



Technical Service Bulletin

01 MIL on, DTC P040100 is stored in the ECM - TDI

01 23 68 2064398/3 August 11, 2023. Supersedes Technical Service Bulletin Group 01 number 23-63 dated July 25, 2023 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A3 TDI	2010 – 2013	All	Not Applicable

Condition

REVISION HISTORY		
Revision	Date	Purpose
3	-	Revised <i>Required Parts and Tools</i> (Updated part number)
2	07/25/2023	Revised documents (Added attachment) Revised <i>Required Parts and Tools</i> (Updated part numbers)
1	07/07/2023	Initial publication

Workshop findings:

The following DTC may be stored in the engine control module (ECM), J623 (address word 0001):

- **DTC P040100** (Exhaust Gas Recirculation Flow Insufficient Detected).

Technical Background

High soot loads prior to regeneration can cause possible restrictions in the Exhaust Gas Recirculation (EGR) filter.

Tools to assist the technician when checking for charge air system leaks.

Production Solution

Not applicable.

Service



Note:

Review the ELSA repair procedures, making certain to address the replacement of fasteners as indicated in the repair manual.



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Required one-time use items are subject to change and may not be listed.

When diagnosing a vehicle with the DTC **P040100**, **P2002**, or **P240F** perform the following:

1. Remove the EGR filter from the Diesel Particulate Filter (DPF) and swipe the inside of the exhaust pipe at the EGR filter connection point using a clean cloth or your finger.



Figure 1. Checking for carbon.

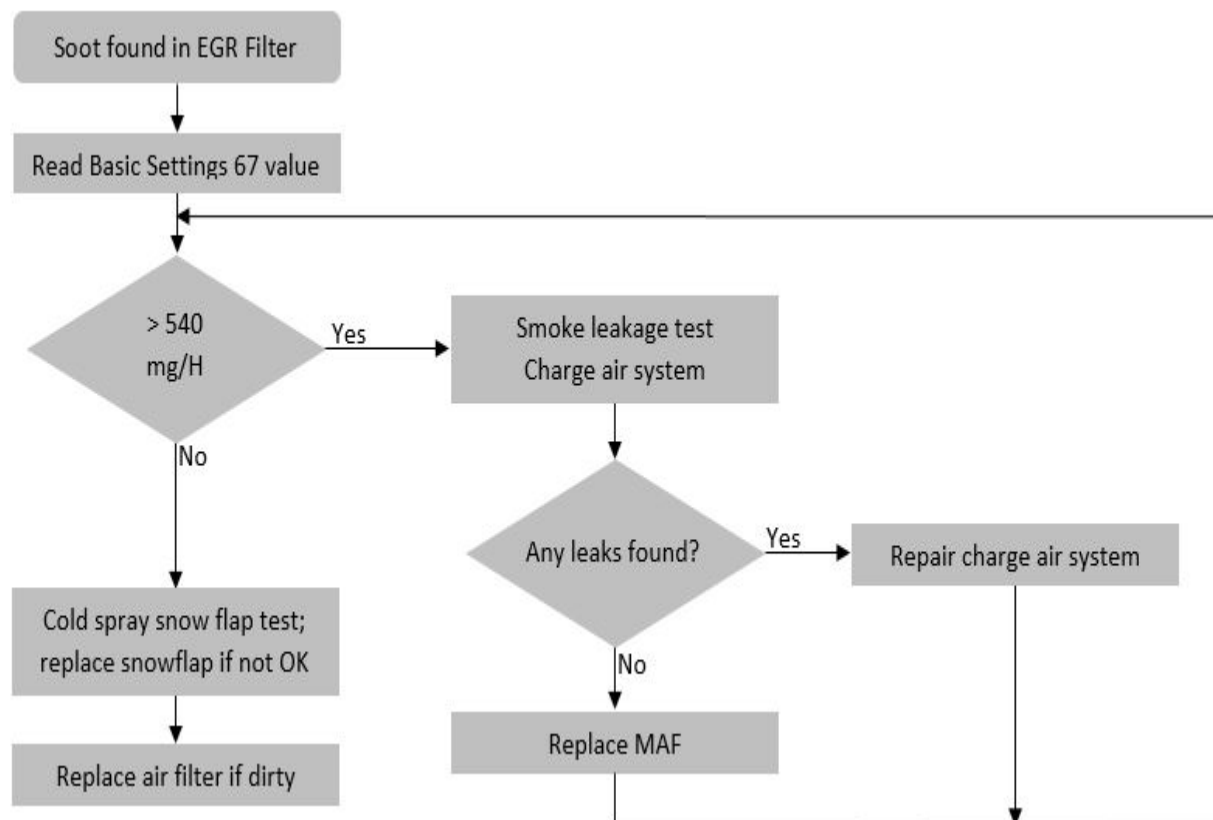


Figure 2. Verifying that there is carbon.

2. If your finger or the cloth comes out with black soot:
 - Replace the DPF & EGR filter together. **The engine must be running correctly with no faults stored to perform the next steps.**
 - Read out 01 ECM control module OBD Basic Settings block 67 with engine at idle and at operating temperature. Select activate and monitor field 3 when EGR is in OFF position.
 - If the MAF actual value is equal to or greater than 540 mg/h, proceed to smoke testing below (there is likely a leak within the intake system).
 - If the value is less than 540 mg/h, proceed to the inspection of the snow flap and air filter (TSB attachment). There is no need to smoke test.
 - Smoke test the charge air system for leaks if MAF value is 540 or great (see procedure below).



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Tip: Proper intake airflow is essential for the longevity of the DPF. If a vehicle is found to have a damaged DPF, it is advised to inspect the condition of the intake air filter and verify resting position of the warm air valve (after the vehicle has cooled, see attachment). If the air filter is dirty, advise replacement.

If there is no soot on your finger or the cloth, continue with GFF diagnostics, this bulletin does not apply.



Note:

When replacing the DPF for the fault **P0401**, **P2002**, or **P240F** it is important to replace both the DPF and the EGR filter together, as soot accumulation in the EGR filter is undesired. It is NOT necessary to replace any other components for this fault (i.e. NOx Storage Catalyst, Sulfur Catalyst, Exhaust Flap, EGR Cooler). These components should be reinstalled in the vehicle with the new DPF and EGR filter. If the particulate filter was replaced, an adaptation must be performed in Guided Functions.



Note:

Vehicles with a front single assembly exhaust (one piece DPF/NOx Cat.) will require additional components. See parts table below. If the car has already had the DPF replaced once, and now has the two-piece DPF/Nox Cat., there is no need for the extra parts.



Note:



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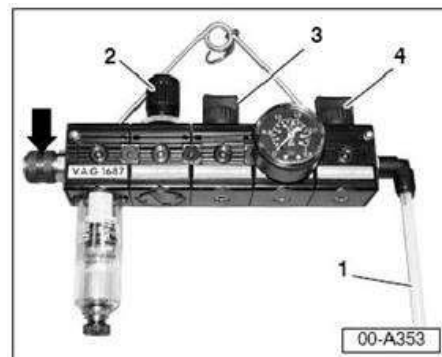
Proper intake airflow is essential for the longevity of the DPF. If a vehicle is found to have a damaged DPF, it is advised to inspect the condition of the intake air filter and verify the resting position of the warm air valve (after the vehicle has cooled) as outlined in **“Air Filter, Cleaning Housing and Replacing Filter Element” section of the Elsa Repair Manual**. Replace the warm air valve (snow flap) if necessary. Additionally, any leaks within the intake air system will cause additional stress to the DPF and a reduction in engine performance. It is advised to reference

Charge Air System Testing

1. The charge air pressure system can be checked using the VAG 1687. Charge air system tester along with the VAG1687/10 adapter as follows:



2. **Special tool VAG 1687 Charge air system tester, preliminary set-up**
 - Back off pressure regulator knob -2- of VAG 1687 fully to protect gauge when shop air supply is applied to the assembly.
 - Close valve -3- before gauge.
 - Close valve -4- after gauge.
 - Shop air supply line will later be attached to the inlet of VAG 1687.
 - Remove the “female” fitting from the tester (arrow) and install an appropriate “male” air fitting that will connect to your shop air supply line (See Note below).



Note:

Use only approved air fittings to adapt shop air supply line to VAG 1687 tester.



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3. Special tool VAG 1687/10 pressure adapter, installing.

- Separate intake hose from the Mass Airflow Sensor assembly (MAF).
- Insert VAG 1687/10 pressure adapter in intake hose -black arrow- using existing clamp (as shown).
- Remove crankcase ventilation valve or tube from intake hose at -white arrow-.
- Plug hose with appropriate metal plug and hose clamps supplied with VAG 1687 special tool kit at -white arrow-.



Note:

To help find small leaks, BEFORE pressurizing the system, fill system with smoke using special tool KLI9210 and adapter KLI9210/50 as outlined in this bulletin.

An Ultrasonic detector may also be used to detect extremely small leaks where smoke may not be visible.

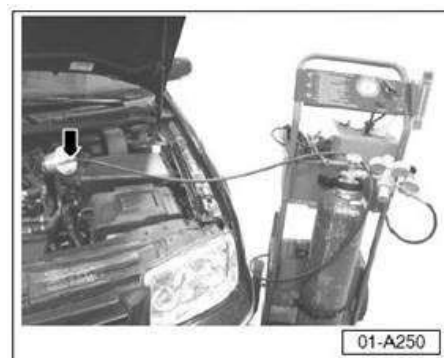
Special tool KLI9210 (EVAP system leak detector)

- Install optional fitting KLI 9210/50 on hose of special tool KLI9210.
- Connect KLI9210 to VAG 1687/1 adapter (KLI 9210 is shown attached to VAG1687/1 at arrow on 1.8L Turbo).



Special tool KLI9210 (EVAP system leak detector)

- Install optional fitting KLI 9210/50 on hose of special tool KLI9210.
- Connect KLI9210 to VAG 1687/1 adapter (KLI 9210 is shown attached to VAG1687/1 at the arrow on 1.8L Turbo).





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Special tool KLI9210 (EVAP system leak detector), preliminary set-up:

- Setup KLI 9210 as described in the user manual regarding self-test and output pressure.
- Connect the smoke generator leads to the vehicle battery.
- Turn the valve to test (black arrow).
- Press the smoke generator button to fill the system with smoke (see instructions printed on the tester).
- Check for escaping smoke for two minutes.



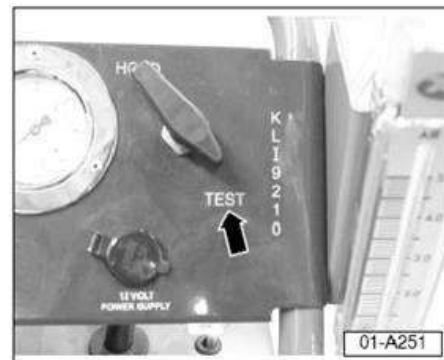
Tip: Smoke may escape from crankcase hose or oil fill hole. This is normal.

With system filled with smoke:

- Remove smoke generator hose and connect VAG 1687 quickly to prevent smoke from leaking out.
- Connect VAG 1687 quickly to prevent smoke from leaking out.

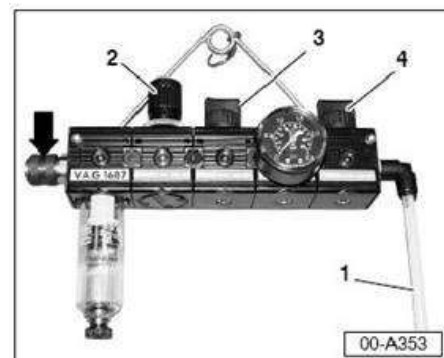
Special tool VAG 1687 connecting to pressure adapter 1687/10

- VAG 1687 is shown connected to VAG 1687/10 (black arrow).
- Shop air supply connected to VAG 1687 at (white arrow).
- Perform pressure test.



Performing the Pressure Test:

- With outlet the hose -1- of VAG 1687 connected to the air pressure adapter.
- Attach the shop air supply line to the previously installed male fitting.





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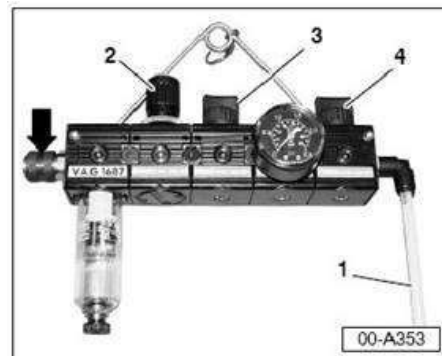
- Open valve -3- between regulator valve and gauge.
- Adjust test pressure up to 1.0 bar (see Note below) by turning the regulator valve -2-.



Note:

DO NOT pressurize the system above 1.0 bar. Doing so may force oil into the intake system which can damage the engine.

- Slowly open outlet valve -4- (after gauge) to test hose connections.
- Observe the pressure gauge for a drop in pressure.



Tip: Some pressure will be lost past the throttle plate.

If a smoke generator was used to fill the system with smoke:

- Check for smoke escaping from intake connections.



Tip: An Ultrasonic detector may also be used to detect extremely small leaks where smoke may not be visible.

- Repair any leaks found.
- Remove tester.
- Remove plug from crankcase ventilation hose.
- Remove air pressure adapter.

With VAS diagnostic tool connected:

- Erase DTC memory.

If a smoke generator was not used to fill the system with smoke:

- Apply soapy water solution or equivalent to intake system connections.



Tip: An Ultrasonic detector may also be used to detect extremely small leaks.

- Inspect intake system connections for leaks.
- Repair any leaks found.
- Remove tester.
- Remove plug from crankcase ventilation hose.
- Remove air pressure adapter.

With VAS diagnostic tool connected:

- Erase DTC memory.



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- Recheck 01 ECM OBD Basic Settings block 67 at idle with the engine at operating temperature. If the actual MAF value is below 540 mg/h, proceed to the inspection of the snow flap and air filter (attached). If the value is equal to 540 mg/h or greater, refer to Repair Group 21 in Elsa for detailed testing of the charge system components.
- If no leaks are found, but Basic Settings block 67 remains at 540 mg/h or above, it is recommended to replace the MAF sensor.

Warranty

Claim Type:	If the vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
Service Number:	2674		
Damage Code:	0010		
Labor Operations:	Remove and install the Particle Filter	2674 1912	See SRT with associated operations.
	Particle Filter Replace	2674 5562	See SRT with associated operations
	Check Warm Air Valve (Snow Flap) Operation, no further action required	2325 2599	10 TU
	Install new Warm Air Valve (Snow Flap_	2325 2599	30 TU
	Smoke Test	2141 2599	70 TU
Diagnostic Time:	GFF	0150 0000	Time stated on the diagnostic protocol (Max 40 TU)
	Road test prior to the service procedure	No allowance	0 TU
	Road test after the service procedure	0121 0004	10 TU
Claim Comment:	As per TSB 2064398/3		

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



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Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.

Part Number	Part Description	Quantity
1K0254708GX	DPF	1
1K0253115AE	Seal	2
1K0253725	Clamp	1
1K0253725B	Clamp	1
1K0253120B	EGR Filter	1
1K0253115AG	Gasket	1
1K0253115T	Gasket	1
1K0253725E	Clamp	1
03G131547H	Gasket	1
03G906461C	Mass Air Flow Sensor	1
03C0129594E	Control Valve (Snow Flap)	1
N10579702	Bolt	3
N10528602	Bolt	4
N91143301	Bolt	2
N91167101	Bolt	1
N91066101	Bolt	1
WHT000729A	Bolt	3
WHT000431A	Bolt	2
N91039802	Bolt	3
1K0825951	Bolt	3

Tool Number	Tool Description
VAG 1687	Charge Air System Tester
KLI9210	EVAP system leak detector



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Freeze Spray	Obtained Locally
VAS 6160/VAS 6150	VAS tester with the current version of ODIS (Windows 10)

Additional Information

All parts and service references provided in this TSB (**2064398**) are subject to change and/or removal.

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