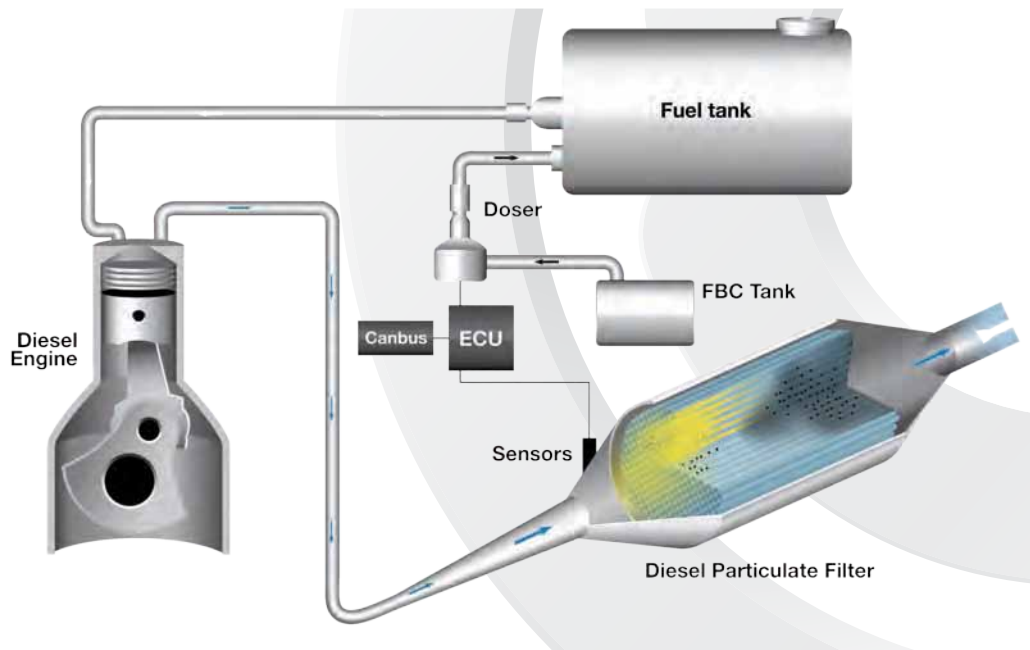


Diesel Particulate Filter

Information



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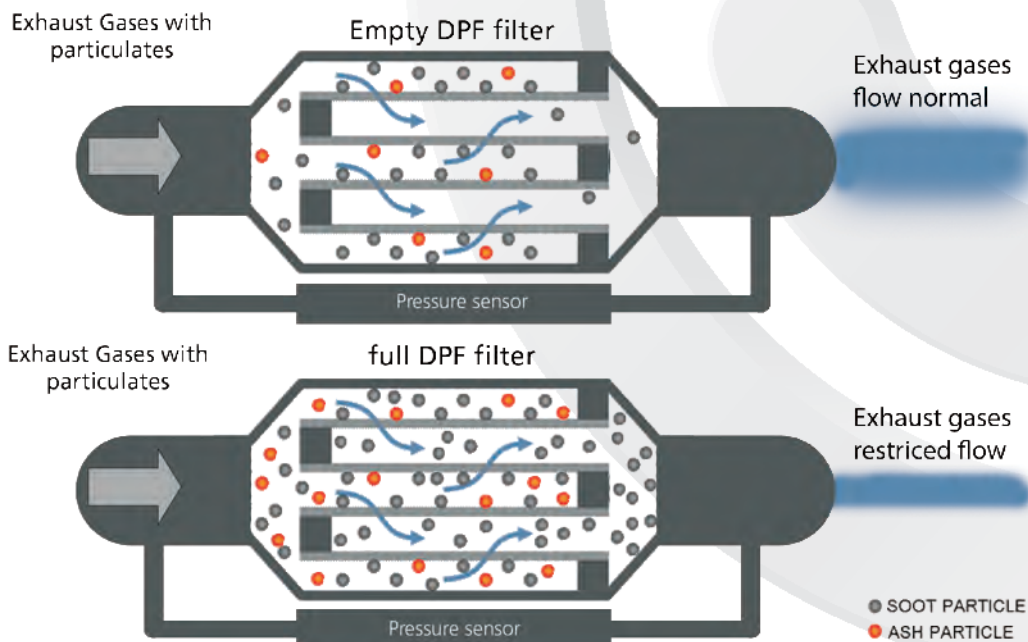
About Diesel Particulate Filter & vehicle filter systems

Diesel Particulate Filters (DPF) - or soot traps - are more common on the roads today due to ongoing changes in emissions regulations. With Euro 5 standards now with us, Particulate Filters in Diesel car exhausts are now as common as catalytic converters on petrol cars.

This relatively new way to combat vehicle pollution has proven to be very successful in providing major reductions to diesel exhaust emissions, but, as with any new technology, sometimes there can be problems. Evidence of these system failing to regenerate comes to light every day. In the **Ireland, the AA** is getting more & more calls from drivers regarding the DPF light illuminated on the vehicle dashboard indicating a filter blockage, not knowing what it is or what to do about it.

How do they work?

As with any filter, they 'filter' or trap particles, in this case harmful diesel exhaust soot particles, so they have to be emptied regularly to maintain performance. The DPF needs to be cleaned regularly, through a process called regeneration, either active, passive or forced regeneration, the accumulated soot is burnt off at high temperature (around 600c) to leave only a residue of ash, effectively renewing or regenerating the filter, ready to take on more pollution from the engine.



DPF Filter types

PSA vehicles (Citroën, Peugeot, also some Ford, Volvo)

PSA vehicles have an active on board additive system with its own tank & pump system that automatically doses the correct amount of additive to the diesel fuel. This active type relies on fuel additive to lower the ignition temperature of the soot particles and along with the engine management system, monitors the load of the filter with sensors & triggers a filter regeneration by altering engine timing & fuel flow settings.

The additive is stored in a separate tank and is mixed automatically with the fuel when you fill up. This system needs filling up of the additive dosing tank with JLM PAT Fluid & equipment that involve system resetting & should be carried out by mechanics only, these systems now only require fluid refills at around 120,000km.

- For this vehicle type with on board dosing system, JLM has developed the JLM PAT Fluid. Only to be used by professional mechanics, use only as replacement for corresponding listed numbers on page...



Active regeneration

The active system works off a filter load limit or sensors reading exhaust backpressure or the 'soot load' of the filter, activating timing adjustments to the fuel injection which in turn increases the exhaust temperature, initiating the burning of the soot and regenerating or clearing the filter. Depending on the vehicle brand, This type of DPF regeneration can also be initiated by the vehicle ECU every 400 - 600 kilometres or so depending on vehicle use and takes around 10 minutes to complete.

- For active systems use JLM DPF Cleaner

Passive regeneration

Some manufacturers use passive regeneration. For these vehicles passive regeneration generally takes place on the motorway where exhaust temperatures are higher. This type of system can have an integrated oxidising catalytic converter located close to the engine where exhaust gases are hot enough so that passive regeneration is possible. Passive regeneration, relies on the exhaust temperature being high enough to automatically burn off, (motorway driving) and or using the ECU to alter the vehicle timing to control the process. In city driving or short trips the regeneration may not take place fully, leading to blocking of the filter. This can lead to higher fuel consumption and a visit to the mechanic for cleaning or replacement.

- For cars that have a passive regeneration use the JLM DPF Cleaner

Forced Regenerations

When your vehicle displays second stage DPF warning lights it will go in to 'limp mode' and should be taken to your garage or dealer to ascertain the extent of the problem. A forced regeneration involves the garage using a computer program to run the car, initiating a regeneration of the DPF. This will also require changing the engine oil & oil filter.



Why does my Diesel Particulate Filter (DPF) block

Every vehicle type & engine combination can have differing reasons as to why the filter blocks. The rate of particulates generated by the engine, the quality of the fuel, quality of the oil, driving style, even the location of the DPF in the exhaust system can all contribute to the filter blocking or not regenerating fully.

Generally, the problems arise in around town stop start driving where the regeneration process might not complete. A warning light will illuminate or a message indicating the DPF is full displays on the dash. If you continue to drive in the same manner, the soot build up will increase until other warning lights illuminate and the vehicle will go into 'limp' mode, where driving speed is restricted.

This warning stage will now involve a visit to the mechanic to carry out a forced regeneration on the filter, where filters that cannot be regenerated will then cost you between €1000 - €1500 to replace the filter.

- *Use low ash engine oil:* Not using the correct oil specified for your engine can significantly add to the soot buildup in the DPF.
- *100% Diesel Bio Fuel:* Using these Bio Fuels can also contribute to extra soot build up loading in your DPF as the Bio Fuel may not burn as 'clean' (produce more particulates) as your regular Diesel fuel.
- *City Cycle driving:* We don't all use our cars in the same way, if you only use your car around town you may experience a faster buildup of soot in your DPF as the regeneration process may not complete in short city or around town driving.
- *Temperature:* The DPF relies on temperature to carry out a filter regeneration, at around 600c, so a lot of short trips, low speed driving will not provide the exhaust system with a high enough temperature to begin or complete a regeneration, so the filter can block up faster.
- *High Kilometre vehicles:* As these vehicles with DPF systems age they will start to show that filter regeneration is harder to complete. Like any part on the car they do wear out and can no longer be repaired.



What do I do if my DPF warning is on

Follow vehicle manufacturer's handbook on procedure to unblock the DPF. It should be possible to start a complete regeneration and clear the warning light simply by driving for 20 minutes or so at speeds greater than 60km per hour.

At this point you should also add a single 100ml dose of JLM DPF Cleaner to a full tank of fuel, then drive as normal. This should clear the warning light within the first few hundred kilometres -depending on how blocked the filter is.

Add a second dose with the next tank of fuel if necessary.

If you ignore the light and keep driving in a relatively slow, stop/start pattern soot loading will continue to build up until around 75% filter capacity, then you can expect to see other dashboard warning lights illuminate too. At this point driving at speed alone will not clear the blockage and the car will have to go to a dealer for evaluation and possibly a forced regeneration.

We see more evidence of these systems failing to regenerate, even on cars used mainly on motorways. It seems that on cars with a very high sixth gear engine revs are too low to generate sufficient exhaust temperature. Occasional harder driving in lower gears should be sufficient to burn off the soot in such cases.



If it is not successful, or the warning repeatedly comes on you should visit your mechanic, they can carry out a test to see how badly the filter is blocked & check:

- if the pressure sensors are working correctly.
- Remove the filter from your car & replace with a change over filter
- Get the filter cleaned with ultrasonic cleaning
- Replace the filter with a new DPF filter



How JLM Diesel Particulate Filter Cleaner Works

JLM's DPF Cleaner has many benefits

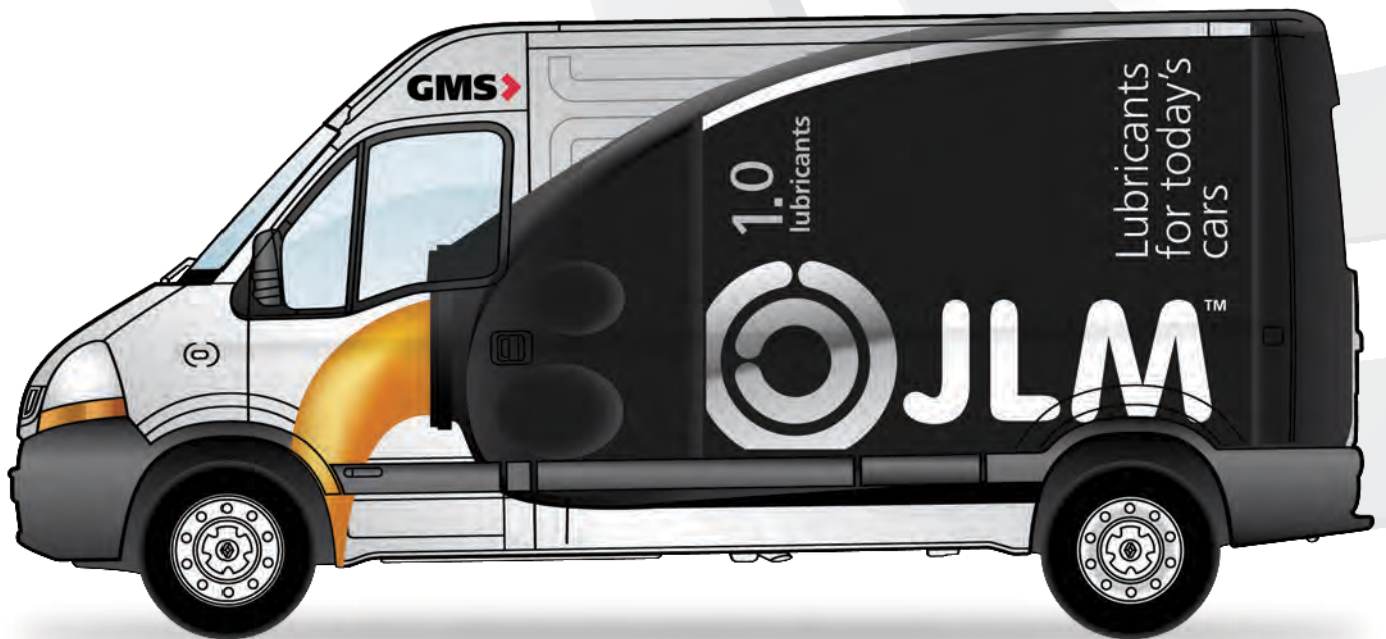
For best results use as a preventative by simply adding the 100ml dose to the diesel tank when servicing.

The additive operates in two ways.

First, it uses a catalyst to adhere to the soot particles during combustion, lowering the temperature at which they can be burnt off at. Secondly, the additive also increases the fuel burn temperature, in turn increasing the exhaust temperature, which increases the temperature inside the soot trap, burning off the soot, regenerating the filter.

Due the unique combination of additives contained in JLM DPFC, the soot burns at lower temperature so it will not cause a 'runaway' regeneration, or cause a failure due to excessive heat during regeneration. Adding JLM DPF Cleaner to the diesel tank every 10,000 kilometres & every service interval will ensure the filter regeneration takes place fully with all DPF types, in all driving conditions. (dependent on soot load & filter condition & age) First, it decrease the temperature the soot will burn off at, and, it increases the temperature the fuel burns at. This in turn increasing exhaust temperatures, burning of any excess soot in the filter trap, aiding the vehicles regeneration system.

As these vehicles age - higher kilometer vehicles will start to show that the filter regeneration is harder to complete, so the extra help JLM DPF Cleaner ensures longer filter life.



Customer Testimonial...



Cases by Bosch Diesel Specialist with the JLM Diesel Particulate Filter Cleaner

The following data & case results were compiled by a Bosch Diesel Specialist in the United Kingdom. In these case reports we briefly describe 4 cases of modern diesel cars that came into their workshop with serious DPF problems. All of the tested vehicles are used on short drive cycles.

In all 4 test cases the problems were resolved by simply adding 100ml of JLM DPF Cleaner into the tank and driving until the tank was empty again, roughly 500 km on average.

"We use many types of diagnostic tools to enable quick & accurate measurement & problem diagnosis, equipment like: Bosch KTS system, Worth wow, Carman scanner, factory Citroen Peugeot diagnostic, VW Vag com, DEC super scan, and many more."

Case 1 - Chevrolet Captiva

Make : Chevrolet Captiva
Engine : 2.0 liter Diesel
Year : 2008
Odometer : 47300 Miles (76.121 km)

Action
100ml of JLM DPF Cleaner added to a full tank of fuel.
Vehicle rechecked when complete tank of DPF fuel used.

Before Treatment:

| | | |
|-------------|---------------------|--------|
| Idle 800rpm | DPF pressure sensor | 4 kpa |
| 2000rpm | DPF pressure sensor | 17 kpa |
| 4000rpm | DPF pressure sensor | 47 kpa |

After Treatment:

| | | |
|-------------|---------------------|-------|
| Idle 800rpm | DPF pressure sensor | 0 kpa |
| 2000rpm | DPF pressure sensor | 0 kpa |
| 4000rpm | DPF pressure sensor | 0 kpa |

Diagnostic note - Last regeneration 547 km.



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Customer Testimonial...



Case 2 - Volkswagen Passat

Engine : 2.0 liter BMR Diesel
Year : 2008
Odometer : 43590 Miles (73.369 km)

Owner is a local Doctor with a lot of local slow driving. Vehicle presented to us with regeneration light on and the vehicle had gone into limp mode once in the last 60 miles.

This vehicle has had a history of regeneration light warnings.

Action

We removed the pipes from the DPF pressure sensor to stop the vehicle calling for regeneration. 100ml of JLM DPF Cleaner was added to a full tank of fuel and the owner was send on his way. On using the complete tank of treated fuel we reconnected the pressure sensor and read the following data.

After Treatment

| | | |
|-------------|---------------------|-------|
| Idle 800rpm | DPF pressure sensor | 2 kpa |
| 2000rpm | DPF pressure sensor | 4 kpa |
| 4000rpm | DPF pressure sensor | 8 kpa |

Case 3 - Alfa Romeo 197

Engine : 2.4 JTD Diesel
Year : 2008
Odometer : 31543 Miles (50.763 km)

Before Treatment

Message on dash - DPF full - Had problem collecting data from this vehicle fault on diagnostic plug (worn).

Action

100 ml JLM DPF Cleaner added to a full tank of fuel. After 210 miles the customer reported the message was no longer displayed. After the full tank of treated fuel was used the vehicle was returned to us and we managed to make connection with the ECU.

After Treatment

| | | |
|-------------|---------------------|--------|
| Idle 800rpm | DPF pressure sensor | 2 kpa |
| 2000rpm | DPF pressure sensor | 12 kpa |
| 4000rpm | DPF pressure sensor | 31 kpa |

Case 4 - Volvo V70

Year : 2008
Odometer : 24500 Miles (39.428 km)

Before Treatment

Regeneration warning light on and warning message last regeneration 194 miles.

Action

100ml JLM DPF Cleaner added to a full tank of fuel.

After Treatment

Vehicle rechecked when complete tank of DPF dosed fuel used. Only data we could read was that the DPF filter was 13 % full. Warning light was off and no warning message.



Diesel Particulate Filter Cleaner

JLM Lubricants

Leads the way with the new Diesel Particulate Filter Cleaner.

Suitable for all DPF filter types, JLM DPF Cleaner is added to the fuel tank every service interval for maximum cleaning power of the DPF. It can also be added to the tank to clean blocked filters (1st stage warning light) and enables full filter regeneration in difficult drive cycles (i.e. city driving).

Product Information

- Ensures long term durability of filter systems
- Facilitates passive regeneration across a wider temperature range
- Prevents run-away regeneration which can otherwise damage filter substrate
- Minimizes unscheduled maintenance costs

Use

Add 100ml JLM DPF Cleaner to 60 liter diesel fuel before or after filling. For best results use regularly.



Product details

| | | |
|-------------------------|---------------|----------------------------|
| Art.-Nr: | J02210 | USA EPA Registered |
| Barcode: | 8718274350999 | Patent protected worldwide |
| Pack size: | 100 ml | VERT approved |
| Carton quantity: | 9 | |

RRP €29.00 (per 100ml)



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Pat Fluid

The JLM Pat Fluid replaces the genuine Citroën / Peugeot DPF additive

JLM Pat Fluid has the following benefits:

- One universal aftermarket product for Citroën / Peugeot cars' diesel engines with DPF filters
- Low cost alternative for the original product
- One JLM product number replaces multiple "genuine part" numbers

Product Information

The JLM Pat Fluid replaces the following genuine parts numbers:

- PSA Particulate Fluid 973665, 997995, 973685, 973686, C973685 & C973686
- Eolys DPX 42, DPX 176
- Satacen 25
- Ford Particulate Fluid 1337646

Available in

JLM Pat Fluid 1 L
 JLM Pat Fluid 4,5 L
 JLM Pat Fluid refill Kit - suits 1 L
 JLM Pat Fluid refill Kit + empty 1 L bottle - suits 4,5L

*A separate refill kit is required to enable filling of the system.



Product details

| Art.-Nr | Barcode | Pack size | Carton quantity | Per can RRP |
|------------------------|---------------|-----------|-----------------|----------------|
| JLM PAT 1L | 8718274350845 | 1 Liter | 12 | € 59.80 |
| JLM PAT 4.5L | 8718274350869 | 4.5 Liter | 4 | € 199.80 |
| JLM PAT 1LKIT | 8718274350883 | 1 Liter | 1 | € 73.00 |
| JLM PAT 4.5LKIT BOTTLE | 8718274350890 | 4.5 Liter | 1 | € 224.00 |

Diesel Fuel System Cleaner

JLM Lubricants

At JLM we are committed to making a range of service products that the workshop professionals can rely on to do the job quickly, thoroughly & professionally. JLM products are manufactured to exacting TUV standards, guaranteeing quality products at a competitive price

Product Information

Advances in diesel engine technology require new additive technology to meet vehicle manufacturer & government vehicle emission regulations. These high pressure, direct injection, common rail engines have injector nozzle holes not much thicker than a human hair, and can foul quite easily with carbon & fuel deposits, reducing engine performance.

JLM Diesel Fuel System Cleaner quickly restores & maintains fuel system cleanliness in all diesel fuel blends. Developed for Euro 5 engines to deliver consistent engine power, performance & emission reductions.

- Euro 5 injector deposit control
- Increases Cetane by up to 6 numbers
- Compatible with all diesel fuels
- Reduces particulate filter soot build up
- Optimal flow retention in XUD-9 test
- Emulsion formation prevention & improved water separation
- Improves fuel economy
- Reduces carbon emissions
- Restores lost power
- Chlorine Free
- Excellent corrosion protection
- Zero power loss in DW-10 test

Use - Professional Use only

Use every 5,000 km or when vehicle is running poorly, has injector problems, black smoke, rough idle. Add 250 ml to one tank of diesel fuel during service. Cleans fuel system & injectors after treated in one tank of fuel. For best results, treat the fuel system every 5,000 Km.



Product details

| | |
|------------------|---------------|
| Art.-Nr: | J02320 |
| Barcode: | 8718274351095 |
| Pack size: | 250 ml |
| Carton quantity: | 9 |

RRP €11.80 (per 250ml)



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Diesel Air Intake & EGR Cleaner

JLM Lubricants

At JLM we are committed to making a range of service products that the workshop professionals can rely on to do the job quickly, thoroughly & professionally. JLM products are manufactured to exacting TUV standards, guaranteeing quality products at a competitive price

Product Information

Dissolves carbon deposits, gums & varnish build up. Quickly cleans EGR valve, air intake system, manifold & inlet valves. Restores air flow to engine improving power & acceleration, reducing exhaust smoke.

Use

Remove the hose between turbo & air intake cleaner. Spray directly into inlet manifold with engine running around 2000rpm, in short bursts until the engine runs smoother. Use approximately half the can. Replace hose.

RRP €11.50 (per 500ml)

Product details

Art.-Nr: J02710

Barcode: 8718274350050

Pack size: 500 ml

Carton quantity: 12

