FORS
FLEET OPERATOR
RECOGNITION SCHEME

FORS Fuel Management Guide

How to manage fuel and save money

Who is this guide aimed at?

This guide is aimed at operators of heavy good vehicles (HGVs), passenger carrying vehicles and vans. Much of it is also relevant to car and powered two wheeler fleets. It provides practical advice to help implement robust policies, management systems and training that will reduce fuel use, environmental impact and safety-related issues.

Know your responsibilities

As a FORS operator it's down to you to have a policy and procedures in place to manage fuel. It is a requirement of FORS that you monitor fuel consumption and vehicle emissions.

Importance of fuel management

In most transport operations fuel accounts for roughly 30 per cent of all costs. Managing the amount of fuel used and reducing fuel wastage is vital. Small reductions in fuel use can add up to big savings.

Remember: if you can measure it, you can control it!

Your fuel management policy

FORS Standard Bronze requirement ‘O2 Fuel, emissions and air quality’ states that your policy and supporting procedures shall outline the organisation’s commitment to environmental performance, name the Fuel and Emissions Champion and describe how:

- Environmental regulations and standards are complied with
- The vehicles and fuel type selected are suitable for the tasks to be undertaken
- Engine-idling is minimised to reduce fuel waste and unnecessary emissions
- Fuel data is collected and monitored by vehicle registration mark, including AdBlue where relevant
- Fuel spillages are minimised and managed

This guide will help you develop your own fuel management policy.

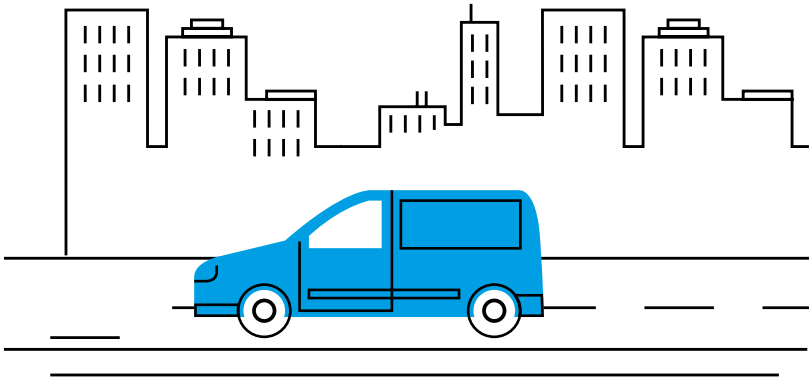
Purchasing fuel

There are a number of different ways to help your operation save money. Operators should research which type of fuel is most suited to their operation and vehicles. There are many different types of grades/quality of fuel available to purchase, with each having different price points. The key is finding which deal is the best value for money for your operation.

Fuel cards have become a popular choice, allowing a direct charge to be made to a company account at pre-designated fuelling stations, fuel bunkers or forecourts. Not all fuelling points accept all types of fuel cards. Ensure that your driver is briefed and has the information about where they can and cannot fuel-up with your chosen card.

For large operators there is an option of contract buying. This is where the operator agrees to buy a certain amount of fuel annually and in return gets a fixed price, negating market fluctuations.

Out on the road a driver may need to fuel-up unexpectedly. Operators and drivers should come to an agreement on reimbursement for cash purchases.



Storage

If you have the facility to store fuel at your depot, buying fuel in bulk can save your operation money. There are a number of aspects that an operator should consider before storing fuel (and AdBlue). These include:

- Storage location
- Type of storage container/tank
- Amount of fuel to be stored
- Whether the fuel will be stored above ground or underground
- Risk to environment

You must comply with the appropriate laws and regulations when storing fuel. These include the Petroleum (Consolidation) Regulations 2014 and Dangerous Substances and Explosive Atmospheres Regulations 2002. The Department for Transport provides further information on oil storage regulations for businesses at www.gov.uk/guidance/storing-oil-at-a-home-orbusiness.

Spillage

You should include preventing and dealing with fuel spills in your fuel management policy and procedures. Drivers need to receive instruction on what to do if there is a spill. One of the most important means of preventing spills from vehicles is not to overfill tanks and to include checking the fuel system and the filler cap as part of the daily vehicle walkaround checks.

Saving fuel soons adds up

Reducing the amount of fuel wasted can have a major impact on an operator's fuel bill. Improving MPG by just five per cent can save over £2,200 (excluding VAT) per HGV per year – so for a fleet of 10 that's over a massive £22,000 (excluding VAT) per year.

Connecting to vehicle CANBus

All modern vehicles use a CANBus to transfer information between the various electronic vehicle systems. This communication network enables a wide range of data including fuel consumption (MPG), revolutions per minute (RPM), odometer reading (ODO), throttle position, engine load/torque, fuel levels and engine temperature to be monitored. It is possible for telematics to connect directly into the CANBus system to allow this data to be recorded and subsequently analysed.

Using GPS technology

Telematic systems that do not connect to the CANBus use GPS data instead to monitor the vehicle. This type of system can record details on engine performance and malfunctions, vehicle speed and driver actions such as hard braking.

Driver feedback

The use of driver feedback in relation to vehicle telematics is very important. Without this, the driver is not aware of their performance and is therefore unlikely to change their behaviour in order to make improvements. There are two main types of driver feedback:

- Post-trip feedback – where data provided by the telematics system is reported back to drivers to inform them of their performance and if any areas of their driving need improving. This can be done by the transport manager or automatically by the system

- In-cab feedback - where instantaneous feedback is provided, encouraging the driver to adjust their driving style in real time. This allows the driver to recognise aspects of their driving style that trigger the alerts and improve them as they drive

Navigating Ad Blue

AdBlue is a urea-based Diesel Exhaust Fluid which is used to tackle the emissions generated by road transport, industrial and marine applications. It reduces the Nitrogen Oxide (NOx) and Sulphur Oxide (SOx) produced by diesel engines by reacting with the gases to turn them into harmless substances.

Following the implementation of the Euro 6 Emissions Standard, most vehicles with a diesel engine registered after September 2015 are legally required to use AdBlue. As part of the standard, vehicles produced from this date were fitted with a Selective Catalytic Reduction (SCR) system, which uses AdBlue to react with the harmful NOx gases and neutralise them. As such, the use of AdBlue is also a common condition on most vehicle warranty packages to maintain the engine systems and overall vehicle health.

AdBlue is generally sold in bulk, delivered directly into tanks on site from a bulk tanker, which is typically the most cost-effective method of purchase, or in individual packs to suit smaller sites and operations, including IBC containers, barrels and cans

For more information on any AdBlue products or on how you can optimise usage for your fleet, visit the team at Noxdown Ltd. They are a VDA-approved AdBlue manufacturer and supplier based in Northern England and have been delivering AdBlue to customers nationwide for over 10 years.

Visit their website: https://noxdown.co.uk/

Hydrotreated Vegetable Oil

Hydrotreated Vegetable Oil (HVO) is a lower-carbon alternative to fossil diesel produced through the hydroprocessing of oils and fats, which can yield up to a c. 90 per cent reduction in Greenhouse Gas (GHG) emissions compared to fossil diesel. Due to cleaner combustion, tailpipe emissions are also reduced, which can also result in lower AdBlue consumption.

HVO has very similar chemical and physical properties to fossil diesel, therefore it is considered a ‘drop in’ alternative, meaning it can be used in a conventional diesel engine with no modifications or updates (check with your vehicle manufacturer than EN 15940, the specification for paraffinic diesel, can be used, particularly in older vehicles), and co-mingled with fossil diesel in tank.

Despite its name, HVO is made from a variety of feedstocks, including oil crops, waste oils and animal fats, not just vegetable oil! It is therefore sometimes referred to as HEFA (hydroprocessed esters and fatty acids), or simply ‘renewable diesel’. The GHG intensity of HVO varies depending on the feedstock used within the production process, with HVO made from waste products such as Used Cooking Oil, generating the greatest savings against fossil diesel.

In order to accurately measure (and report on) your GHG reductions, it is important to clarify with your supplier the type of HVO supplied. If you buy in bulk and your supplier is registered under the Renewable Fuels Assurance Scheme (RFAS), you can request an RFAS declaration relating to your delivery, which lists useful details such as product origin, feedstock and GHG intensity.

In the UK, HVO is most commonly supplied in bulk (delivered into a tank on site), which is the most cost-effective purchase method available to end users. However, there are a growing number of retail sites offering HVO at the pump, with fuel card networks steadily adding greater coverage as demand for the product grows.

For more information and advice on alternative fuels transition, check out FORS Fuel Advisory Service.

Importance of fuel efficiency

Fuel saving tips for operators

You should be actively looking to reduce fuel bills for each of your vehicles. Below is a list of actions that you can implement in order to create better efficiencies:

- **Driver training:** Having a professional development plan in place which identifies and documents the training needs for drivers is vital in helping to reduce fuel consumption. There are many courses available that can assist drivers to be more fuel efficient. These include FORS Professional LoCITY training, Safe and Fuel Efficient Driving (SAFED), Eco-driving and training provided by the vehicle manufacturer

- **Bonus scheme based on fuel efficiency:** There is a range of incentives to reward specific behaviours, such as extra holiday, cash, vouchers or eligibility for a vehicle upgrade

- **Anti-idling policy:** Implement an anti-idling policy that incentivises drivers and potentially the entire operation on sharing the money saved from switching off the engine of a vehicle when it is not in use. A useful tool is the FORS anti-idling tool https://www.fors-online.org.uk/cms/wrrrcompliance/anti-idling-2

- **Driver league tables based on fuel economy averages:** Allows comparison of driving performance by individual and groups of employees. Under-performing drivers can be targeted with appropriate training, whilst the league tables can be used to support driver incentive and reward schemes to boost employee engagement

- **Fuel data:** Recording the mileage and fuel used for every journey completed by your fleet will help to pinpoint areas for improvement, from driving technique to routes or particular loads

- **Effective communications with drivers:** Make drivers aware of all the things you are doing to improve fuel efficiency and get their feedback. They might have ideas of their own

- **Anti-spillage policies:** Introducing anti-spillage training and anti-spillage literature will encourage drivers to make a simple but cost affective change to their behaviour

- **Use of telematics and key performance indicators (KPIs):** There are a number of KPIs which are often recorded and monitored by operators in order to influence training needs and driver behaviour. These includegreen band driving, engine idling, harsh braking, harsh acceleration and overspeeding

- **Improved vehicle aerodynamics:** Certain vehicles (e.g. high sided) would benefit from the installation of equipment such as wind deflectors and spoilers

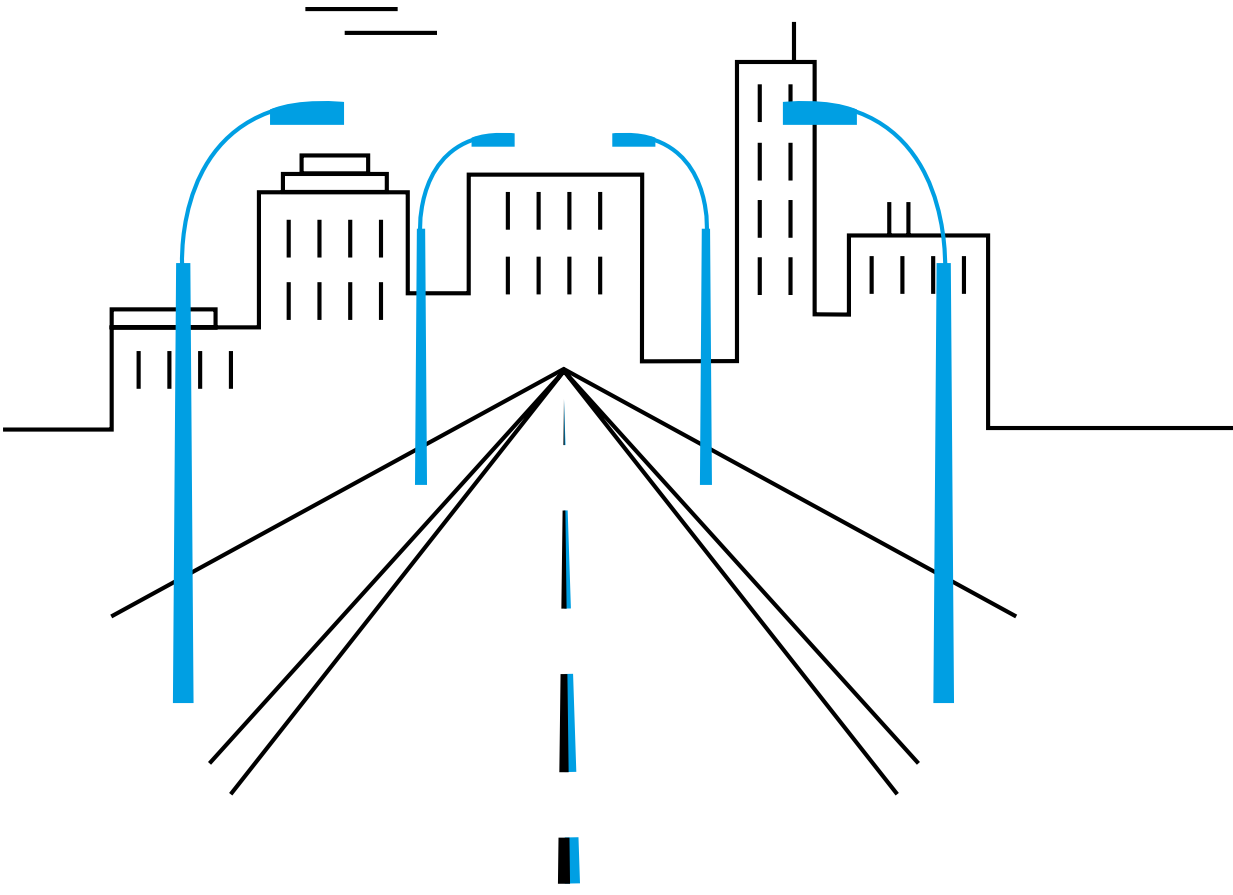
- **Appointment of a Fuel Champion:** As part of the FORS Bronze requirement O2, appointing a Fuel Champion will help to push the message of fuel efficiency and help develop a suitable programme to reduce costs, reduce emissions and ultimately make the operation more profitable

- **AdBlue:** Helps to reduce some of the emissions that a diesel engine emits. It is the operator's responsibility to ensure AdBlue systems are working correctly and meet legislative requirements. Operators should measure AdBlue usage and record the ratio in comparison to the amount of diesel used. This should then be monitored to identify any anomalies

- **Tyres:** Properly maintained and inflated tyres will help reduce an operator's fuel bill. For every 10 per cent decrease in tyre pressure, fuel consumption increases by two per cent for the entire vehicle. Energy saving tyres that have low rolling resistance can reduce an operator's fuel bill by as much as 13 per cent

- **Correct loading:** Ensuring a vehicle's load is secure and properly placed can lead to better aerodynamics and a reduction on drag. This will then reduce fuel consumption as the vehicles engine will not need to work as hard

- **Alternative fuels:** Consider alternative fuels to traditional diesel and petrol propelled vehicles. These include hybrid engines, compressed natural gas (CNG), liquefied natural gas (LNG), hydrogen and electric engines



Fuel saving tips for drivers

- **Get trained:** There are several training modules you can attend, including the FORS Professional Driver CPC LoCITY Driving course and LoCITY Time to clean up eLearning module

- **Check your fuel systems:** As part of your daily walkaround checks, remember to check the fuel tank and fuel system for damage, leaks and security whilst ensuring that the tank is not over filled

- **Minimise engine-idling:** If your vehicle is likely to be stationary for more than two minutes, switch the engine off. Idling wastes fuel and causes pollution. A typical 420hp heavy-duty truck engine consumes fuel at the rate of around two litres an hour when left idling and stationary

- **Don't drive aggressively:** Drive at a safe speed and avoid aggressive starts/driving. For HGVs, a 20 per cent reduction in fuel consumption can be achieved simply by reducing your speed from 56 mph to 50 mph

- **Avoid over-revving:** Lower revs can give higher levels of fuel economy. Try and keep the engine revs within the green band

- **Use cruise control:** Use of cruise control will help the engine regulate fuel input and reduces fuel wastage

- **Forward planning:** Maintaining vehicle momentum (where safe to do so) reduces the strain on the engine, meaning less fuel is needed to be used to propel the vehicle

Communicating to drivers

FORS Professional Toolbox Talk ‘O2 Fuel, emissions and air quality’ will help you to communicate to your drivers the importance of monitoring and minimising fuel use and vehicle emissions. (https://www.fors-online.org.uk/cms/toolboxtalks/)

Summary

Reducing fuel use lowers operating costs and is better for the environment.

Measuring fuel use is key to understanding how it can be reduced and the impact of any fuel saving initiatives, whilst appointing a Fuel Champion ensures than an individual is responsible for the successful implementation of any fuel management plan.

Drivers play a vital part in any initiatives to reduce fuel usage. You should support them with appropriate training and guidance and encourage buy-in with appropriate KPIs.

Remember: measure it, manage it, save it!

FORS Fuel Card Services

To help you make savings on fuel purchases, FORS launched **FORS Fuel Card Services** offering exclusive access to a range of discounted fuel cards. These cards are completely free for the FORS Community, saving you £12 annually per card.

Whether you have diesel, petrol, or electric vehicles, **FORS Fuel Card Services** covers every major brand, offering competitive prices with a saving of up to 10 pence per litre off motorway pump prices. Receive access to regular certificates detailing the amount of fuel and emissions each vehicle is using with the CO2Count reporting tool.

To find out more about **FORS Fuel Card Services**, click here.

Watch the video explaining how **FORS Fuel Card Services** can help you here.

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