

DPF CHECK LIST

Part 1 - GENERAL INFORMATION

IMPORTANT ADVICE!

- The use of a Scan Tool to read and reset diagnostic trouble codes is mandatory to service a DPF or refill the FBC additive of the DPF system.
- The directions and instructions of the vehicle manufacturer must be observed strictly!
- This technical leaflet should be used as a guide for the correct service of vehicles equipped with DPF systems, but it will never substitute the use of the service manual of the vehicle.
- Before you replace a DPF, you should test the vehicle to exclude all other possible sources of error!
- The tests listed in this manual should be performed before and after replacing any DPF system parts. This ensures that the DPF will work properly when replaced.
- Failure to do this may cause DPF malfunction after a short time. In some cases, this malfunction can cause permanent damage to the new DPF and consequently is not covered by our warranty. It can also damage other parts of the engine such as the turbo, EGR valves, sensors, catalytic converters,...
- When the diagnosis concludes that DPF should be replaced, prior to proceeding with the replacement of the DPF, it is critical to determine and repair the problem that caused the failure before the vehicle leaves the garage.
- If the DPF fails due to other problems such as insufficient temperature to perform the regeneration, low level of additive, wrong selection of sump oil, etc. and the filter is damaged before the end of its expected working life (over 100,000 km), the causes of those failures must be corrected prior to any replacement procedure. If the causes are not corrected they will inevitably lead to a new DPF failure which will not be covered by our warranty, because the cause of the failure is not linked to the DPF manufacturing process.

ALWAYS FOLLOW THE OE SERVICE MANUAL OF THE VEHICLE!*

* Error messages may vary depending on the vehicle

Faults and Maintenance Checks

The DPF light comes back on within a few kilometers after replacement of the DPF.

- How long after the DPF replacement procedure?

If after a few km, the repair was not done properly.

- Has the ECU been reset during the DPF service procedure?
- Are the pressure pipes connected correctly?
- Are the pressure pipes blocked? Did you clean them using pressurized air during the DPF service procedure?
- Did you check for air leakages upstream of the DPF?
(cracked pipes, exhaust manifold gasket, loose connections, etc.)
- Did you check the status of the lambda sensor?
- If the DPF is replaced after 140,000 km and there is a pre-catalytic converter before the DPF (DOC and filter), this unit should be replaced together with the DPF because the minimum temperature should be reached to allow the DPF regeneration process.

The DPF keeps logging up.

- Was the vehicle driving long enough journeys to regenerate?
- Has the fuel additive tank been filled?
- Was the right fuel additive FBC used for this model?

If the vehicle was serviced recently or the oil was replaced

- Oil Specification - Check if the correct low-ash oil was used.
- If the oil level is too high the oil can be contaminated with fuel during failed regeneration attempts. The additional fuel which is required for an increase in exhaust gas temperature passes into the sump tank mixing with the oil, contaminating it, this can lead to a breakdown. In this case the oil needs to be replaced.

Is the EGR (Exhaust Gas Regeneration valve) performing well? When this valve doesn't perform well it can get stuck, modifying the Air/fuel mixture that access to cylinders, leading in an increasing of the level of solid particles that permanently travel through the exhaust pipe, causing the filter to clog much faster.

Is the injection system working properly? A poor maintenance of the injectors produces the wrong mixture at the combustion chamber, This leads to an increase of solid particles in the exhaust gases, causing the filter to clog faster.

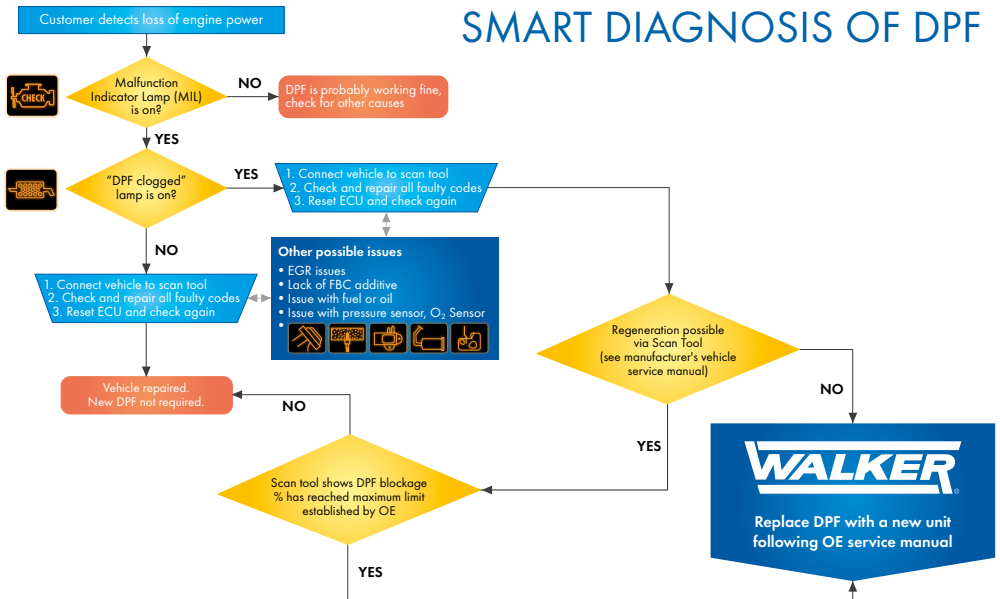
Is the air intake system properly sealed? A leak at the intake area will lead to an improper mixture in one or several cylinders. This will increase the number of particles produced and will lead to the filter clogging much faster.

Part 2 - DO I REALLY NEED TO REPLACE THE DPF?

DIAGNOSE BEFORE REPLACING A DPF

Before replacing a DPF, a complete diagnostic test should be done with a modern Scan Tool (code reader) so as to detect all possible diagnostic error codes (TDC) and repair the causes prior to any replacement. A visual inspection of the components listed below is highly recommended as well, because an error involving any of these components separately or in conjunction with others can lead to a failure of the DPF. Only if the vehicle presents none of these possible failures can you proceed with the DPF replacement under cover of the warranty!

	ok	renewed
If the filter is blocked, perform the "Forced regeneration" procedure by means of the EOBD switch with the Scan Tool.		
Air leaks at the intake system (manifold or gasket)		
Air leaks at the exhaust manifold area (or DPF housing)		
Sensors - Check all sensors (lambda, temperature, differential pressure, Air mass meter)		
Exhaust gas recirculation system		
EGR valve status		
EGR pipe is free to move		
Influence of other peripheral factors		
Fuel Additive (FBC) level (if applies)		
Air mass meter		
Wear of the engine and turbo		
Fuel Injectors (in the case of leakage)		
Condition of the glow plugs		
Air filter condition		
Status of ECU		



Part 3 - THE DIESEL PARTICULATE FILTER MUST BE REPLACED

IMPORTANT STEPS AND INFORMATION WHEN YOU REPLACE A DPF*

Information from the ECU for the defective part:	
Ash content in grams or percentage	
Soot content in grams or percentage	
Km since last regeneration	
Stored diagnostic trouble codes (DTC)	
Other information from ECU	
Brand and model of the Scan Tool used for performing the tests	

DIAGNOSIS AFTER REPLACING THE DPF*

Implementing proper diagnostic tests after DPF replacement is mandatory. The following points must be checked routinely when exchanging a DPF (check list - please fill in performed interventions):

	CHECKLIST
Control unit - read and reset DTC error messages with the Scan Tool	
Oil level checked	
Oil specification - Check whether the correct low-ash oil was used	
Fuel additive storage (where available) - Fill-in and save at the control unit through diagnostic tool	
DPF pressure pipes - Inspect, clean with air and check functionality	
Sensors - Functional testing	
Lambda	
Pressure sensor	
Temperature sensor	
EGR system	
Air mass meter	
Engine and turbocharger - wear condition	
Injectors	
Glow plugs	
Air filter	
Leak testing	
Turbocharger	
Manifolds (intake and exhaust)	
Intercooler	
Precatalyst	

**ALL THESE INSTRUCTIONS SHOULD BE USED AS
A GENERAL INFORMATION GUIDE.
TO FOLLOW VEHICLE'S OE SERVICE MANUAL
IS MANDATORY!**



* Please print out the test results and add them to the documents for the warranty claim!

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