

Preventative Maintenance for Efficient Road Freight Operations

Guide



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Foreword

Freight Best Practice is funded by the Department for Transport and managed by Faber Maunsell Ltd to promote operational efficiency within freight operations.

Freight Best Practice offers **FREE** essential information for the freight industry, covering topics such as saving fuel, developing skills, equipment and systems, operational efficiency and performance management.

All FREE materials are available to download from **www.businesslink.gov.uk/freightbestpractice** or can be ordered through the Hotline on **0300 123 1250**.



Throughout this guide you will see this signpost - directing you to relevant publications from the Freight Best Practice programme.

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Introduction

What Is Preventative Maintenance?

Preventative maintenance for road freight fleets is a proactive strategy of care for vehicles that maximises long-term vehicle efficiency and reliability. This strategy can include daily vehicle checks, as well as systematic, thoroughly documented safety inspections at programmed intervals, whilst ensuring that proper procedures are in place for dealing effectively with any faults. Records of these activities are the foundation of a preventative maintenance programme, and the system should be supported by capable and responsible staff and adequate maintenance facilities.

How Can Preventative Maintenance Help You?

The 'don't fix it till it's broke' philosophy can lead to high expenditure on large and unexpected maintenance jobs, and can cause unscheduled disruptions to your operation when vehicles are out of action for periods of time. Poor vehicle maintenance can shorten vehicle life, increasing whole-life vehicle cost; a proactive maintenance strategy can therefore reduce whole-life cost. When vehicles are on a short-term buy-back contract, residual value can be reduced by poor maintenance. Whichever way it is viewed, preventative maintenance is a winning solution.

Legal and safety obligations are also important. The law requires vehicles to be maintained to a minimum standard, with regular vehicle inspections. If vehicles are found not to comply with minimum legal standards by an enforcement agency they can be prohibited from proceeding until satisfactory repairs have been carried out. Where this occurs, the costs of disruption to delivery schedules can be high.

Preventative maintenance can help your fleet achieve a higher pass rate for its annual roadworthiness inspections and it can help your vehicles use less fuel, which is a major proportion of costs in any transport operation. Lastly, and by no means least, good maintenance can help to improve the safety of your most important resource – your drivers.

The Aim of This Guide and Who Should Use It

This guide is intended to help logistics and transport professionals better understand how preventative maintenance can improve the efficiency and reduce the whole-life vehicle costs of freight operations. It offers practical advice on how you can specify and implement an appropriate preventative maintenance plan for your business. It also focuses on how to better manage the performance of your fleet, through a clear process of monitoring and reviewing.

The guide focuses on the benefits of best practice in maintenance with particular attention to fuel use, and it refers to 'O' Licence obligations and the roadworthiness of fleets. However, it does not cover these areas in detail as the Vehicle Operator and Services Agency (VOSA) and the Society of Operations Engineers (SOE) have already produced detailed guides for these areas.

The guide aims to encourage you to take a strategic look at your maintenance operation and understand the reasons for current practices (e.g. inspection schedules, use of external maintenance contractors) before looking for areas for improvement. It provides a number of practical examples of companies that devote resources to maintenance above and beyond minimum legal requirements in order to improve reliability and reduce operating costs.

Structure of This Guide

The guide is divided into the following sections:

Chapter 2 - Describes preventative maintenance and gives examples of how good, proactive maintenance can pay dividends in the long term.

Chapter 3 - Shows you how to plan and implement a preventative maintenance schedule.

The Appendix contains templates of forms that can be used to help you comply with your roadworthiness obligations, better organise your maintenance administration and make improvements to your maintenance operation.

What Is Preventative Maintenance and How Can it Help Your Operation?

Preventative Maintenance as a Proactive Strategy

Preventative maintenance can be thought of as a proactive strategy. It is a strategy that involves making sure that equipment and facilities are always kept in good order thereby minimising the chances of defects occurring, whilst finding ways to improve vehicle efficiency beyond merely ensuring that basic roadworthiness is attained

Small Actions Can Lead to Large Savings

The benefits of preventative maintenance can be clearly demonstrated through some simple examples.

Example 1: Hydraulic Pump Seal

If a hydraulic seal is left to leak without replacement, it will eventually perish, damaging the pump. Without preventative maintenance not only would a new hydraulic pump be required, but also additional costs would be incurred through the loss of oil from your vehicle's engine.

Cost Without Preventative Maintenance – £500 or more (in materials alone)

This example highlights a repair to the vehicle; costs would be even higher if a breakdown occurred whilst in operation and resulted in costs to recover your vehicle and lost revenue through non-delivery and the non-productive time of your driver. There could also be the need to hire an additional vehicle.

If this were necessary, the following are indicative daily costs of vehicle hire:

3.5 Tonne van	£50
7.5 Tonne rigid	£70
18 Tonne rigid	£100
Articulated tractor unit	£120

This does not include the costs of management time in arranging for delivery of the hire vehicle, and your driver's time spent picking it up.

Cost With Preventative Maintenance – Approximately £150 (in Addition to Costs of the Preventative Maintenance Programme)

If the same mechanical problem had been identified earlier through a preventative maintenance strategy, the defective seal would have been spotted and quickly changed. Apart from the indirect costs of running the preventative maintenance strategy, such as the time involved to carry out the checks, the only costs would be the seal itself at around £20, and the labour involved to replace it and reinstall the pump.

Thus a relatively simple, preventable mechanical problem could cost your business many times more without an effective preventative maintenance system.

Personnel are the key in any preventative maintenance system, and they will perform a number of important tasks, mainly:

→ Inspection

→ Detection

→ Correction

The following example shows how regular preventative maintenance by Kidds Transport is used to overcome common fleet problems.

Case Study 1: Kidds Transport Ltd

Kidds Transport is a Lancaster-based company employing 30 drivers and runs a 12-hour operation from Monday to Friday using 26 artics and 4 rigid vehicles.

Maintenance of the fleet is carried out on site at the depot by the company's own workshop staff. In an attempt to improve fuel efficiency, reduce wear and tear on vehicle components and increase tyre life, Kidds Transport made the decision to implement a wheel alignment programme.

Callibration costs will vary depending on the type and number of vehicles in the fleet, but the table below shows some indicative costs.

Single axle steering	£65
Twin axle steering	£110
Additional other axles	£45 per axle
Centralise steering box	£36
Full geometry test (all axles and steering box)	£200

- ➡ Fuel performance improved on one vehicle from approximately 6.5 miles per gallon (mpg) to approx 9 mpg
- ➡ The average fuel consumption across the fleet is now approximately 8.5 mpg, resulting in fuel savings of:
 - 3% - 19% on articulated lorries
 - 3% - 11% on rigid lorries
- ➡ Steered axle tyre tread life is up from 180,000 kms to 220,000 kms (an increase of 22% in tyre life)
- ➡ Drive axle tyre tread life up from 280,000 kms to 310,000 kms (an actual increase of over 10% in tyre life)
- ➡ Super single tyre tread life up from 65,000 kms to 75,000 kms (an increase of 15% in tyre life)

- ➡ Added safety, as aligned tyres are less likely to overheat
- ➡ Drivers reported less fatigue as vehicles easier to drive

The tyre in this photograph has completed 220,000 kms and shows some uneven wear due to misalignment. However, if action is taken to rectify the problem then the expected life could be extended to misalignment. However, if action is taken to rectify the problem then the expected life could be extended to over 300,000 kms.

Inspection



Regular safety inspections to monitor tyre wear

Detection



Detection of tyre wear

Correction



Realignment carried out



See the Freight Best Practice Case Study Keeping Profit on Track with Wheel Alignment. This and many other publications can be ordered FREE of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

Preventative maintenance can be applied to all operations, no matter what the size, sector or industry. It is not a single action, but it requires the dedication to make longer-term improvements to your business through the measuring and monitoring of key performance indicators (KPIs). Measuring your performance not only can reduce the cost of vehicle maintenance in the short term, but also can help you choose better vehicles in the future and therefore make long-term improvements in operating costs.

Key Concepts: Inspections and Services

It is important to differentiate between 'inspections' and 'services', as these are two tasks that will be carried out at regular intervals throughout a preventative maintenance programme.



Regular inspections form a key preventative maintenance function through highlighting problems early

→ Inspections - Inspections are the process of looking for, and highlighting potential problems, e.g. the safety inspections you are required to undertake in accordance with your agreed inspection interval on your 'O' Licence. For more specialist vehicles, it is prudent to extend the safety inspection process to encompass all of the technical elements of the body and ancillary equipment



Undertaking routine maintenance keeps your operation on the road

→ Services - Servicing is the routine maintenance that is carried out at intervals determined either by the vehicle manufacturer's guidelines, or by other factors such as dealer/third-party service agreements, leasing terms or the specific usage/mileage of the vehicle

To find out more information about inspections and services, consult vehicle manufacturers' guidelines or see the VOSA and SOE guides on maintaining

How to Implement a Preventative Maintenance Schedule

Planning the Process of Preventative Maintenance

The flow chart below outlines the process recommended for looking at your preventative maintenance strategy, either for the first time, or as an on-going process once your plan is up and running. The framework is generalised, recognising that businesses vary and have differing maintenance issues.

By setting up a clear preventative maintenance strategy now, you can:

- ➔ Reduce the amount of unplanned maintenance required
- ➔ Keep long-term maintenance costs to a minimum
- ➔ Ensure that vehicles operate efficiently
- ➔ Lessen the chance of accidents and incidents

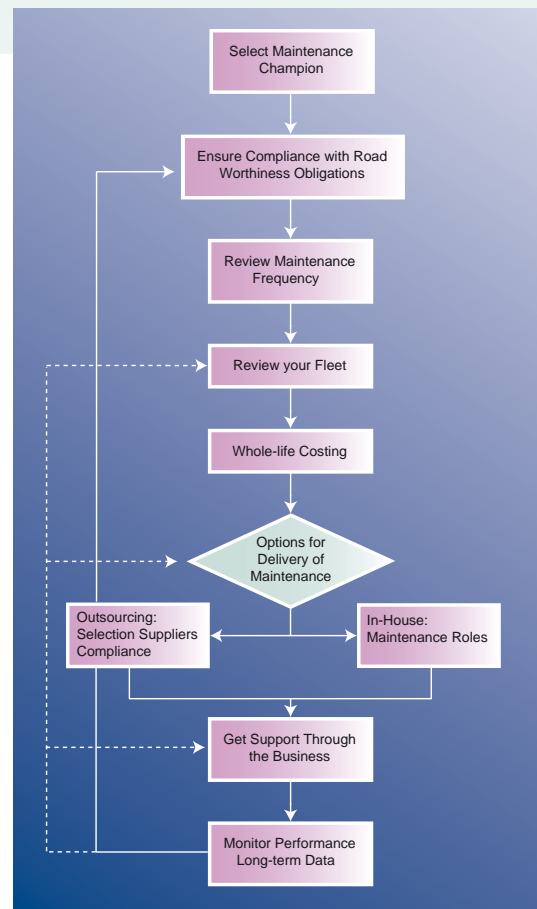
It may be that preventative maintenance is already a part of your operation, and a review will help to audit your current systems. On the other hand, it could be that a full overhaul of your maintenance procedures would be beneficial. Above all, you need to ask yourself: Is your current maintenance regime the most suitable for your type of operation?

Select a Maintenance Champion and Establish a Management Structure

It is important to appoint a Maintenance Champion to develop a maintenance plan, resource it and drive it forward, ensuring it is successfully implemented. The champion should be a respected, responsible person who is aware of maintenance issues and their relationship with other aspects of transport operations. Above all, the champion should have sufficient authority to make changes to improve your business and the skills to communicate the necessary changes to other employees. Depending on the size of the fleet, the job of the Maintenance Champion may range from a full-time role to a part-time role for the transport manager or mechanic, or simply be part of the overall management tasks of an owner-driver.

Depending on the size of the fleet, a Maintenance Champion should:

- ➔ Be aware of the company's obligations under 'O' Licence regulations



- ➔ Understand the factors associated with good maintenance, including accurate vehicle-checking processes and driver training
- ➔ Allocate and communicate responsibilities to drivers, mechanics and other staff who help to make improvements
- ➔ Be involved in the recruitment of maintenance personnel
- ➔ Evaluate whether maintenance should be undertaken in-house or outsourced
- ➔ Be able to evaluate whether your present arrangement provides best value for money
- ➔ Take responsibility for collecting information, such as KPIs, so that lessons can be learnt to improve maintenance practices in the longer term
- ➔ The responsibilities of drivers, and the training required for them
- ➔ The optimum safety inspection intervals and appropriate inspection report forms to use, the electronic capture of such information and general storage of defect information
- ➔ Safety inspection and repair facilities, and whether you should provide your own inspection facilities or contract this element out to a third party. Where maintenance is to be contracted out, there is guidance on the type of contract that should be used
- ➔ Monitoring methods
- ➔ Safety inspection and vehicle defect forms that can be used within your operation



Consider introducing a dual role of Maintenance Champion and Fuel Champion. Section 5.2 of the Freight Best Practice publication **Fuel Management Guide** gives details of the role of a Fuel Champion.

Ensure Compliance with Roadworthiness Obligations

Preventative maintenance takes you beyond compliance and into best practice. However, a key starting point for any preventative maintenance system is to ensure you at least comply with minimum roadworthiness obligations. It is important for you to understand your obligations under the Goods Vehicle Operator Licensing system. There are some important industry publications that can help you understand these requirements:

The VOSA Guide to Maintaining Roadworthiness sets out:

- ➔ The responsibilities for maintaining roadworthiness, information on inspections such as the daily walk around checks and defect reporting

To order the VOSA guide, or for more information on maintaining roadworthiness, call VOSA on

0300 123 9000, or download a copy from its website: www.vosa.gov.uk/vosacorp/publications/publications.htm

The Industry Guide to Maintaining Roadworthiness, produced by the North West Goods Vehicle Maintenance Liaison Committee in association with the SOE, uses experience from the road haulage industry, along with advice from VOSA, the Freight Transport Association (FTA) and the Road Haulage Association (RHA), to provide practical advice, tips and tools, that operators can use to meet the required roadworthiness standard. This publication is relevant to all types of company regardless of fleet size or industry sector.

Contact the SOE, www.soe.org.uk, if you wish to obtain a copy of this guide.

What Is Your Responsibility?

'O' Licence regulations state that either the driver (in the case of an owner-driver) or the 'O' Licence holder (usually the transport manager) is responsible for the vehicle being maintained in a safe and roadworthy condition at all times.

WARNING!

If you sub-contract the maintenance of your vehicles, you are still responsible as the operator.

Tip

- ↪ Always use a reputable repairer/ maintenance company if you sub-contract maintenance, making sure that it has adequate facilities
- ↪ Make sure you obtain a contract/ agreement with your maintenance provider
- ↪ If maintenance is carried out in-house, VOSA must be made aware of the performance statistics of your in-house maintenance
- ↪ Maintain appropriate records whichever option you choose
- ↪ Vehicle test history reports can be requested, free of charge, by sending an email to datacare@vosa.gsi.gov.uk
- ↪ Operators can also request details of their Operator Compliance Risk Score (OCRS)

Roadworthiness Inspections

As part of your 'O' Licence responsibility, roadworthiness inspections should be carried out in the following areas:

Daily Driver Checks

The driver has a legal responsibility to check that the vehicle (and trailer) has no visible defects. The use of defect reporting sheets should be explained to all drivers as part of their training (see Chapter 3.9).

Defect Reporting

All vehicle defects should be recorded in a report detailing defects found as well as repair work carried out.

WARNING!

It is mandatory for defect reports to be kept for at least 15 months.

Example: Oil Leak

In a situation where a driver notices an oil leak, the transport manager is the person that must take responsibility for it being mended. It is necessary to have a system in place to cross-check whether repairs are made. This can be confirmed by:

- ↪ A report from the transport manager
- ↪ The driver, when the vehicle is used again
- ↪ A fleet maintenance software package, where all defects and repairs can be reported

Regular Safety Inspections

Inspection frequencies must be planned and regularly reviewed in line with the vehicle's operation. For more information on how to determine inspection frequencies, see Section 3.4.

WARNING!

VOSA must be notified of any changes to your maintenance agreement, i.e. changes in equipment, service intervals, provider details etc.

Information to Drivers

Drivers must clearly understand their responsibilities. Where possible, incorporate specific responsibilities into their contracts to ensure you have a formal agreement in place. Spell out these details through driver briefings, or in written material given to a driver such as a drivers' handbook.

Case Study 2: ASDA Stores Ltd

ASDA Ltd is a supermarket chain with over 300 stores throughout the UK. Its distribution network operates out of 26 depots, and it currently has in the region of 1045 tractors and 1385 trailers.

ASDA's distribution centre at Bedford recently sourced a new fleet of Scania trucks and found that correct maintenance was an issue, due to their drivers' unfamiliarity with the vehicle. To address this, ASDA liaised with representatives from Scania, who visited the site to provide driver training sessions. Using feedback from this, Scania was then able to adjust the settings on the trucks to suit the needs of the Bedford-based drivers, thus reducing the number of breakdowns experienced.

The centre also has five in-house driver trainers who oversee the annual assessments of its drivers and provide any specific training that may be required throughout the year. A 'Driver of the Year' competition is organised at each depot, providing an incentive for drivers to be seen to be carrying out correct maintenance procedures



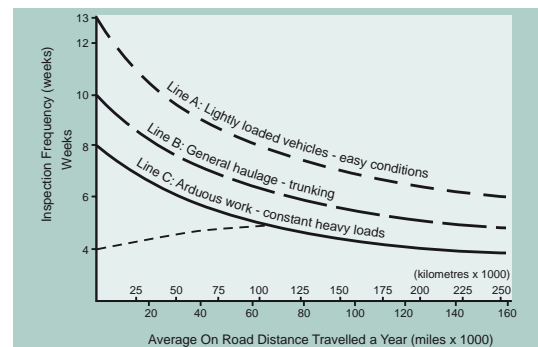
Non-roadworthy Vehicles

Once a defect is reported on a vehicle, it is important that there is a process to prevent potentially unsafe vehicles from being used. This can be achieved in a number of ways, such as affixing a notice to the vehicle or physically marking or securing the keys in such a way as to prevent unauthorised use.

Reviewing Your Maintenance Frequency

As a part of your review of your maintenance strategy, and indeed your legal compliance, you should review your current maintenance frequency. You need to keep a check on the distances being run by your fleet, as this will affect how regularly maintenance should be carried out. VOSA's Guide to Maintaining Roadworthiness recommends inspection intervals depending on distance travelled per year, but also depending on the type of operation. See Figure 1 below.

Figure 1 VOSA's Guide to Safety Inspection Intervals



Vehicle Maintenance Scheduling

The timing of when maintenance is undertaken is important. For instance, with an intensively utilised day shift fleet it may be appropriate to undertake maintenance at night to maximise vehicle utilisation. It may also be that certain days of the week or weeks of the month, where fleet demand is lower, offer opportunities to carry out planned maintenance. Careful planning can ease the operational burden of planned maintenance and reduce the temptation to prolong maintenance periods in order to keep vehicles on the road.

Case Study 3: Coca-Cola Enterprises Ltd

Coca-Cola Enterprises Ltd is responsible for the manufacture and distribution of 'Coca-Cola' products in the UK, supplying around 240 million cases every year. The company operates vehicles out of ten depots throughout the UK. Coca-Cola normally sends its vehicles for maintenance overnight to minimise the impact on its operations and maximise vehicle productivity. In the case of reported vehicle/equipment defects, vehicles are fixed the same evening. Each vehicle is inspected fully every six weeks. Servicing is the responsibility of the operator but it is the manufacturer-approved dealerships that conduct the maintenance at time or distance-related intervals, much of which can be predicted as the routes tend to be regular and distance driven is often consistent. Coca-Cola Enterprises Ltd aims to pre-plan its maintenance and service programme one year in advance. The benefit of this is that transport managers know when their vehicles are going for service and this can help them with operational planning and matching seasonal demand forecasting with vehicle availability.



Conduct an Operational Fleet Review

A maintenance-related fleet review can range in its formality, depending on the size of your business. It is critical to look objectively at your operation and see where improvements can be made. There are a number of steps that should be taken:

- Document your current fleet vehicles
- Assess the suitability of your fleet for your operation, particularly in light of any recurrent maintenance problems
- Review the maintenance of non-standard equipment or features
- Consider the operating conditions, terrain and environment in which the vehicles operate and the implications for maintenance
- Consider the quality and whole-life costs of the consumables used on the fleet, such as lubricants

Type of Operation

Getting the right vehicle for the operation is a fundamental part of the whole preventative maintenance strategy, as this can reduce the amount of maintenance required. Knowledge of the type of operation will also highlight the areas where maintenance is likely to be required, and so can be planned rather than being unexpected.

After undertaking an analysis of your operation and fleet, you may find that there are some areas where you have less suitable vehicle types for the work required. In most cases, it is obviously difficult to change the specification and type of vehicles immediately; you will be tied into these vehicles, and will have to work with what you have. However, when new vehicles are being specified the maintenance experiences of current operations should be taken into account as part of the longer-term preventative maintenance plan.

Understanding the nature of the operation leads to the correct initial specification of vehicles, and the maintenance programme required. For example, geographical factors make a large difference to some fleets: operations in Cornwall use predominantly minor roads which are narrow, undulating and twisting, meaning that the vehicle tyre, clutch and gearbox wear differs considerably to that of similar vehicles in other areas of the country.

Tip

➡ Buying the right vehicles can reduce the running costs of a vehicle over its life, and the amount of maintenance due to wear and tear.

Example: When to Use Urban Artics and Demountables

There are many different types of vehicle that offer varying levels of suitability for different operations. Two examples of a less standard approach are urban articulated vehicles and demountable units.

Where traditional articulated vehicles deliver in an urban environment, accessing delivery points is often difficult for drivers and damage to the vehicle can occur, thereby increasing maintenance costs. One solution to the problem is to use an urban artic, which can offer a higher volume capacity than many rigid vehicles while giving the advantage of being able to pre-load the trailers. Urban artics are more economical to run than conventional artics, with less tyre wear and lower maintenance and fuel costs.

Demountable units have become increasingly popular for nationwide operations, where trunking from a central distribution centre to a regional distribution point occurs and onward delivery is either particularly time-sensitive or the product is difficult to load and unload, such as tyres. The advantages are the ability to preload and the lack of need to tranship the product. Although demountable systems need simple maintenance and greasing to ensure they operate correctly and reliably, the folding legs are particularly susceptible to damage if incorrectly or carelessly operated, and this can lead to costly repairs.



See the Freight Best Practice Guide **Truck Specification for Best Operational Efficiency**. This and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

cranes, including grabs, multi-lifts, hydraulic ramps and winches, or lorry-mounted fork-lifts, you should understand the correct maintenance procedures for these items. The reliability of ancillary items can be crucial to your operation, as any breakdown of this equipment can be costly in terms of time lost, cost of repair and effect on customer service.

Equipment and Fittings

If your operation has loading and unloading equipment in the form of tail-lifts, lorry-mounted

Tail-lifts are a common cause of disruption to operations when they fail to operate correctly and this can be caused by poor maintenance.



Choosing the most suitable equipment for your vehicles will affect your maintenance costs. It is important to identify any weaknesses and other maintenance-related issues. The frequency of maintenance should be guided by the manufacturer's recommendations together with the degree of usage of the equipment. Where the maintenance can be undertaken at the same time as the vehicle servicing, it is beneficial to schedule the maintenance on a similar cycle. However, this is not always possible.



Terrain and Environment

If deliveries have to be made in an off-road environment then regular checks of wheel alignment and tyre condition will be important.



Traction can be an issue, and many companies have found that the losses in fuel efficiency and capacity of using a six-wheeler rigid vehicle are outweighed by the reduction in maintenance required and the better traction offered by Articulated Tippers.



See the Freight Best Practice Guide **Guide to Truck Aerodynamics** and the Case Study **Smoothing the Flow at Somerfield & TNT**. This and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**



See the Freight Best Practice Guide **Keeping Profit on Track with Wheel Alignment**. This and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

Lubricant Choice

Selecting suitable engine and transmission oils can sometimes be difficult, but is a very important task. The Freight Best Practice Guide 'Fuel Saving Devices' demonstrates that correct lubricant choice can mean a 3-5% improvement in fuel performance.

Modern engines are required to satisfy increasingly stringent exhaust emission regulations, and so specific types of oil are often needed. In terms of maintenance of the vehicle engine, you should consider how often the oil is changed and judge whether the use of a more expensive oil changed less often is more cost-effective than changing a cheaper oil more frequently.

Additionally, if the vehicle uses equipment that requires a power take-off (PTO), effective preventative maintenance will require extra lubrication of the PTO's bearings and moving parts.



Making sure you use the most suitable lubricant for a vehicle's engine can extend its life



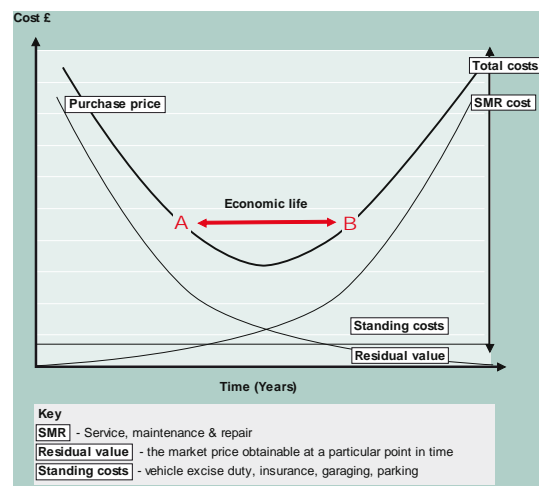
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Whole-life Vehicle Costing

Whole-life vehicle costing can have a major impact on the cost of your operation. Finding the point on a vehicle's life-cycle curve when maintenance costs are still comparatively low, residual value is still comparatively high and the time is right to change vehicles is very important. Waiting too long can mean that maintenance costs escalate and residual value drops dramatically, meaning that an operator can be left running a low-value asset at an increased cost (represented by point B on Figure 2, page 12). The key point is that consideration of whole-life costing at vehicle specification time should help to select a vehicle that is both economical to run and has an acceptable residual value. Real-life experience of vehicle maintenance can provide key input into the decision-making process for future vehicle specification and purchase. For guidance on how to undertake whole-life vehicle costing, see the examples on page 12

The economic life shown on Figure 2, shows the optimal period in which to run your vehicles. Before point A, the value of the vehicle drops dramatically and beyond point B, the costs begin to escalate.

Figure 2 Typical Vehicle Life-cycle Cost Model





Example of Whole-life Costing – Lower Purchase Costs for Vehicles Can Be Expensive in the Long Run

Whole-life, or life-cycle, costing is used by many types of organisation to help with complex decisions but the underlying concept is simple and very useful. Whole-life costing involves making purchasing decisions based on all of the costs associated with every stage of a vehicle’s life including purchase, use and the ultimate disposal of an asset, instead of just focusing on the initial purchase price.

There are a great number of direct and indirect costs associated with operating a vehicle – these include maintenance, insurance, fuel, drivers’ wages and training costs, fitting additional equipment, the environmental cost of the CO2 produced by the engine, and even the cost of disposal of used oil and tyres.

You can decide exactly what costs you should incorporate into your decision-making process, but the more comprehensive the cost model, the more informed the decision-making. The table below provides a simple example using four major cost components.

Comparison of major costs for two refuse collection vehicles:

	Vehicle A	Vehicle B
Purchase price	£97,000	£109,000
Residual value	£15,000	£27,000
Maintenance costs*	£18,060	£17,850
Total fuel costs*	£35,736	£32,757
Total cost over 3 years	£135,796	£132,607

*Based on a three-year vehicle life and assuming 36,000 miles per year @ £0.80 per litre (excl. VAT)

Vehicle B costs £12,000 more to purchase initially than Vehicle A, but both have a depreciation cost of £82,000 over the three-year use of the vehicle, when residual value is taken into account. Maintenance costs are lower for Vehicle B and it has better fuel consumption.

Taking these differences into account, there is a £2,979 saving in fuel plus £210 less for maintenance of B over A, resulting in a net saving of £3,189 or £1,063 per year for Vehicle B over the three-year life-cycle.

Options for Delivery of Maintenance

Key Factors Affecting Decisions About Maintenance Delivery

Another important decision is how your preventative maintenance programme will be delivered. Three main options are available:

- ➔ In-house
- ➔ Outsourcing
- ➔ Contracted using own facilities

While in most cases you will have already made a decision about how to deliver maintenance, it is important to understand the costs and benefits of each approach, and how these how will vary depending on the nature of your operation. A summary of the main factors which can affect decisions about maintenance delivery

is presented after an examination of the three options.

In-House Maintenance

In-house maintenance is conducted within your own facility using your own employees. Having a workshop facility on-site, or nearby, offers important benefits. One of the key benefits is the ability to prioritise and have certain trucks serviced before others, according to your own schedule rather than that of an external supplier. In-house maintenance also generates savings on site-to-site time and fuel. If you operate a diverse or specialist fleet, an in-house approach can ensure that service and knowledge levels are high, as it can sometimes be difficult to find a contractor to service some types of vehicle or specialised ancillary equipment, e.g. pneumatic discharge units or double-decker trailers with moving floors.

However, in-house maintenance means that warranty repairs and certain manufacturer-specific diagnostic equipment may not be available. In addition, your in-house maintenance is a fixed overhead, the short-term cost of which will not vary greatly with the volume of work required.

In-house Benefits

- ➡ Having your own workshop facility can give you some important benefits:
- ➡ The option to have certain trucks serviced before others
- ➡ To save on site-to-site time and fuel
- ➡ If you are operating a specific type of truck with non-standard auxiliary equipment or a refrigerated vehicle, some third party workshops may not be able to service adequately
- ➡ An in-house operation can prevent you from being just another customer in a queue when your vehicle is taken for servicing

Outsourced Maintenance

When maintenance services are outsourced, vehicles can spend longer periods away from base than when using an in-house facility. When reviewing your decision about whether or not to outsource, the extra downtime that could be incurred requires careful consideration.

Modern vehicles are increasingly sophisticated, and outsourcing the servicing of your fleet may mean that it will be maintained by manufacturer-trained specialists who know more about electronics and engine diagnostics than your own general-purpose mechanics. These specialists are likely to be highly trained and skilled, and may therefore ensure higher service levels.

The service level and response times may well be set out in the maintenance contract; in some cases, outsourcing means that there is less flexibility to respond to your needs and in other cases it may offer more flexibility. Assessing the flexibility of response lead times, service availability and agreements regarding the qualifications and experience of staff is a prime consideration when considering if and to whom to outsource. It is possible that when your vehicles need maintenance, there may be only trainees or apprentices available to work on them.

You should consider the correlation between the times of day or days of the week when your fleet has most availability compared with the supplier's service offer. For instance, if you operate weekday daytime shifts then a service provider offering overnight and weekend servicing would be particularly useful. However, the cost of non-standard hours may be higher.

If you operate contract hire or leased vehicles, your maintenance contractor may provide you with a replacement vehicle within the contract.

Ensure that the workshop you are considering or already operate has adequate facilities and equipment to cope with the size or complexity of your vehicles, e.g. vehicle hoists of the correct capacity, appropriate servicing pits and brake rollers.

You should consider the distance from the maintenance supplier to your depot, in terms

of both the fuel used during transit and the response times if you have a breakdown on-site. However, for breakdown off-site, national dealerships offer good breakdown cover no matter where the vehicle is in the country. The immediacy of breakdown service is important because, even with smaller repairs, losing a vehicle for some of the day can be very costly. However, some operations, such as ASDA's Bedford depot, are able to deal with some of the smaller maintenance issues on-site, despite the maintenance being carried out under contract elsewhere (see case study below).

Case Study 4: ASDA Stores Ltd

Vehicles at ASDA's Bedford depot are maintained off-site under contract to the Scania dealer, Truckeast, which is based in Milton Keynes. Smaller repairs, such as headlight faults, can be carried out by an on-site maintenance crew. There is an on-site tyre maintenance company, Ashfield Tyre Services, which will check all of the fleet's tyres on a monthly basis. Records are kept for 15 months.



Many companies outsource the maintenance of their fleets to reduce costs and ensure that they can meet their changing needs without requiring high capital investment. By outsourcing, a company can focus on its core activity. Outsourcing can remove much of the burden of maintenance from a company, offering some relief from the obligations of legislation and maintenance-related paperwork. However, your company will always remain legally responsible for the necessary maintenance records.

Case Study 5: Coca-Cola Enterprises Ltd

Coca-Cola Enterprises Ltd's fleet management and administration are outsourced to third parties. The company uses the services of three fleet management companies chosen on a tendered basis. These fleet management companies are responsible for:

- ➡ Day-to-day tasks and responsibilities related to fleet administration
- ➡ Daily contact with workshops
- ➡ Monthly reports for Coca-Cola regarding its fleet performance and maintenance (including number of breakdowns, percentage of availability or 'uptime' and MOT pass rate)
- ➡ Quarterly maintenance system improvement meetings with Coca-Cola to update and set targets
- ➡ The benefits to Coca-Cola include:
 - ➡ Fewer breakdowns
 - ➡ Savings on repair costs
 - ➡ Better fleet utilisation (less time spent on maintenance)
 - ➡ Fewer vehicles required for the operation
 - ➡ No requirement for in-house staff to carry out maintenance, generating a significant cost saving
- ➡ Improved customer satisfaction

Whilst outsourcing can be a flexible and cost-effective option, it may well require a commitment to substantial expenditure over a period of 12 months.

WARNING!

It is important to note that outsourcing vehicle maintenance does not release you from your obligations as an 'O' Licence holder; you retain responsibility for the safety of your vehicles and drivers and for record-keeping.

Many companies take out maintenance agreements with the dealerships from which they bought their vehicles. Such agreements mean that maintenance and repairs continue to be provided by the dealer even after manufacturers' warranties on the parts have expired (generally after three years). However, manufacturers' parts are sometimes more expensive than after-sales parts that could be purchased for the same purpose. Manufacturers can make substantial profits on service parts and are therefore keen to extend service warranties. Be wary, and ensure that you obtain value for money.

Contracted Using Own Facilities

Some companies view contracting external staff to operate their in-house facilities as a suitable balance between the desire to be first in the queue and have on-hand facilities, and the wish to save staff time and focus more on their core business. Ensuring contractor availability is the key factor for this scheme's success and it can provide a very flexible approach.

Costs can vary according to region and labour availability. For instance, it is sometimes more common for operators in the south to contract out their maintenance. Even when maintenance is undertaken in-house by either the company or contracted labour, newer vehicles will still be required to undergo work connected with warranty claims at the premises of the manufacturers' agents. This will also be the case for vehicles maintained under contract anywhere other than at manufacturers' agents.

Summary of Factors Affecting the In-house or Outsourcing Decision

Understand the service level required for:

- ➔ Manufacturers - new vehicle choice and manufacturers' maintenance agreements
- ➔ Suppliers, e.g. tyre check or wheel alignment providers
- ➔ Mechanics
- ➔ Fleet engineers
- ➔ Workshop/transport manager
- ➔ Driver trainers
- ➔ Third-party providers of maintenance software packages

Third-party providers of maintenance and management of the maintenance strategy

Consider the following when deciding on whether to stay in-house or to outsource maintenance:

- ➔ Fleet size
- ➔ Complexity of equipment
- ➔ Labour rates
- ➔ Labour pool and outsourcing hourly rates
- ➔ Distance to outsourced facilities
- ➔ Availability of land for on-site maintenance facilities
- ➔ Ability for vehicles to be maintained as and when required

Outsourcing: Selecting Suppliers of Maintenance

If you have made the decision to subcontract part or all of your maintenance, it is important to use a defined process for selecting the most suitable supplier. While it is always useful to shop around, be aware that for such a large-scale project as

finding a supplier for a maintenance contract for a major fleet of vehicles, you may need to spend several months over your decision because it will have a substantial impact on your organisation.

There are a range of different issues that need to be considered in choosing a supplier but for simplicity, the process can be broken down into three key steps:

- ➔ **Initial evaluation** - This can be done through independent research before you speak to any companies. Most dealerships and providers of maintenance/maintenance software have good websites, and all will be happy to provide you with brochures and other information you can use to make comparisons
- ➔ **Short-listing** - Decide on a handful of companies that you wish to contact and obtain more details from them
- ➔ **Get advice** - Talk to other similar-sized companies to learn from their experiences. Also speak to organisations such as RHA and FTA for advice
- ➔ **Interviewing/demonstration** - Once you have decided on a short list of suppliers, speak to them directly to gain a better understanding of the services they offer, as well as their costs

Look at, and compare, all available options and costs before making a decision. An overall assessment should be carried out for each servicing option to determine which is right for your business.

WARNING!

Always check that the maintenance supplier complies with DfT regulations as applied by VOSA, as this could affect your Operator's Licence.

In-house Maintenance

If you currently conduct maintenance in-house and have decided to continue to do so, it may be worth reviewing your operation with respect to the key factors of operating such a facility. The

following advice is more relevant to larger fleet operations but contains good guidance for all.

Maintenance Roles

One of the most effective methods of ensuring well-maintained vehicles lies in the recruitment of good staff, particularly mechanics. Mechanics are encouraged to look for potential problem areas when servicing vehicles and to take the initiative in dealing with them. In some cases, mechanics have actually been able to 'design out' some problems. For instance, St Edmundsbury Borough Council mechanics corrected some problems they were having with refuse vehicle bin lifts by simplifying the vehicles' electrics and installing new circuit boards.

Recruiting a Fleet Engineer

Important factors, cost aside, when choosing a fleet engineer are:

- ➔ Experience
- ➔ Technical ability - able to answer technical questions on interview
- ➔ Management ability
- ➔ Ability to look at the strategy as well as the tactics of the business
- ➔ Understanding of Operator Licensing and legal requirements
- ➔ Recruiting a Mechanic

Important factors, cost aside, when choosing a mechanic are:

- ➔ **Physical ability**
- ➔ **Technical ability**
- ➔ **Initiative**
- ➔ **Positive work attitude**
- ➔ **Ability to communicate**



Tips

Have some clear policies for ensuring you get the best staff for maintenance roles.

When choosing mechanics:

- ➡ Set salaries above market rate to improve staff retention
- ➡ Always ensure they are physically/ technically able
- ➡ Ask technical questions in job interviews, e.g. how does a turbo charger work?
- ➡ When choosing fleet engineers:
- ➡ Make sure candidates are experienced
- ➡ Choose staff capable of looking at the bigger picture
- ➡ Try to promote from within
- ➡ Ensure they have a thorough understanding of operator licensing

Maintenance Record Systems

Fleet management and maintenance record systems can also be either kept in-house or outsourced. A maintenance record system can be anything from a simple-to-use spreadsheet file or wall chart to a specialised software package.

Maintenance systems store records of important vehicle data and can include features such as:

- ➡ Tracking vehicles and trailers across their scheduled maintenance plan
- ➡ Storage of maintenance records and records of legal compliance, e.g. MOTs, regular safety inspections, VORs, tachograph checks and service history information
- ➡ Prioritisation of maintenance
- ➡ Scheduling and parts ordering for in-house maintenance operations
- ➡ Warranty control
- ➡ Incident and defect reporting
- ➡ Fuel usage records
- ➡ Calculation of maintenance and servicing costs
- ➡ Storage of maintenance and servicing contract details

Some systems are also capable of undertaking more detailed analysis to identify such aspects as part life, timeline for new maintenance schedules, future maintenance requirements, optimum service intervals and the benefits of new maintenance practices. Breakdown and maintenance analysis can be used to

identify particular vehicles, or types of vehicle, experiencing a higher than average number of problems.

These kinds of analysis can be integrated into other cost benefit analyses undertaken by the company, for example, whole-life vehicle costing can be used to determine which vehicles will be purchased in future

Case Study 6: Coca-Cola Enterprises Ltd

Coca-Cola Enterprises Ltd has developed its own software (through its internal IT department) for its maintenance system. Detailed records are kept on fleet utilisation, efficiency for each specific depot, achievements against targets, etc. The software incorporates Microsoft Excel® and this universal format is used by the depots to send their data to a main database.

The software produces a suite of reports including monthly, quarterly and annual reports of: fleet utilisation, fleet efficiency, maintenance trends, and the performance of particular depots, third-party companies and workshops.



See the Freight Best Practice Guide **Information Technology for Efficient Road Freight Operations**. This and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

Encouraging Support and Feedback from the Business

To make your preventative maintenance strategy effective, you will need to gain the commitment of all employees, from the directors to the maintenance staff and the drivers.

Mems Power Generation made sure its drivers were involved by introducing preventative maintenance into its staff induction process.

Driver Training

Driver training is a critical part of any preventative maintenance system. Daily checks are the first alert to any vehicle problems and would normally be carried out by the driver, prior to commencing the journey. This information can then be referred to the maintenance department, so that it is aware of any potential problems that require rectification.

Safe and Fuel Efficient Driving (SAFED) training may help to reduce the wear and tear on your vehicles, reduce maintenance costs, decrease the likelihood of accidents and lower insurance premiums.

Case Study 7: Mems Power Generation Ltd



Mems Power Generation specialises in the hire, sales and service of diesel power generators. It owns and operates an extensive transport and refuelling fleet which enables its team of specialists to respond rapidly to a power emergency.

Preventative maintenance is a vital part of fleet management at Mems. The majority of its fleet are equipped with lifting equipment and are used to transport generators to and from customers. Preventative maintenance is part of health and safety policy, to ensure that accidents are avoided on site during operations. The Logistics Manager, Ian Coffey, developed the system, which includes two core elements:

➡ Day-to-day inspections, maintenance, fleet management and audit - undertaken by Mems

➡ Vehicle repair and servicing - undertaken by the vehicle and crane manufacturers

According to Ian, the main element of vehicle maintenance is driver involvement. Every new driver employed by Mems is obliged to undertake an induction process. For the first two weeks of employment they are trained by either the Logistics Manager or senior drivers in terms of health and safety, job-related maintenance procedures, lifting equipment usage and the locations of the main sites. New drivers are not allowed to drive a vehicle without the assistance of a senior driver until full training has been completed and the Logistics Manager is satisfied that they are competent.

Every day, drivers are responsible for checking and auditing the vehicle they use. Before each trip they complete a Vehicle Check and Audit form where they report any vehicle or equipment defects or shortages. The Logistics Manager carries out random audits of the vehicles to check that the forms provided for the drivers are filled out correctly. All hard copies of forms are kept separately for each vehicle and stored for a period longer than the 15 months required by law.

Drivers are encouraged to participate in a variety of training, including refresher training and advanced driving training. They are also encouraged to share their opinions, comments and suggestions about improvements related to fleet utilisation, maintenance and efficiency.

Case Study 8: Belcher Cammack Transport Ltd

Belcher Cammack Transport Ltd is a family-owned haulier based near Crewe, Cheshire, which specialises in the delivery of locomotive and railway-wagon parts to rail-industry workshops throughout the UK. A SAFED instructor from Senior Driver Training visited Belcher Cammack and provided a day's training for all drivers. An experienced driver of Belcher Cammack commented after completing his SAFED training, "I didn't realise that a tiny rip in a trailer curtain

or low tyre pressure can have a big effect on fuel economy."

Overall, Belcher Cammack Transport highlighted the following benefits:

- ➡ Fuel savings - MPG savings of 2.6%
- ➡ Improved driver awareness of safety issues
- ➡ A reduction in the incidence of minor accidents/scrapes
- ➡ Improved driver field of vision through retrofitting additional nearside mirrors



See the Freight Best Practice Guides

The Safe and Fuel Efficient Driving (SAFED) Standard and Companies and Drivers Benefit from SAFED for HGVs: A selection of case studies.

These and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

Tips

Many telematics systems can help you to monitor driver technique and indicate any vehicle issues arising, through the use of exception reporting.



See the Freight Best Practice Guide **Telematics for Efficient Road Freight Operations**. This and many other publications can be ordered **FREE** of charge by calling the Hotline **0300 123 1250**, or downloaded from the website **www.businesslink.gov.uk/freightbestpractice**

Monitoring Maintenance Performance

It is a legal requirement to have detailed inspection information for each vehicle. However, collating and reviewing the information over time will allow you to identify areas of improvements, both in your core operation and in your maintenance strategy. Many larger companies have auditors, perhaps one in each operating region, whose role it is to visit each site and check that records are compiled correctly, whether in-house or by external providers. For smaller fleets, audits can be carried out by a member of staff who is not responsible for maintenance.

Monitoring

By monitoring your activity you can identify any higher than expected costs and discover the cause, which can then be rectified by taking the appropriate action. For example, poor fuel consumption of a specific vehicle might be due to wheel misalignment, issues with the fuel injector, or a poor driving technique; only through monitoring will the true cause be correctly identified.

Using a few simple maintenance KPIs can help you to measure each area of maintenance in terms of cost and subsequent performance. By comparing performance before and after the introduction of preventative maintenance, you will see the incremental improvements it can bring.

One of the cornerstones for any performance monitoring programme should be to establish a benchmark against which you can compare future performance. Careful consideration should be given to choosing your KPIs. As a general rule, it is best to keep them simple. Try to have a few relevant KPIs and make them easy to measure and simple to interpret.

Broadly speaking, you can measure the performance of the vehicle in operation and the cost of vehicle maintenance.

Simple vehicle KPIs might be:

- ➔ MPG
- ➔ Time utilisation of vehicle (hours in service)

Maintenance KPIs might be

- ➔ Direct maintenance cost per vehicle
- ➔ Maintenance cost per vehicle per mile
- ➔ MOT pass rate

Case Study 9: Co-operative Retail Logistics (CRL) Distribution

While CRL strives to achieve a 100% MOT pass rate, it has set itself a minimum target of 90%. This compares to the national average MOT pass rate of around 61% in 2004/05* for HGVs. Additionally, it follows up on vehicles that fail the MOT by carrying out root cause investigations and applying countermeasures for future prevention. It also discusses these issues with the vehicle manufacturers. **Source: VOSA.*

Keeping a Performance Log

Having a system in place to capture defect and breakdown details is essential for a successful maintenance programme. It will help you to analyse unplanned maintenance and to spot trends. Depending on your needs, the complexity of your operation and the available budget, you could choose a manual or electronic logging facility/template to capture the required information. The vehicle and trailer defect form summary sheet in the Appendix 1 can help you keep an accurate log of issues.

There is a legal requirement to retain maintenance records for 15 months; however, storing data for longer than this makes sense. It can help to identify seasonal effects and trends in the performance of vehicle components that have an extended life.

Example: Improving Driver Performance

By keeping a close eye on the number of breakdowns and by analysing the number of gearbox problems, a Preventative Maintenance Champion identified that two specific vehicles were responsible for 90% of instances. After further investigation it became apparent that, as all the vehicles within the fleet are the same make and they are all serviced at the same garage, the problems lay with the driving habits of two drivers. Following an investigation and driver training, it was discovered that both drivers changed gear more than was necessary. As a result, they were both put through the SAFED course in order to reduce the number of gear changes they make during the day, helping to reduce wear on the gear box and driver fatigue.

The **Fleet Performance Management Tool** is available free from Freight Best Practice, and enables you to enter KPI data and provides you with the ability to clearly see the performance of your fleet through the aid of tables and graphs. Along with 20 other KPIs, it allows you to measure the percentage of failed inspections and the percentage of defects rectified within 24 hours. Other KPIs relate to:

- Operational issues
- Costs
- Service
- Compliance



See the Freight Best Practice **Fleet Performance Management Tool** and the Case Study **Small Fleet Performance Management Tool (SFPMT) Helps A1 Paper Improve Efficiency**.

Reviewing and Improving your Operation

Identify risks involved in your current maintenance working practices and decide how they can best be managed. This could result in the adoption of safe working practices and training for maintenance staff, covering both general health and safety and specific activities.



For more information on public sector operations see the Freight Best Practice Guide **Efficient Public Sector Fleet Operations**.

Case Study 10: ASDA Stores Ltd

Keeping long-term data is an essential part of ASDA's preventative maintenance strategy. The first point of reference is the driver defect reporting system, updated every time a driver carries out their pre-operation checks. ASDA

then makes sure that any problem is logged and rectified. Separate files, documenting service histories, are kept for each vehicle and trailer, and these are kept on record for 15 months or the lifespan of the vehicle, whichever is longer. Not only does this allow for identification of key or repetitive failures, but also it is vital for legal reasons in the event of a claim being made against the company.

Case Study 11: St Edmundsbury Borough Council



The Council has a fleet of 40 light vehicles (less than 3.5 Tonnes GVW), 35 'O' Licensed vehicles (greater than 3.5 Tonnes Gross Vehicle Weight [GVW]) and 30 other vehicles, including agricultural vehicles.

The Council has a preventative maintenance system in place, and the Fleet and Technical Manager, Phil Clifford, is a firm believer in its value. In order to get the best out of preventative maintenance, data collection is essential, and this is an area where Phil is looking to make improvements. He uses a fleet management software system to better manage information about the fleet, i.e. dated maintenance records per vehicle. This system incorporates information from the Council's fuel management system to enable it to monitor fuel use by vehicle and also to help monitor costs associated with the fleet.

The Council has recently undertaken a management review process called Vanguard to see where improvements can be made in fleet management as well as other areas of the organisation. The first step in the review was to identify all customers and establish their needs.

The workshop has three main customers: Highways, Parks and Gardens, and Refuse and Cleansing. The different customers have differing demands in that refuse collection is a time-critical operation, meaning that vehicle downtime has a serious effect on the efficiency of the operation. Once these customers' needs were identified, the workshop then looked at its processes to see how these needs were currently being met.

Part of the Vanguard process involved looking at how key staff within the workshop used their time over the course of a day. From this, it was found that administration staff spent a large part of their time on tasks that were unrelated to their jobs, e.g. opening and closing gates for people accessing the depot, accepting deliveries etc, and the mechanics were frequently interrupted by drivers with verbal defect reports. By analysing all tasks and process steps, alternative procedures/roles for dealing with these tasks were then put in place, which meant that workshop staff would have more time to devote to their core function.

An important improvement was to insist that drivers complete a daily vehicle check and defect report, and to ensure that all defects or requests for work were directed to the administration office. This procedure ensures that a work record is raised for every defect, and the mechanics' efficiency was improved as a result.

The next area to be tackled is better measuring of vehicle downtime so that improvements can be made to effect a reduction. This will involve collecting more information about work carried out in the workshop and reviewing vehicle utilisation, in order to enable better quantification of the costs and benefits of maintenance activities.

Preventative Maintenance Checklist

This guide has set out the steps you can take to improve maintenance in your operation and maximise the long-term efficiency and reliability of your vehicles. A maintenance checklist, like the one below, will help you to carry out a review of your operations and implement your preventative maintenance plan.

	Done (✓)	Date
Appoint a Maintenance Champion		
Ensure legal compliance with roadworthiness obligations		
Examine the record systems in place to help with maintenance		
Review your maintenance frequency		
Review your fleet		
Undertake whole-life costing of vehicles, maintenance facilities and equipment, and major parts		
Evaluate outsourcing of maintenance and/or outsourcing provider		
Ensure support for preventative maintenance throughout the business through effective communication		
Provide your maintenance staff with training in safe working practices and technical skills to do the job		
Benchmark current and previous maintenance costs and compare		

Appendix 1 Useful Preventative Maintenance Tools

Daily Driver Vehicle and Trailer Check and Defect Report

This sheet will enable drivers to complete a daily walk-round check and report any defects to the transport manager or the work-shop. This will help to establish a nil defect quality system.

This sheet is intended to be used for photocopying purposes to enable an audit trail and to be used in conjunction with the Vehicle and Trailer Defect Form Summary sheet below. One copy should be kept by the transport manager and another copy should be provided to the workshop so the necessary details can be entered and the invoice can be attached. This returned report will then need to be put into the vehicle files.

Vehicle and Trailer Defect Form Summary

This form will enable you to log all the defects for a specific week in your operation. This will help to ensure all defects are actioned promptly and are recorded for future analysis. This form can be used in conjunction with a defect reporting log spreadsheet to enable simpler on-going defect analysis.

Maintenance Planner

The Maintenance Planner on the fold out back cover of the guide enables operators and auditors to visually track and identify the status of their entire fleet. It helps to detail if Services, Inspections, Tachograph calibrations, Tank Pressure tests and MOTs are all up to date and when the next one's are due. It also provides the operator with a brief overview of the fleet registrations and type/make of vehicle

(i.e. rigid/articulated or Scania, Mercedes, Volvo, etc).

This planner can be re-created on computer or can be photocopied for re-use. These Maintenance planners are generally 'wall-mounted' within offices and printed on A2 size paper if possible to allow improved visibility. Once a specific task has been completed, then the appropriate box should be coloured to indicate that task is complete.

This is an important aid to ensure your fleet remains compliant and in peak condition.

Daily Driver Vehicle and Trailer Check and Defect Report

Vehicle/Trailer Registration: _____	Odometer Reading: _____	Date: ____/____/____
-------------------------------------	-------------------------	----------------------

Items to be checked by driver before driving and monitored throughout. A defect should be reported as soon as possible so that the problem can be rectified.

Daily Vehicle Check	Servicable Defect √ or X	Description of Defect(s)
Oil/Fuel (levels)		
Water/Screenwash		
Lights/Indicators		
Battery		
Number Plate		
Mirrors		
Reflectors		
Brakes		
Tyers (inflation)		
Wheels (inc. nuts)		
Body (damage/dents)		
Load (secure)		
Exhaust		
Breakdown Kit		
Horn		
Wipers		
Windscreen (damage)		
Tachograph		
Dashboard (warning)		
Speed Limiter		
Driver Cab/Seat Belts		
O Licence Disc/VED		
Under-run bars		
In-cab Height Indicator		
Trailer Coupling		
Tail-Lift		
Demount/Trailer Legs		
Trailer Connections		
Loading Equipment		

Action Taken

Defect Corrected: _____

Signature: _____

Print Name: _____

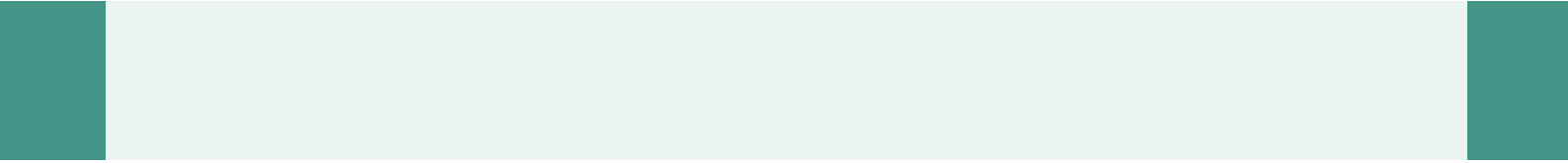
Date: ____/____/____

Position: _____

Signature of the Driver: _____

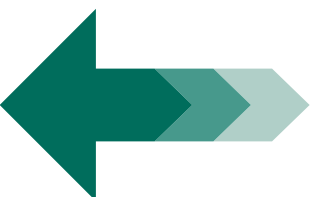
Print Name: _____





The Preventative Maintenance 'Wall Planner'

Open Here



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Saving FUEL

Fuel Management Guide

This is the definitive guide to improving the fuel performance of your fleet. It gives step-by-step explanations of the key elements of fuel management, how to measure performance and how to implement an effective improvement programme.

Performance MANAGEMENT

Fleet Performance Management Tool

This PC-based spreadsheet tool has been designed to help fleet operators improve their operational efficiency using key performance indicators (KPIs) to measure and manage performance. The KPIs include costs, operational, service, compliance and maintenance.

Developing - SKILLS

SAFED for HGVs: A Guide to Safe and Fuel Efficient Driving for HGVs

This guide outlines the elements of the Safe and Fuel Efficient Driving (SAFED) scheme and explains the content of the one-day SAFED training course.

Transport Operators Pack - TOP

Choosing and Developing a Multi-modal Transport Solution

This guide provides a useful insight into the rail and water freight industries, explains the process for making an informed choice about modal shift, and also explains the availability of financial assistance such as grant funding.

Equipment & SYSTEMS

Information Technology for Efficient Road Freight Operations

This guide provides an overview of the available and relevant systems, covering their uses, likely benefits, issues to consider and associated costs

Case STUDIES

Actions to Reduce Emissions and Improve Efficiency

This case study illustrates a number of ways in which Denbighshire County Council has sought to improve its fleet efficiency and move towards a sustainable future.

