

## Engine Idling - Costs You Money and Gets You Nowhere!

Case Study



Drivers: You are the key!

# TURN IT OFF!



An idling truck  
can waste up to  
2 litres of fuel  
per hour.

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Transport  
OperatorsPack

Department for  
Transport



Companies Involved:

Lloyd Fraser Group Plc  
Allied Bakeries Ltd  
Ralph Colman International Ltd  
Leggett's Transport Ltd

# Acknowledgements

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Lloyd Fraser Group Plc

Allied Bakeries Ltd

Ralph Coleman International Ltd

Leggett's Transport Ltd

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# 1 Introduction

Excessive idling of HGV engines is simply a waste of fuel and money. With modern vehicles, the cost of switching off the engine and starting up again is usually less than the cost of leaving the engine idling.

On tick-over, a typical heavy-duty truck engine consumes fuel at the rate of around 2 litres per hour. That equates to roughly £1.70 and over 5 kg of CO<sub>2</sub> emissions per hour.

By following simple anti-idling advice, HGV operators can save money and reduce exhaust emissions. This case study highlights the benefits experienced by operators that have managed to improve the fuel consumption of their fleet as a result of introducing truck anti-idling measures. The efficiency benefits of truck anti-idling can be clearly demonstrated by examining commercial applications, as the following case studies demonstrate. All fuel cost savings in this case study have been based on a price of 85p per litre (ex VAT).

## 1.1 How to Implement an Anti-idling Campaign in Your Operation

To support the introduction of truck anti-idling into your operation we have produced a four stage process, as shown in Figure 1.

Figure 1 Anti-idling Campaign Process



## 1 Plan Your Campaign

When planning your campaign, consider the following steps:

- ➔ Put a system in place for measuring fuel use & vehicle mileage
- ➔ Arrange a trial period: measure fuel consumption for at least two weeks without anti-idling (the 'before period') and two weeks with anti-idling after the trial period
- ➔ Ensure you record data for the period before the implementation to help set a benchmark miles per gallon (MPG) figure and realistic targets

**Tip** - Try to avoid very different periods. For example, do not run part of the trial in school term time and part in school holidays

## 2 Brief Your Drivers

Gather your drivers together before their shift for a Driver Briefing on 'truck anti-idling' (no more than five minutes may be required). This provides an opportunity for driver feedback and may help to improve the quality and accuracy of your plans.

**Tip** - Use the Freight Best Practice 'anti-idling' training presentation and posters which are available in the **Transport Operators' Pack (TOP)**, available from [www.freightbestpractice.org.uk](http://www.freightbestpractice.org.uk)

## 3 Run the Campaign

Once all drivers have been briefed, start the campaign. The following steps should be considered:

- ➔ Collect data for two weeks after training has been given to drivers
- ➔ Analyse 'before' and 'after' data to determine improvements in fuel usage and success of your campaign

**Tip** - Put Freight Best Practice 'anti-idling' posters up at your site

## 4 Communicate the Results

Once the defined period of the campaign is complete, present results of the campaign back to your drivers. We also recommend that you:

- ➔ Monitor progress and undertake periodic Driver Briefings to maximise benefit over the long term
- ➔ Provide feedback to Freight Best Practice on whether the case study is useful and how it can be improved by emailing: [info@freightbestpractice.org.uk](mailto:info@freightbestpractice.org.uk) or by visiting the website [www.freightbestpractice.org.uk](http://www.freightbestpractice.org.uk)

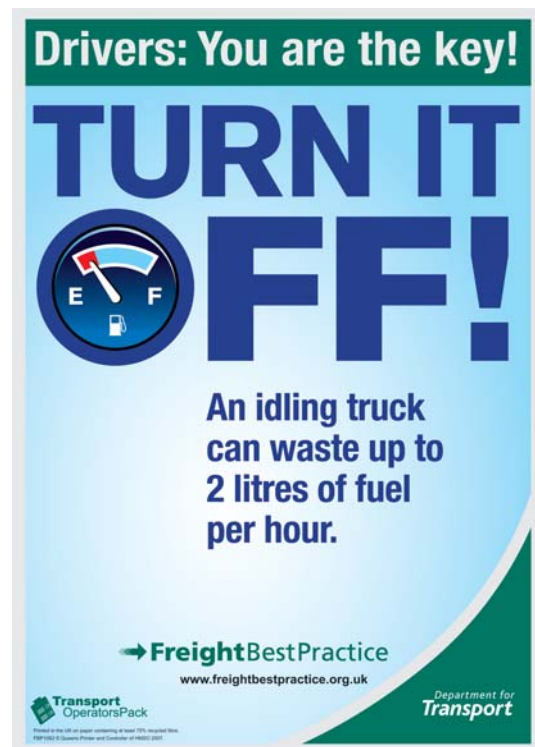
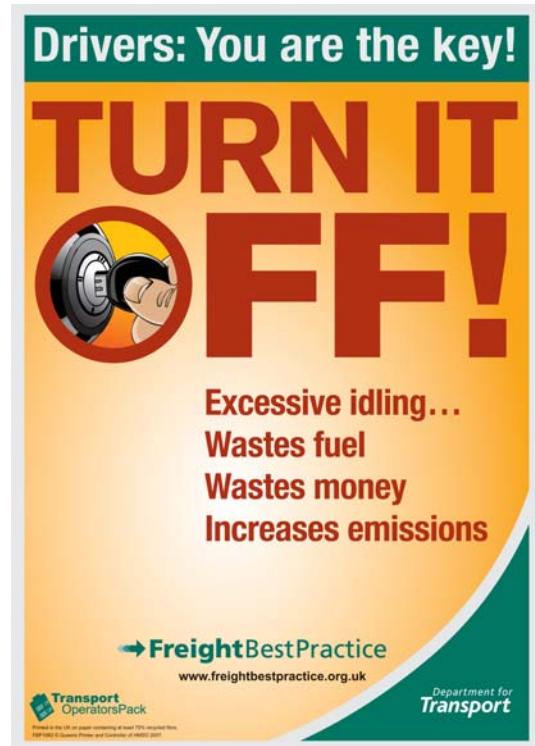
### Key Facts

- ➔ Truck operators can save money and fuel if they encourage their drivers to turn off their truck engines:
  - When stationary in non-moving traffic (ensuring road safety is not compromised)
  - When parked
  - During driver breaks
- ➔ With modern vehicles, the cost of switching off the engine and starting up again is usually less than the cost of leaving the engine idling
- ➔ It is also vitally important that drivers should not leave their engines on tick-over to warm up their cabs as this will affect fuel consumption, and it is suggested that time-controlled cab heaters could be used instead for this purpose. Another factor for consideration is leaving the air-conditioning on when not really required, using additional fuel
- ➔ Excessive engine idling of any vehicle results in increased maintenance and engine wear costs
- ➔ Stopping unnecessary vehicle idling can directly improve local air quality and lessen noise, and reduce environmental health risks in our communities
- ➔ These case studies suggest that for every HGV in your fleet, you could expect to avoid at least one Tonne of CO<sub>2</sub> emissions per vehicle each year by introducing anti-idling measures



The Transport Operators' Pack can be ordered **FREE** via the Hotline **0845 877 0 877**, or you can download it from the website

[www.freightbestpractice.org.uk](http://www.freightbestpractice.org.uk)



Examples of Anti-idling campaign posters found in the Transport Operators' Pack

## 2 Case Study 1 - Lloyd Fraser Group Plc

**Company:** Lloyd Fraser Group Plc  
**Location:** Rugby, Warwickshire  
**Fleet size:** 49 tractor and trailer units (44 Tonne articulated vehicles)

### 2.1 The Operation

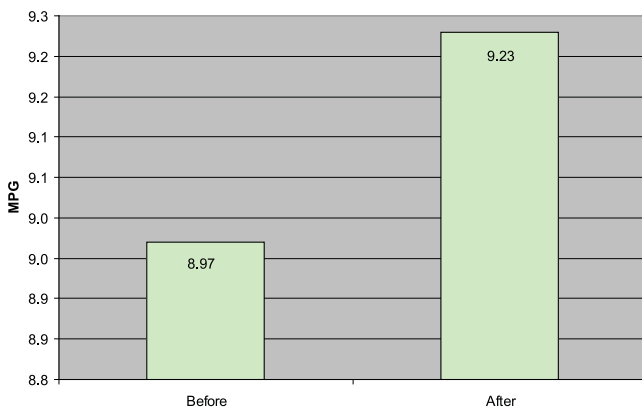
Lloyd Fraser provides third-party logistics, employing over 1,400 staff and operating out of 33 sites nationwide. The company offers a complete range of logistics and value-added services. The group operates over 500 vehicles, but this case study involves the operation of 49 (44 Tonne) articulated vehicles on the Manor Bakeries contract. These Rugby-based vehicles trunk nationwide, 24 hours a day, seven days a week.

### 2.2 Truck Anti-Idling - What Do the Figures Say?

Fuel consumption figures for 45 operational articulated vehicles (four out of service) were monitored for a total of four weeks: two weeks prior to anti-idling training being provided to drivers and two weeks after training. Figure 2 shows that:

- ➡ Of the 45 vehicles monitored, 30 vehicles (67%) reported an improvement in MPG
- ➡ Average MPG across the 45 vehicles increased from 8.97 to 9.23 (approximately 3% improvement)

Figure 2 Average MPG Before and After Anti-idling Training - Lloyd Fraser Group Plc



“We have saved some money and reduced our fuel bills, at least in the short term, by encouraging our drivers to turn off vehicle engines when stationary or when they are having their rest breaks.”

**Stuart Holmes, Transport Manager, Lloyd Fraser Group Plc (Manor Bakeries contract)**

The trial period has realised a weekly saving of 1,300 litres of fuel for the contract. At 85p per litre, this equates to a saving of £1,105 per week for the 45 vehicles. As a result of these improvements in the MPG figures, the company saved 3.4 Tonnes of CO<sub>2</sub> emissions per week. If these trends were maintained over one year, for this fleet of 45 vehicles the savings approximate to:

- ➡ 65,000 litres of diesel
- ➡ £55,250
- ➡ 170 Tonnes of CO<sub>2</sub>

### 3 Case Study 2 - Allied Bakeries Ltd

**Company:** Allied Bakeries Ltd  
**Location:** West Bromwich, West Midlands  
**Fleet size:** 89 vehicles (61 rigid and 28 articulated vehicles)

#### 3.1 The Operation

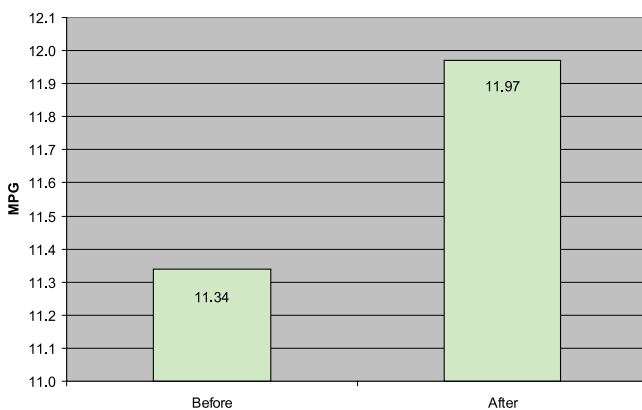
Allied Bakeries Ltd is the company behind big brand names such as Kingsmill, Allinson and Sunblest. At its round the clock production site in West Bromwich, it operates a total of 89 vehicles. The company's 61 rigid vehicles carry out multi-drop deliveries in the Midlands and its 28 articulated vehicles are used for trunking to distribution centres nationally.

#### 3.2 Truck Anti-Idling - What Do the Figures Say?

Allied Bakeries Ltd implemented anti-idling in January 2007. As a result of the simple anti-idling training given to drivers, the West Bromwich depot has achieved the following results to date:

- ➔ MPG increased from 11.34 to 11.97 (a 5% improvement), as shown in Figure 3 below
- ➔ Engine idling reduced from 66.03 minutes per route per week to 11.45 minutes per route per week (an 83% reduction in engine idling)

Figure 3 Average MPG Before and After Anti-idling Training - Allied Bakeries Ltd



“Before implementing truck anti-idling, our vehicles had idling figures of 66.03 minutes per route per week. Now idling time is down to 11.45 minutes per route per week. This has significantly improved our MPG figures.”

**John Parker, Logistics Manager, Allied Bakeries Ltd**

The estimated weekly saving in fuel was approximately 1,186 litres of diesel. As a result of the improvement in MPG, the company has managed to save approximately 3.1 Tonnes of CO<sub>2</sub> emissions per week. If this is maintained over one year, the West Bromwich operation could potentially save:

- ➔ 59,300 litres of diesel
- ➔ £50,405
- ➔ 156 Tonnes of CO<sub>2</sub>



Example of Anti-idling campaign posters found in the Transport Operators' Pack

## 4 Case Study 3 - Ralph Coleman International Ltd

**Company:** Ralph Coleman International Ltd  
**Location:** Atherstone, Warwickshire  
**Fleet size:** 20 vehicles (a mixture of rigid and articulated vehicles and one van)

### 4.1 The Operation

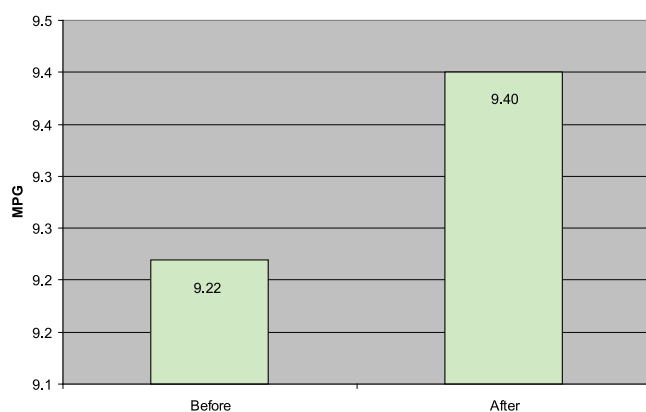
Ralph Coleman is a family business which started in 1971. The company's commitment to high-quality services has enabled it to expand into warehousing, logistics and contract distribution. Ralph Coleman operates 20 vehicles from two of its operating centres in the Midlands. This case study looks at 16 of its vehicles, 2 rigids and 14 (38 Tonne) articulated vehicles, which operate out of the company's Atherstone depot.

### 4.2 Truck Anti-Idling - What Do the Figures Say?

Ralph Coleman implemented anti-idling in September 2007. Following the simple anti-idling training given to drivers, it has achieved the following result:

➡ MPG increased from 9.22 to 9.40 (a 2% improvement), as shown in Figure 4

Figure 4 MPG Before and After Anti-idling Training - Ralph Coleman Ltd



"Every little helps! Our drivers have managed to improve their MPG figures as a result of following the simple messages of truck anti-idling. I've found it to be one of the easiest measures to get the drivers to improve their fuel consumption."

**Lee Jeffery, Logistics Manager, Ralph Coleman International Ltd**

The estimated monthly saving in fuel was about 662 litres, and at 85p per litre this equates to a saving of £562 per month. As a result of the improvement in MPG, the company saved 1.74 Tonnes of CO<sub>2</sub> emissions during one month. If this is maintained over one year, the company could potentially save:

- ➡ 7,900 litres of diesel
- ➡ £6,700
- ➡ 20 Tonnes of CO<sub>2</sub>

## 5 Case Study 4 Leggett's Transport Ltd

- Company:** Leggett's Transport Ltd
- Location:** Bury St Edmunds, Suffolk
- Fleet size:** 65 vehicles:
- 63 44 Tonne articulated vehicles
  - 2 26 Tonne rigid vehicles

### 5.1 The Operation

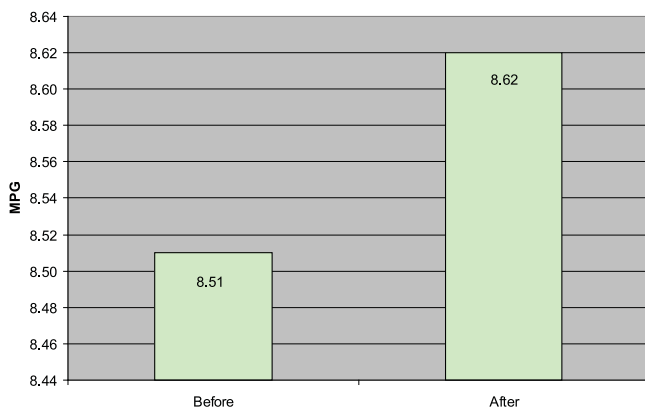
Leggett's Transport is a family-owned company specialising in haulage, storage and distribution. It operates 63 maximum weight articulated vehicles and 2 (26 Tonne) rigid vehicles from its depot in Suffolk. Today, the company has significant general haulage and container distribution contracts and a wide range of spot market customers. This case study focuses on the 63 articulated vehicles which are used to trunk regionally and nationally.

### 5.2 Truck Anti-Idling - What Do the Figures Say?

As a result of training drivers to switch off their engines when idling, Leggett's Transport achieved the following MPG results in one month for 63 of their vehicles:

- ➔ The overall average MPG figures increased from 8.51 to 8.62 (a small average improvement of 1.2%)
- ➔ Of the fleet of 63 articulated vehicles, MPG improved for 37 vehicles (59%)

Figure 5 MPG Before and After Anti-idling Training - Leggett's Transport Ltd



"We have various initiatives in the company to get our drivers to drive more fuel efficiently. Anti-idling is the simplest measure that has helped us improve our overall MPG figures by 1.2%. However, putting together all our initiatives has helped us to save at least 5% on MPG. In turn, we've also improved our environmental distribution efficiency."

**Rob Summers, Driver Instructor, Leggett's Transport Ltd**

The estimated monthly saving in fuel was about 4,000 litres, and at 85p per litre this equates to a saving of £3,400 per month. If this is maintained over one year, Leggett's Transport could potentially save:

- ➔ 48,000 litres of diesel
- ➔ £41,000
- ➔ 120 Tonnes of CO<sub>2</sub>



Example of Anti-idling campaign posters found in the Transport Operators' Pack

## 6 Summary and Conclusions

The results indicate that HGV operators could potentially save money and reduce fuel bills by encouraging their drivers to turn off vehicle engines when stationary or idle (where it is safe to do so).

Table 1 below summarises the improvements in MPG achieved by the four operators as a result of implementing truck anti-idling. As can be seen, depending on the nature of the operation and vehicle types, fleet operators can expect average fuel savings in the region of 1% to 5%. The four operators can save over 466 Tonnes of CO<sub>2</sub> and 180,200 litres of diesel annually between them.

Excessive idling of lorry engines can be a waste of fuel and money, resulting in unnecessary environmental impact. When the engines of trucks and other road vehicles are left running while parked, they produce pollution that can contribute to climate change.

By encouraging drivers to switch off their vehicle engines, an operator can save money by reducing fuel consumption and at the same time decrease CO<sub>2</sub> emissions.



See the Freight Best Practice **Transport Operators' Pack (TOP), Fuel Saving Tips** and **Safe Driving Tips**

Table 1 Summary of MPG Improvements as a Result of Truck Anti-idling

| Company                         | Litres of Diesel Saved per Annum | CO <sub>2</sub> Savings per Annum | Average Percentage Improvement in MPG |
|---------------------------------|----------------------------------|-----------------------------------|---------------------------------------|
| Lloyd Fraser Group Plc          | 65,000                           | 170 Tonnes                        | 3%                                    |
| Allied Bakeries Ltd             | 59,300                           | 156 Tonnes                        | 5%                                    |
| Ralph Coleman International Ltd | 7,900                            | 20 Tonnes                         | 2%                                    |
| Leggett's Transport Ltd         | 48,000                           | 120 Tonnes                        | 1.2%                                  |
| <b>TOTAL</b>                    | <b>180,200 Litres</b>            | <b>466 Tonnes</b>                 |                                       |

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