

Transport for London

Low Emission Zone



A London based coach company operates this Mercedes Vario 614D minibus. It is fitted with a 4.2 litre diesel engine of Euro II standard and was first registered in 1998. It has 18 seats and a gross vehicle weight of 6,000kg. It is used regularly for sight-seeing visits to the Capital, and also for executive visits to the Benelux countries.

The London Low Emission Zone will apply to this vehicle from 7 July 2008 and it will be required to meet the Euro III standard for particulate matter. This standard rises to Euro IV for particulate matter in January 2012.

A vehicle that does not meet the required standard after 7 July 2008 must pay a £200 daily charge for driving in the zone. Failure to pay the daily charge would leave operators liable to a daily penalty charge of £1,000 for this vehicle type.

To establish what is needed for a vehicle to comply with London Low Emission Zone requirements, it is essential to know the exact engine version that is installed. This can be read

on the manufacturer's data plate, which on a vehicle such as this should be positioned just inside the front door. If the engine is certified to the Euro III standard, then no modifications or registration will be necessary.

Euro I and II Engines that meet the Euro III standard for particulate matter

The vehicle featured here was built in 1998 and has a Euro II standard engine. Certain Euro I and Euro II engines may still be compliant with the Euro III standard for particulate matter. To establish if this is the case vehicle owners must check the engine type designation (taken from the data plate; see above) against the Eligible Engines List. The list is published on the Transport for London (TfL) website, at tfl.gov.uk/lezlondon

The Mercedes Vario 614D with OM904 LA II/1 engine in this vehicle is included in the Eligible Engines list. All engines on this list meet the Euro III standard for particulate matter even though the engine as a whole is certified as Euro I or II (ie they meet the Low Emission Zone standards for 2008).

The owner can take the vehicle to a VOSA test station for certification without any modification and it will be issued with a Reduced Pollution Certificate (RPC) or Low Emissions Certificate (LEC), provided it passes an inspection and smoke test. In this case the owner would be issued with an LEC as the vehicle is not eligible for an RPC.

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These certificates are valid for 12 months and must be renewed annually. A vehicle with a valid LEC can be driven within the zone without being subject to the daily charge. When VOSA issue the certificate they will inform TfL, and the vehicle details will be updated on TfL's database within 10 days. Owners are advised to allow enough time for this before travelling in the zone.

The Low Emission Zone compliance status of the vehicle can be checked at tfl.gov.uk/lezlondon

Fitting an abatement device

If this vehicle had a Euro II engine that was not on the Eligible Engines list (ie did not meet the Euro III for particulate matter emissions standard) the owner of this vehicle could fit an approved abatement device to bring the vehicle up to the required Euro III standard.

An alternative filter could bring the engine in this vehicle up to the Euro IV for particulate matter standard required in January 2012.

Generally, when selecting a particulate matter abatement device there are two key considerations:

- The typical operating conditions (ie low mileage, slow speed, stop-start conditions or higher speed, long distance use)
- The length of time the vehicle is expected to remain in operation (ie up to or beyond 2012 when the LEZ emissions standards increase to Euro IV)

Only approved devices can be used to meet the requirements of the London Low Emission Zone. It is important that any retrofit device is selected from either the LEC Approved Devices list or the RPC Approved Devices list, both of which are published on the TfL website.

It should also be matched specifically to the engine and the operating conditions of the vehicle. Approved suppliers should be able to advise on the most appropriate equipment to suit any vehicle, and this is important here as not all systems are suitable for use with older or worn engines. Vehicles fitted with non-approved devices will not pass the VOSA inspection (required to certify compliance with the LEZ's standards). The registered keeper would be liable to pay the daily charge.

There are two types of abatement system that could be fitted on this type of vehicle: a partial flow diesel particulate filter (partial filter) and a full flow diesel particulate filter (particulate trap).

A partial filter for this engine would typically cost around £2,400 and is unlikely to need regular cleaning. However, this would only improve the emissions of the engine by one Euro standard, to Euro III. This particular engine, being on the Eligible Engine list, already meets this standard and so there is no gain for the operator in fitting a partial filter, unless the engine failed a VOSA certification test.

The owner could fit a full-flow diesel particulate filter, suitable for this vehicle's duty cycle for a

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typical cost of £4,200. All full-flow filter systems require the periodic removal of ash residue, which means this system needs servicing approximately twice per year. A service indicator, installed as part of the system, alerts the driver when servicing is required.

A diesel particulate filter system of this type would raise the emission standard of this vehicle to Euro IV for particulate matter. This would enable the vehicle to comply with London Low Emission Zone standards beyond January 2012.

In addition, fitting a full-flow filter or particulate trap would entitle the vehicle to an RPC, which means the vehicle would benefit from a reduced rate of vehicle excise duty in addition to being compliant with the zone.

For further information visit tfl.gov.uk/lezlondon or call 0845 607 0009.

Details correct at time of publication.
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