

## Coach used for visiting London on Excursions



A midlands coach operator has a small fleet of vehicles used mostly for local operations. However, his two newest vehicles, both 1993 Volvo B10Ms, are regularly hired by a nearby football club to transport spectators to watch major league games in Greater London. These coaches would come within scope of the London Low Emission Zone (LEZ) – when used within Greater London - from July 2008, when coaches come into scope of the Scheme.

The first vehicle had a major engine failure last year and was re-engined with a Euro III engine. The operator would need to register this with TfL, but when this has been done this vehicle can be operated in Greater London without modification until early 2012.

The second vehicle has a Euro I certified engine, which would usually need to take action to comply with the LEZ emission standards. However, there are instances when engines of this age do conform to the LEZ standards, in relation to PM. To find out if this is the case the operator would need to check the engine type displayed on the manufacturer's plate, usually located on the driver-side door, and see if the engine is listed on the LEC (Low Emission Certificate) Eligible Engines List - available on the Transport for London website (<http://www.tfl.gov.uk/roadusers/lez/vehicles/options/5374.aspx>). If the engine appears on the LEC list, the vehicle operator may apply to a VOSA test station for the vehicle to be inspected and to undergo a smoke test. If it passes the test, which is more stringent than the usual MOT smoke check, a LEC will be issued. This certificate, renewable annually, makes the vehicle a compliant vehicle for the London Low Emission Zone.

If the engine does not appear on the LEC list then the operator is faced with a number of options:-

It may be possible to retrofit the existing vehicle engine with a diesel particulate filter (DPF), which would reduce the particulate emissions to Euro III levels, ensuring the vehicle remains compliant until 2012. However, DPFs that use a catalytic process for regeneration, may be less suitable for Euro I engines because of the tendency for lubricating oil to be present in the exhaust gas. As an alternative, DPF systems which use either a fuel-borne catalyst, or an active regeneration system (using a diesel fuel burner or electrical heating) could be specified. DPFs of the types described will have an on-going maintenance requirement and

are likely to typically cost £3000-£4000, which is a significant investment relative to the market value of the vehicle.

If a DPF is fitted and it is one approved under the Vehicle and Operator Services Agency (VOSA) operated Reduced Pollution Certificate (RPC) scheme, then the vehicle may qualify for a reduced rate of Vehicle Excise Duty (VED), which could offset some of the cost of fitment. Where there is no suitable RPC approved fitment available, a particulate abatement device deemed by Transport for London to result in an equivalent emission standard (and listed in the LEC Approved Devices List) will enable the vehicle to be compliant with the proposed LEZ standards. Such systems will have been verified to ensure their compliance, although there would be no reduced VED available for vehicles retrofitted under this approach.

An alternative to DPF fitment is the use of a partial exhaust filter. These devices have a lower maintenance requirement and are generally of lower cost. However, they are only likely to achieve up to one Euro particulate emission level improvement (and would not, for example, take a Euro III engine to the Euro IV PM standard), and so probably are not a viable option for this operator.

If it is envisaged that the vehicle will have a long useful life, then it may be possible to install a replacement engine of Euro III specification. This would be a large initial investment, but is likely to bring returns in the form of improved fuel economy and reduced maintenance costs. A Euro III engine would not require exhaust abatement equipment until 2012 when the LEZ standard is raised to Euro IV for particulate matter. Alternatively, the operator could consider replacing the engine with a Euro II certified one and install a DPF to bring the particulate emissions down to Euro IV levels immediately and therefore ensure compliance with both the 2008 and 2012 LEZ standards. Such engine replacements may also qualify for the VOSA Reduced Pollution Certificate and associated reduced VED rates. There are a number of proprietary engine suppliers who offer replacement engine conversions for buses and coaches.

A further option is to take no action to retrofit the vehicle and to choose instead to pay the daily charge for non-compliant vehicles entering the proposed LEZ. The charge is £200 per day for a vehicle of this size. A commercial decision will need to be taken as to whether this is a preferable option to retrofitting the vehicle. It will be necessary to register for this option to avoid incurring a penalty charge on entry with a non-compliant vehicle. A network of automatic number plate recognition cameras will be in place to detect vehicles entering the LEZ. Those vehicles recognised as being non-compliant will be subject to a penalty charge.

If none of these options are attractive, the operator may have to consider subcontracting this work to another operator, with LEZ compliant vehicles, in future.