

Pre-Euro tractor unit

Transport for London

Low Emission Zone



This Volvo F12 tractor is plated at 44,000kg GVW, but is used to transport concrete girders at up to 80,000kg Gross Train Weight (GTW). This haulier specialises in abnormal indivisible load work, involving regular journeys to supply construction projects throughout the London area. This type of work results in relatively low annual mileages for a commercial vehicle which, coupled with the high replacement costs, mean that vehicles like this have a relatively long service life.

The London Low Emission Zone (LEZ) will apply to this vehicle from 4 February 2008 and it will be required to meet the Euro III standard for particulate matter (PM). This standard rises to Euro IV for particulate matter in January 2012.

This particular vehicle was first registered in 1990 and so its engine is of a Pre-Euro standard. It will therefore appear as non compliant if checked against Transport for London's (TfL's) LEZ compliance checker (tfl.gov.uk/lezlondon). The registered keeper will therefore need to take some action to avoid paying the £200 daily

charge for travel within the LEZ from 4 February 2008.

In order to establish what action is needed for such vehicles, it is essential to know the exact engine make and model that is installed. The engine type identification can be read on the manufacturer's data plate, which, on a vehicle like this, should be positioned just inside the driver's door.

Options for Pre-Euro engines

Given the age of this vehicle, the only way to bring it up to the Euro III standard for PM is to fit a Diesel Particulate Filter (DPF).

Generally, when selecting a PM abatement device

- 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 for PM)

Only approved devices can be used to meet the requirements of the London LEZ. 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. Vehicles fitted with non-approved devices will



Pre-Euro tractor unit

Transport for London

Low Emission Zone

not pass the VOSA inspection that is required to certify compliance with the LEZ standards and thus the registered keeper would be liable to pay the daily charge.

For a Pre-Euro engine vehicle such as this, a full-flow Diesel Particulate Filter (DPF) would be the only practical option, and would ensure the vehicle meets the 2008 LEZ emissions standard. The abatement equipment must be able to work effectively with the vehicle's expected low mileage, although operation at 80,000kg GTW should ensure that exhaust temperatures are more than adequate.

A DPF often uses a catalyst to "burn-off" the collected particulate matter. However, older engines which have rather oily exhaust fumes, or those used extensively on low speed/high load duties, may not be suitable for a catalytic filter. In this case a solution is still available in the form of fuel-borne liquid catalysts and/or "active regeneration" DPF systems.

All full-flow DPF systems require periodic servicing, approximately twice per year depending on duty cycle. A service indicator, installed as part of the system, alerts the driver when this is required. This system would enable the vehicle to be used within the London LEZ up to 2012 without paying the daily charge. However, because the engine on this vehicle is pre-Euro, it would not enable the vehicle to meet the LEZ standard in 2012. At that point the vehicle would probably have to be replaced. A filter suitable for this vehicle would typically cost £5,000 - £5,500

including fitting.

Once a filter has been fitted the operator must take the vehicle to a VOSA test station to be inspected and to undergo a smoke test. If it passes the test, a Low Emissions Certificate (LEC) or a Reduced Pollution Certificate (RPC) will be issued. When VOSA issue the certificate they will inform TfL, and the vehicle details will be updated on TfL's database within 10 days. Please allow enough time for this before travelling in the zone. The LEZ compliance status of the vehicle can be checked on the TfL website.

Euro I and Euro II engines

If this vehicle had been fitted with a newer engine, another option would have been available. Certain Euro I and Euro II engines may still be compliant with the Euro III standard for PM. The engine model code can be checked against the Low Emissions Certificate (LEC) Eligible Engines List available on the TfL website (tfl.gov.uk/lezlondon). 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. In other words, they meet the LEZ emissions standards for 2008. The owner can therefore take the vehicle to a VOSA test centre for certification and it will be issued with an LEC or a Reduced Pollution Certificate (RPC), provided it passes an inspection and smoke test. These certificates are valid for 12 months only and must be renewed annually. A vehicle with a valid LEC or RPC can be driven within the LEZ without being subject to the charge.



Pre-Euro tractor unit

Transport for London

Low Emission Zone

It is important to do this as soon as possible, since if the vehicle fails the inspection or smoke test at VOSA, the operator will have to take alternative action.

In January 2012 the emission standard will be raised to Euro IV. After that date the owner will have to either pay the daily charge, or take further action, such as fitting a filter.

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

Details correct at time of publication.
September 2007

