



Fuel Reduction Plan (Huddersfield University)

20 ways to reduce your fuel bill.

There are three themes to improving fuel efficiency. The first is ensuring that you have accurate fuel consumption figures. The second, getting the best from your present fleet and the third making fuel efficient purchasing decisions when buying new or second hand equipment. The following 20 points are designed to give a basic guide to operators who want to reduce their fuel bills without spending too much money.

Accurate Data

1. Check that weekly or monthly averages are produced by total distance divided by total fuel used rather than average of daily averages. Quarterly summaries (using average of the averages) have been found to be inaccurate by as much as half a mile per gallon.
2. In most cases there is a seasonal pattern to mpg, peaking in July and August and bottoming out in December and February. This is very important if you are going to test products that claim to improve mpg.
3. When you find a large discrepancy in daily mpv investigate it, don't just average it or ignore it. Take measures to prevent it from happening again.
4. If you want to accurately determine the effect of different equipment under controlled conditions, then enter the Institute of Road Transport Engineers (IRTE) fuel trials that are run every year in June. It is a lot cheaper than hiring a facility on your own and you get the benefit of mixing with like minded fleet managers and engineers.

Optimise Fuel Consumption in your Present Fleet

5. Driver training consistently achieves better mpg but it needs a reinforcement mechanism otherwise it will fail.
6. Reinforcement mechanisms for fuel efficient driving can be simple feedback on a notice board, individual letters to drivers, or a fuel bonus. However, whilst an annual bonus can use the annual average mpg, shorter term bonus systems (e.g. weekly or monthly) should not use the annual average mpg.
7. The first person to be trained in any company should be the most senior person with an LGV license.

8. Identify the most fuel efficient vehicles and if possible, bearing in mind other operational factors, place them on the operations routes that use most fuel.
9. Think of aerodynamics. For example, ensure that the gap between the back of the cab and the front of the trailer is minimised to reduce aerodynamic resistance. Tippers with easy-sheets should have them closed when empty to prevent airflow hitting the inside of the tailboard.
10. If adjustable air deflectors are fitted, get the drivers to adjust them for maximum effect. If the deflector is too low you will see a tide mark on the front of the trailer.
11. Specify the correct bodywork, it should be no higher or wider than the job requires.
12. Monitor maintenance records, poor mpg and short brake lining life are good indicators of driving style.

Optimising Purchase Decisions

13. When buying new vehicles, calculate which is best over the life of the vehicle. Is it a better residual at the end of its life from a large engine, or reduced fuel costs from a smaller engine that is just as capable of doing the job? Remember to include the effect of the fuel escalator in the fuel costs.
14. Specify trailers or bodywork with rounded leading edges (minimum 200 millimetre radius)
15. Aerodynamic aids may not be cost effective on vehicles that do not undertake long high speed journeys as part of their regular work.
16. Beware of claims made for aerodynamic equipment tested at 56 mph and translating the saving to your vehicle(s). Aerodynamics is highly sensitive to speed. As a rough guide calculate the average speed of your vehicle(s) and ask for test results conducted at that speed.
17. When buying a new vehicle consider specifying a tachograph with the fourth needle activated to record engine speed. Whilst you can get more information from electronic systems, activating the fourth needle will be far cheaper. However, you must be prepared to use the information, otherwise you are wasting your money.
18. Specify and activate an engine limiter. Some vehicles have them fitted as standard.
19. When buying a second-hand vehicle take it for a test drive and note the engine speed at 56 mph. If the vehicle is being purchased for medium or long distance work you do not want to purchase a vehicle that is geared for local work. If you get it wrong you will end up cruising at too high an engine speed and subsequently wasting a lot of fuel.

20. When purchasing a new vehicle get the manufacturer to provide free driver training. Most do, now, so take advantage of it.

Look out for further information and conferences on the Huddersfield University Transport and Logistic Units website at www.hud.ac.uk/sas/trans

Free Fleet Fuel Software

As a result of work undertaken by the Transport and Logistics Research Unit at the University of Huddersfield, free software is now available which will enable car, van, bus or truck operators of any size to produce accurate fuel consumption figures.

This software helps users to avoid some of the problems identified in the fuel consumption analysis. For a discussion of these issues follow the links below:

www.hud.ac.uk/sas/trans/fuel/cantique/cantique.htm

www.hud.ac.uk/sas/trans/fuel/lrn98.html