Technical Bulletin

SB-10058578-7231

Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Golf, Jetta, Jetta SportWagen	2009-2012	2.0L TDI (CBEA, CJAA)	All	All	All

Condition

23 15 03 June 24, 2015 **2041063**

MIL ON, No Start, or Rough Running with DTCs P0087, P0088 or P0191 Stored in ECM Fault Memory (TDI ONLY)

MIL ON, No Start, or Rough Running with one or more of the following DTCs Stored in ECM Fault Memory:

DTC	Description
P0087	Fuel Rail/System Pressure - Too Low
P0088	Fuel Rail/System Pressure - Too High
P0191	Fuel Rail Pressure Sensor "A" Circuit Range/Performance

Technical Background

When diagnosing the condition above on a common rail diesel vehicle, if no root cause is found after checking all other components and all GFF diagnostic procedures have been performed, it may be necessary to check for metallic particles in the High Pressure Fuel Pump using the service section of this bulletin.

If such an inspection is necessary, the following guidelines must be observed when removing the N290 Fuel Metering Valve.

Production Solution

No production change required.

Service

Figure 1. Misfueling guard installed in the filler neck.

Note:

Inspect the fuel filler neck for a properly installed and functioning misfueling guard (see figure 1). Refer to Warranty Bulletin VWP-15-06 for details regarding HPFP coverage eligibility.

Section A – Initial Diagnosis of the High Pressure Fuel Pump (HPFP)

Note:

Removing the N290 Fuel Metering Valve to inspect for metallic particles should only be considered as a last step after all GFF diagnostic procedures have been performed. This includes testing supply pressure to the high pressure fuel pump (low pressure side), and checking for internal leakage from the injectors and the N276 Pressure Regulating Valve.

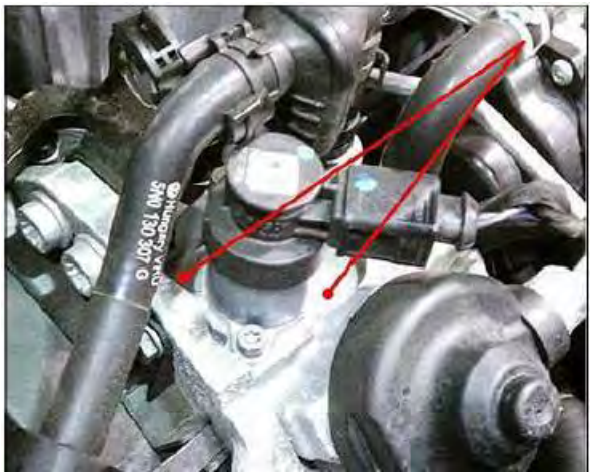


Figure 2. Surrounding Area

Note:

Prior to removing the N290 Fuel Metering Valve, the area surrounding the valve (Figure 2) must be clean and dried with compressed air to remove ALL debris from the area. See Repair Manual Group 20 Fuel Supply, General Information, Clean Working Conditions in Elsa.

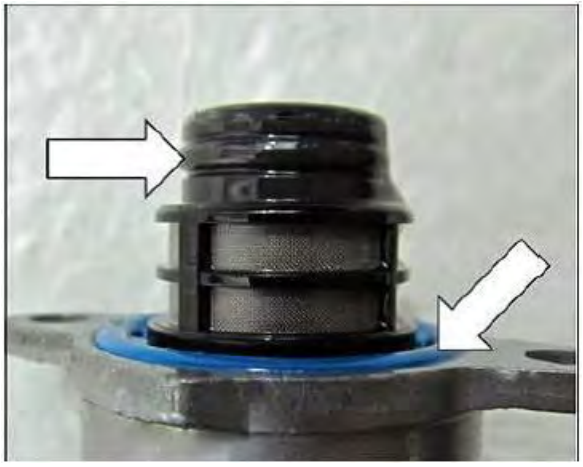
If debris enters the fuel system, components may be damaged.

Figure 3. N290 Fuel Metering Valve and Valve Bore

1. Remove the N290 Fuel Metering Valve and inspect the valve and valve bore for the presence of metallic particles **(see Figure 3).**

2. If metallic particles are found on the N290 Fuel Metering Valve or in the valve bore, replacement of the high pressure fuel pump and major components in the fuel system is necessary. **Proceed to Section B – Fuel Sampling and Analysis.**

3. If no metallic particles are found on the N290 Fuel Metering Valve or in the valve bore, do not replace the high pressure fuel pump. Open a VTA case and contact the Volkswagen Technician's Helpline for further assistance diagnosing the vehicle, this bulletin does not apply.



Note:

To prevent fuel system damage, ensure that the N290 Fuel Metering Valve is free of any contaminates before reinstalling.

Prior to reinstallation of the N290 Fuel Metering Valve, ensure that both O-rings are not damaged. If they are damaged, the high pressure fuel pump must be replaced.

To prevent damaging the O-rings when reinstalling the N290 Fuel Metering Valve, lubricate the O-rings with diesel fuel **(see Figure 4).**

Figure 4. N290 Fuel Metering Valve O-rings

4. Install the N290 Fuel Metering Valve into the valve bore using light pressure.

5. 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.

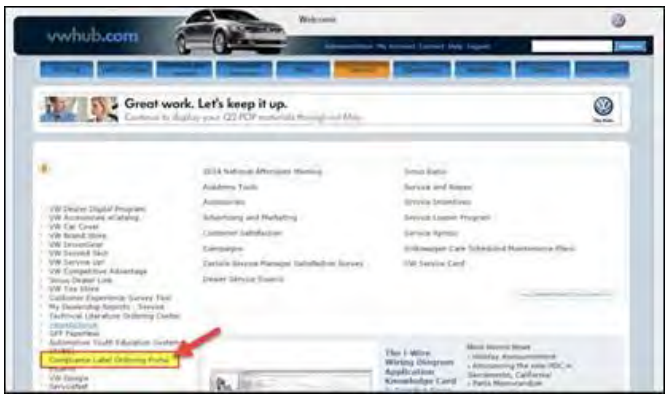
6. If metallic particles are found on the N290 Fuel Metering Valve or in the valve bore **(see figure 3),** replacement of the high pressure fuel pump and major components of the fuel system are necessary.

Section B – Fuel Sampling and Analysis

Note:

A fuel sample must be taken and analyzed prior to repairing the vehicle.

1. The fuel sample kit, P/N LQ1LKIT must be ordered via the Compliance Label Ordering Portal in vwhub.com fuel sample kit will be sent to the dealership within 1 business day*.



The Compliance Label Ordering Portal is available through the Service or Parts tab in VWHub.com

Figure 5. Compliance Label Ordering

Enter the VIN in the Quick VIN Order field.

Figure 6. Enter VIN

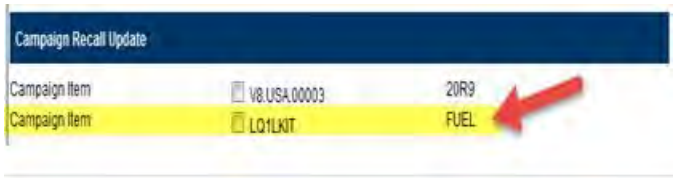


Figure 7. Select part number LQ1LKIT

Tip:

When ordering LQ1LKIT on the Compliance Label Ordering Portal, please include a secondary email address (ie. service manager) in the purchase order field for dealer e-mail notification.

2. Each fuel sample kit will contain the prepaid shipping label, detailed packaging instructions, and all necessary packaging to send the fuel sample via FedEx ground to a designated test facility.

Note:

HAZMAT certification is required for packaging the fuel sample but NOT for shipping *. The diesel fuel sample may be shipped to the laboratory utilizing ground shipment services provided the dealer is using the Limited Quantity Kit (PN# LQ1LKIT).

3. The fuel analysis results will be available to the dealership within 3 to 5 business days once the fuel sample has been shipped to the laboratory. The dealer will be notified via an email to acquire a pdf copy of the analysis result certificate via an embedded link to VW Google Search. The dealer enters the VIN and the report is presented under the heading "Component Locations, Wiring Diagrams, and Share Folders" in the lower right hand corner of the search results screen.

4. Once the test results are obtained by the dealership, they will be clearly marked “PASS” or “FAIL” in the comments section **(see figures 7 and 8).**

5. Refer to **Warranty Bulletin VWP-15-06** for details regarding HPFP coverage eligibility.

Fuel Sample Analysis Results

If the fuel sample Certificate of Analysis indicates **“PASS”:** Sections A & B & C will be reimbursed under warranty.

If the fuel sample Certificate of Analysis indicates **“FAIL”:** Only sections A & B will be reimbursed under warranty.

6. When the fuel analysis process is complete, proceed to **Section C – High Pressure Fuel Pump Replacement and Fuel System Repair.**

*Hawaii, Alaska, Puerto Rico: Please follow step one. Once a fuel sample is ordered, you will be contacted by a Volkswagen of America representative who will provide further instructions. A third party will be used to package and ship your fuel samples to the laboratory.

Figure 7. Example of a clean fuel sample analysis.

Note:

Each Certificate of Analysis will contain a “Pass” or “Fail” comment as shown.

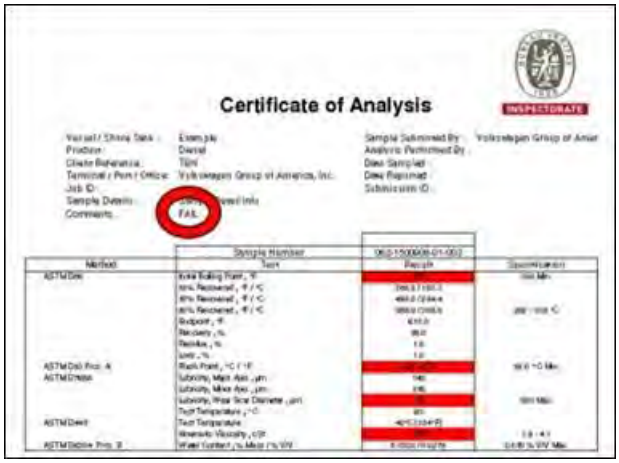


Figure 8. Example of a contaminated fuel analysis.

Section C – High Pressure Fuel Pump Replacement and Fuel System Repair

1. Always use the latest information in Elsa for detailed removal and replacement instructions of the components listed in this technical bulletin.

2. Remove in-tank fuel pump (Sending unit).

3. Drain and clean the fuel tank using the suction pump VAS5226.

4. Fill the fuel tank with **(1.3 gallons)** of fresh diesel fuel.

5. Drain and clean the tank completely using VAS5226.

6. Replace the in-tank fuel pump (Sending unit).

7. Flush the fuel lines (both feed and return) from the fuel tank to the bulk head, using either mineral spirits or brake clean with compressed air. Alternate from both ends of the lines while using a shop towel to catch any debris that may still be in the line. Verify all metal is removed from both lines before proceeding.

8. Replace the following components as per Elsa: high pressure fuel pump, high pressure fuel lines, fuel rail (with both sensors included), all fuel injectors, fuel return lines (overflow lines), fuel filter, fuel filter housing, auxiliary fuel pump.

Note:

The rubber fuel line insulators from the original injector supply lines should be transferred to the new lines.

9. Once repairs are complete fuel the vehicle.

10. Ensure the fuel injector return lines are properly seated and sealed once it is installed.

Note:

The “injector quantity calibration” and the “injector voltage calibration” for the new injectors must be programmed into the Engine Control Module -J623- after replacing one or more injectors. Refer to “Guided Functions” in the vehicle diagnostic tester.

11. Using the VAS tester, perform the guided function “Vent Fuel System”. (see Elsa for additional information under “Fuel System, Filling and Bleeding”).

Note:

If the test plan is unavailable through Guided Functions, switch to Self Diagnosis>Engine Electronics>Basic Settings>35 and perform the basic settings 3 times consecutively. For UDS vehices, perform basic settings for initial fueling.

12. Once the repairs are complete, test drive the vehicle.

13. Inspect for fuel seepage at the fuel injector return line connector. If seepage is found the condition MUST be corrected.

Warranty

Reimbursement for Sections A & B Only Where Fuel Analysis Result = FAIL

Note:

Active VW Customer Mobility Program (VWCMP) loaner vehicles are eligible to receive $35 per day for loaner expense reimbursement under this warranty extension. For dealers enrolled in the VWCMP, a non-VWCMP loaner vehicle can be provided at a reimbursement rate of $25 per day or a VW rental at $35 if a VWCMP loaner is not available. These claims must be submitted in SAGA on a separate line using claim type 1SP. Refer to document VWS-14-03 for applicable labor operation.

To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual [1)]					
Model(s)	**Year(s)**	**Eng. Code(s)**	**Trans. Code(s)**	**VIN Range From**	**VIN Range To**
Golf, Jetta, Jetta SportWagen	**2009-2012**	**2.0L TDI (CBEA, CJAA)**	**All**	**All**	**All**

Technical Bulletin

SAGA Coding			
Claim Type:	**Use applicable Claim Type [1)]**		
Service Number:	**Damage Code**	**HST**	**Damage Location (Depends on Service No.)**
2374	**0010**	--	**Use applicable when indicated in Elsa (L/R)**
Parts Manufacturer	**Golf, Jetta, Jetta Wagon, Jetta SportWagen**	**3ME [2)]**	
Causal Part: Select Labor Operation	**01320000**		
Outside Material: Diesel Fuel	**Part Number: FUEL**		
Diagnostic Time [4)]			
GFF Time expenditure	**01500000 = As required**	**YES**	
Road Test	**01210002 = 00 TU** **01210004 = 00 TU**	**NO**	
Technical Diagnosis	**01320000 = As required**	**YES**	
Claim Comment: Input "As per Technical Bulletin 2041063" in comment section of Warranty Claim.			

[1)] Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only

[2)] Code per warranty vendor code policy.

[3)] Labor Time Units (TUs) are subject to change with ELSA updates.

[4)] Documentation required per Warranty Policies and Procedures Manual.

Note:

Vendor code BPY or BPT must be recorded from the original High Pressure Fuel Pump for claiming purposes.

Reimbursement for Sections A & B & C Where Fuel Analysis Results = PASS

Note:

Active VW Customer Mobility Program (VWCMP) loaner vehicles are eligible to receive $35 per day for loaner expense reimbursement under this warranty extension. For dealers enrolled in the VWCMP, a non-VWCMP loaner vehicle can be provided at a reimbursement rate of $25 per day or a VW rental at $35 if a VWCMP loaner is not available. These claims must be submitted in SAGA on a separate line using claim type 1SP. Refer to document VWS-14-03 for applicable labor operation.

To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual [1]					
Model(s)	**Year(s)**	**Eng. Code(s)**	**Trans. Code(s)**	**VIN Range From**	**VIN Range To**
Golf, Jetta, Jetta SportWagen	2009-2012	2.0L TDI (CBEA, CJAA)	All	All	All
SAGA Coding					
Claim Type:	Use applicable Claim Type [1]				
Service Number:	**Damage Code**	**HST**	**Damage Location (Depends on Service No.)**		
2374	0010	--	Use applicable when indicated in Elsa (L/R)		
Parts Manufacturer	Golf, Jetta, Jetta SportWagen	BPY or BPT [2]			
Labor Operation [3] : Fuel System Clean and Replacement	23744299 = 750 TU				
Causal Part: High Pressure Fuel Pump	*** 130 775* OR ***130 851**				
Outside Material: Diesel Fuel	Part Number: DIESEL				
Diagnostic Time [4]					

GFF Time expenditure	01500000 = As required	YES
Road Test	01210004 = 10 TU	YES
Technical Diagnosis	01320000 = As required	YES
Claim Comment: Input "As per Technical Bulletin 2041063" in comment section of Warranty Claim.		
[1] Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only [2] Vendor code BPY or BPT must be recorded from the original High Pressure Fuel Pump. [3] Labor Time Units (TUs) are subject to change with ELSA updates. [4] Documentation required per Warranty Policies and Procedures Manual.		

Required Parts and Tools

2009-2012 Jetta, Golf

Note:

Part numbers are for reference only; please consult ETKA by VIN for most current information.

Part No:	Part Description	Quantity
03L 130 851AX	High pressure pump	1
03L130321	Line	1
03L 130 301	Line	1
03L 130 301R	Line	1
03L 130 301B	Line	1
03L 130 301C	Line	1
03L 130 089	Rail	1
5N0 130 307J	Line	1
1K0 127 400F	Filter complete	1
03L 130 235S	Return Line	1

03L 130 277A	Injectors	4
5N0 906 129B	Auxiliary Pump	1
059 130 216 C	Plate	4
WHT 000 884	Seal	4
03L 201 360G	Fuel Line	1
1K0 130 307BJ	Fuel Hose	1
1K0 130 307BG	Fuel Line	1
1K0 919 050 J	In-Tank fuel pump (sending Unit) Jetta	1
1K0 919 050 AB	In-Tank fuel pump (sending Unit) Golf	1
	All torque to yield bolts must be replaced	All

2009-2012 Jetta SportWagen

Note:

Part numbers are for reference only; please consult ETKA by VIN for most current information.

Part No:	Part Description	Quantity
03L 130 851AX	High pressure pump	1
03L130321	Line	1
03L 130 301	Line	1
03L 130 301R	Line	1
03L 130 301B	Line	1
03L 130 301C	Line	1
03L 130 089	Rail	1

5N0 130 307J	Line	1
1K0 127 400F	Filter complete	1
03L 130 235S	Return Line	1
03L 130 277A	Injectors	4
5N0 906 129B	Auxiliary Pump	1
059 130 216 C	Plate	4
WHT 000 884	Seal	4
03L 201 360G	Fuel Line	1
1K0 130 307BJ	Fuel Hose	1
1K0 130 307BG	Fuel Line	1
1K0 919 050 J	In-Tank fuel pump (sending Unit)	1
	All torque to yield bolts must be replaced	All

Tool Description	Tool No:
Midtronics Battery Tester/Charger	InCharge 940 (INC-940) or GRX3000VAS
VAS Diagnostic Tool	VAS 6150/X & VAS 6160/X with ODIS Service with: current online updates

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.