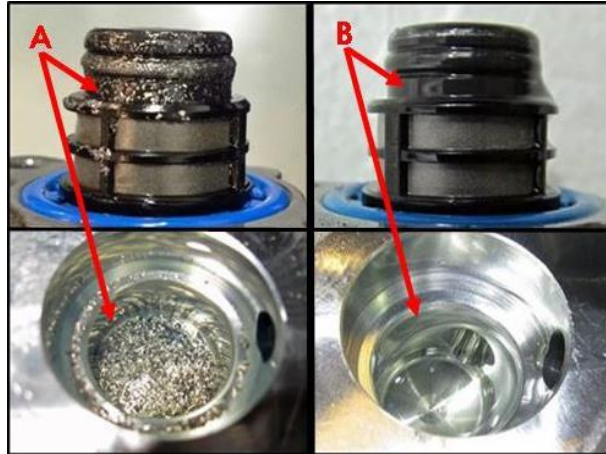


Figure 2. Fuel metering valve and valve bore with metallic particles (A), and without metallic particles (B).

If metallic particles are found on the N290 fuel metering valve or in the valve bore:

1. Contact the Audi Technical Assistance Center (TAC) and open a TAC ticket before continuing with the repair. Before contacting TAC, attach the following to the TAC ticket:
 - GFF diagnostic log
 - Clear pictures showing the metallic particles in the N290 fuel metering valve and bore (Figure 3 and Figure 4).



Figure 3. Example of a clear picture showing the metallic particles in the N290 fuel metering valve.



Technical Service Bulletin



Figure 4. Example of a clear picture showing the metallic particles in the valve bore.



Note:

If a fuel system replacement is necessary, ensure that the fuel injector return line is properly seated and sealed once installed. Inspect for seepage at the fuel injector return line connector after the test drive. If seepage is found, the condition must be corrected.



Tip: Be sure to include the 7-digit technical service bulletin number in the repair order comments.

If metallic particles *are not* found on the N290 fuel metering valve or in the valve bore:

1. Do NOT replace the high-pressure fuel pump.



Technical Service Bulletin



Note:

To prevent fuel system damage, ensure that the N290 fuel metering valve is free of contaminants before reinstalling.

Additionally, ensure that neither O-ring (Figure 5) is damaged. If either O-ring is damaged, replace the high fuel pressure pump.

To prevent damaging the O-rings when reinstalling the N290 fuel metering valve, lubricate them with diesel fuel.

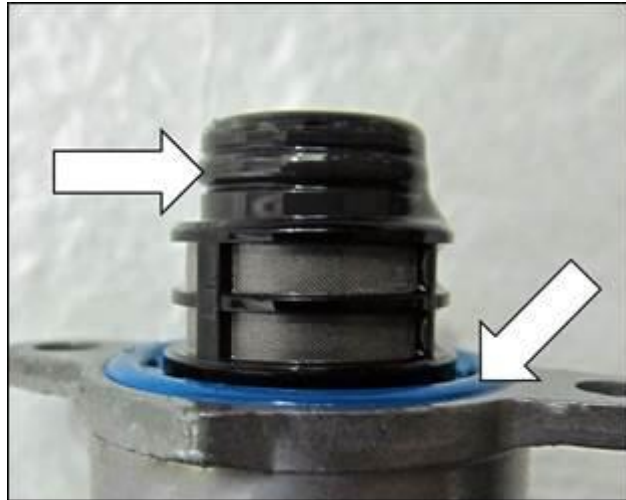


Figure 5. N290 fuel metering valve O-rings.

2. Use light pressure to reinstall the N290 fuel metering valve into the valve bore.
3. Install and hand tighten both M5 fasteners, ensuring that the threads are clean and dry. Pre-tighten to 2 Nm, then to 6.5 – 7 Nm.
4. Use a paint marker or equivalent to mark the top of the N290 fuel metering valve with a white dot (Figure 6).

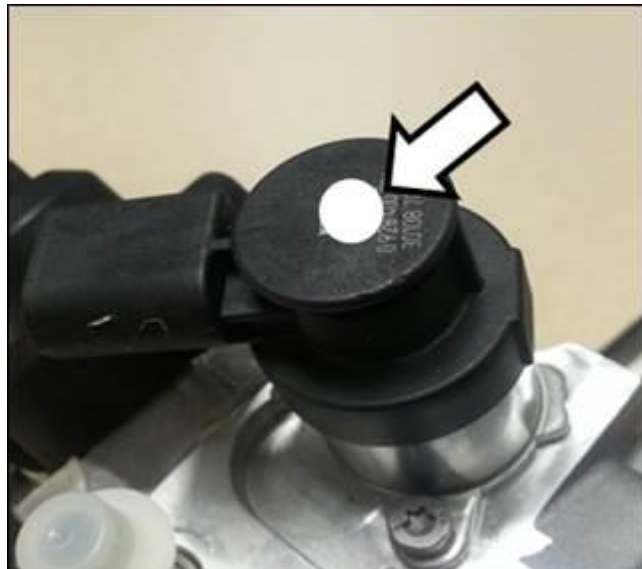


Figure 6. The white dot on N290 fuel metering valve.

5. Continue with the diagnosis.



Tip: Be sure to include the 7-digit technical service bulletin number in the repair order comments.



Technical Service Bulletin

All TDI clean diesel high-pressure fuel pumps that have been replaced in conjunction with this Technical Service Bulletin will be requested for return. These replacement parts will be reviewed to verify the presence of metallic particles on the N290 metering valve and within the bore to ensure that the submitted part matches the information submitted with the ATA.

Warranty

This bulletin is informational only and is not applicable to any Audi Warranty.



Tip: Always verify Extended Emissions Warranty (EEW) coverage in ELSA.



Note:

The Extended Emissions Warranty must cover all parts and labor, as well as the cost or provision of a loaner vehicle for warranty service lasting longer than 3 hours for, among other things, repairs to the entire fuel system, including the fuel pumps, high pressure common rail, fuel injectors, and all sensors and actuators (DOJ 1st and 2nd Partial Consent Decrees, Appendix B, Section 3.9).

Additional Information

All parts and service references provided in this TSB (2036668) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

©2019 Audi of America, Inc. All rights reserved. The information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Audi of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites without the prior expressed written permission of the publisher.