DPF/FAP/CAT filter

REGENERATION/CLEANING

Warranty : [ ]24 months [x]12 months [ ]none

Date of service :	2021-07-15
Customer name :	
Vehicle make and model :	Opel Insignia 2012
Vehicle odometer :	190000
Filter No :	

Warranty coverage :

1. removal of ash and soot deposits plogging filter channels of over 90 %

2. maintaining the integrity of the core (monolith) of the filter during cleaning

Cleaning report :

1. Initial inspection
Filter assessment: [5] [4] [x] [2] [1]

2. Pressure measurement : before [64] after [0] mbar

3. Cleaning of the catalyst : [x] Yes [ ] No

4. Prevailing type of deposits : [ ] oil [x] soot [x] ashes

Recommendations : Tahmafilter ja katalüsaator pestu ja kuivatatud.Valmis kasutuseks.

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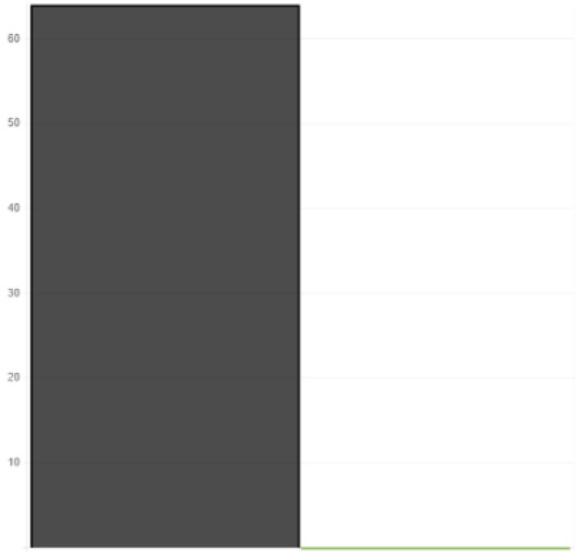
-100%
Pressure

PRESSURE DIAGRAM

Pressure drop by **100.00%**



BEFORE **AFTER**

PRESSURE DIAGRAM

Pressure drop by **64.00 mbar**

Photos before:

Photos after:

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QUALITY POLICY

Dear customers.
For the avoidance of doubt about the quality of the service, we have prepared a list showing in detail when and why DPFs become clogged.

DPF IS A TYPE OF "WASTE BIN", WHEN IT GETS CLOGGED, WE CANNOT SAY THAT IT HAS FAILED OR THAT IT IS DAMAGED. ON THE CONTRARY, THE DPF HAS DONE ITS JOB.

Modern particulate filters are equipped with so-called self-cleaning systems. If the filter becomes excessively clogged, its only salvation is cleaning using a specialized machine.

Hydrodynamic cleaning of DPF ensures that the filter recovers up to 99% of its original filtration surface. However, this does not ensure that the causes of filter clogging are removed. If left undiagnosed, it will result in the filter clogging again in a relatively short period of time.

Causes of emergency DPF clogging with soot:

- Worn-out Common Rail injectors – improper atomization of fuel in combustion chambers. Excessive fuel to air ratio causes heavy black smoke and large amounts of soot.
- Defective differential pressure sensors before and after the filter.
- Faulty temperature sensor at DPF.
- Damaged turbocharger - can cause the engine oil to enter the intake system and subsequently the combustion chambers. Engine oil combustion will produce more smoke and soot.
- Rarely replaced, clogged air filter – obstructs the airflow to the turbocharger and the combustion chambers, resulting in insufficient air supply. Combustion of an excessively rich mix produces large amounts of smoke and soot.
- Damaged (or dirty) airflow meter – due to faulty readings, the ECU computer will not be able to adjust the correct ratio of fuel and air. This may result in the injection of too much fuel into the combustion chambers relative to the air volume. It causes (as we already know) large amounts of black smoke and soot, which clogs up the DPF.
- Worn out glow plugs – cannot heat the combustion chambers adequately, resulting in significantly higher than standard soot emissions during the first few minutes of driving.
- Worn out piston rings – cause engine oil to enter the combustion chambers. Engine oil combustion is the cause of large amounts of smoke and soot.
- Leakage in the DPF steel housing.
- Unprofessional chip tuning.
- Use of particulate filter substitutes.
- Short driving distances. Interruption to automatic soot-burning mode during driving.

Causes for the gradual clogging of the DPF by ash:

- Absence of Low SAPS engine oil.
- In case of a wet FAP type particulate filter, frequent refuelling. Every time the refill is opened, the additive is "injected" into the fuel. The by-product of burning these types of additives is ash that ends up in the filter canals.
- Engine wear and corrosion residue products entering the DPF.
- Poor fuel quality and use of fuel additives.

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