

## **York Vehicle Fleet Euro Engine Specifications: January 2008**

### **General**

In response to EU legislation and to improve fuel economy, there is a general improvement in vehicle engine quality in Europe, which is assisting the reduction in gaseous emissions and the improvement of air quality.

Vehicle emissions make up a significant, but not dominant element of atmospheric pollutants in most urban locations in the United Kingdom. In York, where heavy industry represents only a small proportion of economic activity, emissions from vehicles give rise to a greater proportion of the unwanted gases in the atmosphere than in other City locations. Hence, the types of engines that are on the City's roads, as well as the speed and delay characteristics of the City's network are very important to the level of atmospheric pollution.

It is difficult to accurately assess the types of engine that are present in the fleet of private vehicles using York's roads, but it would be reasonable to assume that as older vehicles are replaced with newer models with better engines, that there is a general improvement in the City's vehicle population.

The City Council has no influence in the types of vehicles which the private motorist may choose to own and/or operate on York's roads.

It is possible however, to assess the engine characteristics of certain categories of vehicles.

### **Bus Operators**

The table below shows the 2008 Euro rating data for buses on York routes from the companies involved in the Quality Bus Partnership. The data covers the major operators in the city, First, Arriva, Yorkshire Coastliner, EYMS, Reliance, Topline Travel, and Veolia.

Percentage of York Buses at Euro II Rating or above	Percentage of York Buses at Euro III Rating or above
82.68	53.35

Most operators have mentioned a programme of renewal, which should result in these figures improving later in the year. It should also be noted that there is a fair overlap in the commercial interest of having newer, more economical engines with the rising cost of fuel and the public interest of improved air quality.

### **Comparison with Previous Years:**

A consistent time analysis for bus engines can be produced for Euro II engines or above. The table overleaf shows this. It may be noted that there appears to be a

slight degradation in the proportion of Euro II engines or above in 2007/8. This is due largely to the bus fleet characteristics of a particular operator which serves York from a depot where the bus fleet is not well equipped with modern engined vehicles. A similar situation occurs in 2003/4.

It is not easily possible to weight the results by vehicle kilometres. If it were, it is likely that continual year on year improvements would be clearly shown.

**Percentage of Buses with Euro II Rated Engines or Higher:**

<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2007/8</u>
76	72	72	84	83

**Percentage of Buses at Euro III / IV Rating:**

2005/6	2006/7	2007/8
84*	49	53

\* Stated in the LTP 2006-11 as Euro III / IV but now believed to be Euro II / III.

The targets set out in Local Transport Plan (LTP) 2 aim for 89% of buses in York to be Euro III rated (or better) by 2010/11 and 69% of buses to be rated at Euro IV by the same date.

The target of 89% was set within LTP2 under the potentially false premise that the proportion of buses equipped with modern engines was 84%. With a programme of bus renewal the target is ambitious but achievable, which will be helped by the forthcoming renewal of the Park and Ride bus fleets later in 2008.

**Council Vehicles**

The Council has a small fleet of cars (47) which are used by the Directorates to enable the duties of the Officers to be undertaken. There is a large fleet of vans and small lorries (227) which allows the Council to undertake works directly, and to offer transport for special categories of people and workers.

As the vehicle fleet managers are fully signed up to the Council's Carbon Management Policy, and as part of that impacts on future vehicle selection, use and efficiency, the future impact of the Council's vehicle operations are under continual review and assessment.

Vehicles are provided under a 5 year lease agreement (except for a few vehicles which fall under the previous 7 year agreement). Thus, the cycle of replacement of vehicles that meet the changing requirements of the Council's services means that the latest engine technology is applied over the 5 year cycle, with continuous improvement, taking advantage of technology enhancements as they become available.

## Cars

Most of the cars are of a small engine type, giving a high fuel economy in the urban area with short journey characteristics.

The fleet of vehicles have been registered from 2003 to 2008. The newer vehicles are almost exclusively dual fuel types, with older vehicles being a mixture of unleaded petrol and diesel. As engine developments take place, with diesel and petrol powered vehicles having very good emission standards which are akin to those offered by dual fuel types, as well as maintenance problems with dual fuel vehicles, it is likely that the dual fuel vehicles will be phased out over time.

There is insufficient historical data to show the yearly improvement in the engine types in the Council's car fleet.

## Lorries/Vans

The types and makes of lorries and vans vary significantly in size and function, from minivans to refuse lorries. An attempt was made to use dual fuel Transit vans, but maintenance problems have been experienced with these vehicles so it is unlikely that dual fuel engine types will be used when the vans are replaced.

The remainder of the van/lorry fleet is powered from diesel fuel.

As with the car fleet, the age of vehicles ranges between 2003 and 2008, except for a small number of vehicles which are older.

As the end of lease period for each vehicle ends, the replacement vehicles will have a more modern engine which will benefit from general improvement in vehicle engines available, and as a result, the fleet of light and heavy goods vehicles have a very high percentage of Euro 3 engines or better.

## Overall Details of Engine Types

Unfortunately, there are insufficient historical records to analyse a trend of improvement, but the following table shows the current proportions of the Council's entire fleet of vehicles according to Euro engine categories.

### Percentage of Engine Types for Council Vehicles :

Euro 2	6 %
Euro 3	81 %
Euro 4	13 %
Total	100 %

## Overall Comments

The bus fleet and Council's vehicle fleet in York are both in the process of continual renewal and improvement, taking advantage of the lower engine emissions associated with the general enhancements in vehicle engine

technology. Likewise, the general population of private vehicles, due to improved engine technology is gradually improving over time, generally reducing the emissions from this source.

As well as having lower gaseous emissions profiles, the more modern bus engines have better fuel economy, and hence as operators upgrade their fleets, commercial opportunities will encourage the better engined vehicles to be chosen, thus reducing further gaseous emissions within the City.

The Council's fleet managers, through vehicle lease arrangements and their commitment to the Council's Carbon Management Policy, continually monitor engine technology, and, in conjunction with the needs of the Council's services, choose appropriate vehicles when the time comes to replace a vehicle that is at the end of its lease period.