

Non-GB HGV Fleet Compliance Check 2010

Final Report

In House Analytical
Consultancy

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The following annexes are provided in a separate file:

Annex A: Terms of Reference

Annex B: Methodology

Annex C: 2010 Check Form

Annex D: Detailed Results

Chapter 1: Management Summary

1.1 Introduction

The aim of the Non-GB HGV Fleet Compliance Check (FCC) was to determine the roadworthiness and traffic compliance of Non-GB-registered vehicles and trailers on British roads.

The survey was designed by the Department for Transport's In House Analytical Consultancy (IHAC) and carried out by the Vehicle & Operator Services Agency (VOSA). It is the fourth similar survey carried out, and the last was undertaken in 2008.

VOSA stopped and checked 3048 randomly selected Non-GB-registered heavy goods vehicles (HGVs) and 2934 trailers during the 2010 Non-GB HGV FCC, although some vehicles were only checked for either a vehicle defect or a traffic offence. The checks were carried out across Great Britain during the period September 6th to October 30th 2010. Check results were recorded on paper forms and in the electronic mobile compliance system. IHAC transferred the resulting paper data into an electronic database, analysed the data collected and summarised the results into this report. Details on the statistical accuracy of the check can be found in Annex B.

1.2 Vehicle Defects

Of the 2715 vehicles checked for roadworthiness defects in the 2010 survey:

- 21.8% of vehicles were issued with prohibitions (5.7% immediate, 16.1% delayed).
- The confidence intervals on the prohibition rate indicate a true rate of prohibitions between 19.3% and 24.3% (i.e. 21.8% +/- 2.5%).
- There was a significantly higher prohibition rate in 2010 compared with the 2004 and 2008 checks, although there was no clear trend across the years.
- There was a significantly higher prohibition rate compared with the GB 2010 survey, and a significantly lower rate of inspection notices.

Other key findings included:

- In addition to 21.8% with prohibitable defects, 7.8% had defects warranting an inspection notice.
- 70.3% had no roadworthiness defects.
- 66 vehicles were issued with at least one GFPD (Graduated Fixed Penalty Deposit) for various reasons (in addition to prohibitions); the most common reason was for the view to the front. 77 GFPDs were issued in total.
- The total amount collected in GFPDs was £5,440.
- Many factors affected vehicle condition. In particular, vehicle age was the most important factor affecting the prohibition rate, followed by area and country.
- Faults on 'Brake Systems and Components' were the most common defects found accounting for 23.3% of all prohibitions. The most common defect warranting an immediate prohibition was 'Glass and View of the Road' (22.4% of all immediate prohibitions).

- Faults on 'Glass and View of Road' dropped from most common prohibitable defect in the 2008 survey to sixth most common in the 2010 survey.
- The top three reasons for prohibitions overall were similar in the GB and Non-GB 2010 surveys, although the most common reasons for immediate prohibitions were different.

1.3 Trailer Defects

Of the 2605 trailers checked for roadworthiness defects:

- 29.1% of trailers were issued with prohibitions (8.3% immediate; 20.8% delayed)
- The confidence intervals on the prohibition rate indicate a true rate of prohibitions between 26.2% and 32.0% (i.e. 29.1% +/- 2.9%).
- The prohibition rate was significantly worse than all of the previous checks carried out, although there was no clear trend across the years.
- There was a significantly higher prohibition rate for trailers compared with the GB 2010 survey, and a lower rate of inspection notices issued

Other Key findings included:

- In addition to 29.1% with prohibitable defects, 5.0% had defects warranting an inspection notice.
- 65.9% had no roadworthiness defects.
- 107 vehicles were issued with at least one GFPD for various reasons; the most common reason was for a defective braking system. 120 GFPDs were issued in total.
- The total amount collected in GFPDs was £7,360.
- Several factors were linked to trailer roadworthiness defect rates: age of towing vehicle was the most important factor, followed by area of check and registered country of vehicle.
- Faults on 'Brake Systems & Components' were the most common defects recorded, accounting for 28.9% of all prohibitions
- 'Trailer Parking and Emergency Brakes, & Air Line Connections' was the most common defect for immediate prohibitions (16.5% of all immediate prohibitions)

1.4 Traffic Offences

Of the 2852 vehicles checked for traffic offences in the 2010 survey:

- 14.4% of drivers / operators were committing serious traffic offences (0.5% notionally¹ reported for prosecution; 13.9% other serious offences)
- The confidence intervals on the serious offence rate show that the true rate of serious offences lies between 12.2% and 16.6% (i.e. 14.4% +/- 2.2%).

¹ A check in this FCC would be notionally reported for prosecution since it is difficult to prosecute Non-GB HGVs operating in GB (compared to prosecuting those registered in GB).

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- There was a significantly lower serious offence rate compared with all other checks in previous years.
 - There was a higher serious offence rate than the GB 2010 survey, although significantly lower proportion of drivers notionally reported for prosecution

Other Key findings included:

- In addition to 14.4% of drivers committing serious traffic offences, 2.0% of drivers committed an offence warranting a verbal warning.
- 83.6% were not found to be committing any traffic offences
- £50,080 was collected in Graduated Fixed Penalty Deposits from 299 drivers.
- Many factors affected the level of serious traffic offences. In particular, area of check was the most important factor, followed by registered country of vehicle and vehicle age.
- Drivers' Hours and Overloading were the most common offences, accounting for 68.5% of all known serious offences.

Chapter 2: Introduction

2.1 Background

The 2010 Non-GB HGV Fleet Compliance Check (Non-GB HGV FCC) was the fourth in a biennial series of checks carried out by the Vehicle and Operator Services Agency (VOSA) since 2004.

There have also been 12 similar HGV FCCs performed by VOSA that have focused on the level of compliance and condition of the GB HGV fleet.

The Non-GB HGV Fleet Compliance Checks are carried out in order to determine both the level of compliance across the fleet of HGVs registered outside Great Britain (Non-GB HGV's) travelling on British roads.

VOSA has three major reasons for sponsoring this survey:

- to determine trends in non-compliance with regard to regulations and roadworthiness to gauge the effects of changes in legislation, and the effectiveness of VOSA's day-to-day targeted operations;
- to provide information to help identify potential issues and areas for targeting, so that VOSA's work can be more focused; and
- to compare differences in condition and compliance between GB and non-GB vehicles.

The Non-GB 2010 check took place between September 6th and October 30th 2010. A total of 3048 HGVs and 2934 trailers were checked for roadworthiness defects and traffic offences by VOSA examiners at roadside inspections (though not every vehicle was checked for both condition and compliance).

To ensure a sufficiently large sample of Non-GB HGVs, the check sites for the Non-GB HGV FCC focussed on locations around ports and locations on thoroughfares with high levels of Non-GB HGV traffic. Decisions on specific locations and times of check sites were left as an operational decision by each area. However, areas were asked to carry out a certain proportion of checks at different times of day and different days of the week (including proportions at nights and at weekends). IHAC developed the methodology and analysed the results of the checks.

During each check the examiner recorded basic details on a paper form and entered full details and the check results into the mobile compliance system. After the checks had been carried out, IHAC entered the information on the paper forms into an electronic database. These forms were then matched to the mobile compliance records from VOSA.

In this report, the term 'vehicle' generally refers to the tractor unit or rigid vehicle only, and not the vehicle and trailer combination.

2.2 Methodology

A description of the methodology used for the analysis is given in Annex B.

The results chapters below all show a list of the combination of factors that was best related to vehicle condition (section 3.2), trailer condition (section 4.2) and traffic offences (section 5.2). In order to help with targeting, the results chapters also present a table showing the factors that were significant for all factors separately (sections 3.3, 4.3 and 5.3). For example, country and age are related (13.2% of vehicles from Poland were aged three years or under compared to only 5.5% of vehicles from Ireland). This means that examiners can target a vehicle based on the country rather than the age, which can be easier to spot at a glance.

This report is shorter than the report of the 2008 results. There is no longer a section for each vehicle/check characteristic, though tables and charts can be found in the annexes.

2.3 Accuracy

Each of the headline statistics quoted in this report has an associated uncertainty. That uncertainty is unavoidable and arises from the random sampling techniques that were used to carry out the survey. This report expresses that uncertainty in terms of two parameters: an accuracy level, plus a corresponding level of confidence.

Wherever a difference is said to be 'significant' it means that it can be stated with 95% confidence that the difference is not due to random sampling factors (i.e. the chance of observing such a difference, where there is none, is less than one in twenty). Details about the accuracy of the results can be found in Annex B.

The accuracy of the results is dependent on an unbiased, representative sample of an adequate size. The check sites were selected locally to pick up high volumes of non-GB-registered HGVs; this meant that check sites tended to be on main thoroughfares on the British motorway network and at ports around Great Britain where non-GB-registered HGVs could arrive or depart. Little data has been collected in other surveys that describe the characteristics of the non-GB HGV fleet, so it has been difficult to compare this sample to the typical fleet of Non-GB-registered HGVs in Great Britain at any one time. More details on the accuracy can be found in Annex B.

In some graphs of prohibition or traffic offence rates, two bars may display apparent differences, yet not demonstrate a statistically significant difference. This effect is due to sample sizes. A lower number of HGVs in a particular category means that a larger difference between that category and all other categories of HGV was required for the difference to be classified as statistically significant.

In some pie charts the percentages displayed do not add up to 100 per cent; this is due to rounding the figures to 1 decimal place.

2.4 Notes about data

Throughout this report, where analysis has been carried out by country of origin, "Ireland" refers to the Republic of Ireland. Any references to Non-GB HGVs refer to HGVs which were registered outside of Great Britain (i.e. vehicles from Northern Ireland, the Channel Islands and the Isle of Man are counted as Non-GB HGVs). The Traffic and VOSA Areas referred to in this report are the Traffic/VOSA Areas in which the vehicle was stopped.

Roadworthiness defects on a vehicle or trailer fell into three categories as per the VOSA Categorisation of Defects Manual. These were:

- Inspection Notice – issued where defects were found that were not of a sufficiently dangerous nature to warrant the issue of a prohibition. Inspection notices are advisory only, and do not in themselves prevent further use of the vehicle/trailer.
- Delayed Prohibition - issued where defects render the vehicle/trailer either unfit, or likely to become unfit, for use, but pose no immediate risk of injury. Delayed prohibitions come into force no later than ten days from the date of inspection. Under the Foreign Vehicle Act 1972 (as amended) the requirement is that a prohibition issued to a foreign driver has immediate effect regardless of the severity. In this report, where a prohibition only includes delayed items it has been classed as a delayed prohibition².
- Immediate Prohibition - issued where any of the defects on the vehicle/trailer is such that further driving of it would involve a risk of injury to any person.

Graduated Fixed Penalty Deposits were introduced in 2009, and therefore do not appear in previous reports (the previous non-GB HGV Fleet Compliance Check was in 2008). Therefore a single category of “Serious Offences” has been used throughout most of this report to take this into account. In this report, ‘serious offences’ include those which result in at least one of:

- Prohibition
- ORN (Offence Rectification Notice)
- Advisory Letter
- GFPD (Graduated Fixed Penalty Deposits)
- Report for Prosecution (notional)

The category *Report for Prosecution* in this report usually refers to *Notionally Report for Prosecution* since it is difficult to prosecute non-GB HGV operators (other than those from Northern Ireland). This category is in effect judging the traffic offences as if they had been committed by a British driver. This allows a fair comparison between rates of prosecution in the non-GB HGV and GB HGV fleets.

Where there was an offence recorded on the paper form that did not result in a prohibition or GFPD, the outcome of that offence was not always clear. Therefore in some cases assumptions had to be made about the likely outcome.

The offence categories used for this 2010 survey and for the previous non-GB surveys differed slightly from the categories usually used for the GB survey. For example, in this survey there was no check of whether the operator was licensed.

Where recorded, there were 26 cases where the country of the trailer was different to the country of the vehicle.

² Where a prohibition only includes delayed items VOSA issues a variation notice delaying the effect

12 dangerous goods inspection notices have been treated throughout this report as if the driver received a verbal warning³— i.e. not a serious offence (although one driver also committed a separate serious offence). Eight drivers received dangerous goods prohibition notices, which were counted as serious offences.

There were 196 cases where a vehicle examiner check had been conducted but no traffic examiner check had been conducted; these checks have been excluded from the traffic examiner analysis. There were also 333 cases where a traffic examiner check had been conducted but no vehicle examiner check; these have been excluded from the vehicle examiner analysis. In one of these cases the check was only conducted by a traffic examiner, but the trailer received a roadworthiness prohibition for condition of tyres. This trailer has been marked as a prohibition for trailer defects but has been excluded from the vehicle analysis.

In 35 cases the vehicle had a vehicle examiner check for the vehicle but not for the trailer, although the traffic examiner had recorded a trailer check and the paper forms had recorded that a trailer was present. These checks were marked as having a trailer for the vehicle examiner and traffic examiner analysis, but were excluded from any trailer analysis. In a further two cases the paper forms had recorded a trailer but there was no vehicle examiner trailer check recorded and no traffic examiner check. These checks were marked as no trailer present.

³ Dangerous Goods Inspection Notices are shown here as a type of offence level, which is consistent with previous reports. However, these are notifications of an inspection of that type and not offences. This will be corrected in future reports. If these were excluded, the overall 'no offence' rate in this report would rise from 83.6% to 83.9%. The rate of serious offences is unaffected.

Chapter 3: Vehicles

3.1 Main Results

Key findings

- 21.8% of vehicles were issued with prohibitions (5.7% immediate, 16.1% delayed).
- 7.8% warranted an inspection notice.
- 70.3% had no roadworthiness defects.
- Significantly higher prohibition rate compared with the GB 2010 survey, and a significantly lower rate of inspection notices.
- Faults on Brake Systems and Components were the most common defects found, accounting for 23.3% of all prohibitions.
- The most common defect warranting an immediate prohibition was Glass and View of the Road (22.4% of all immediate prohibitions).
- Glass and View of Road dropped from the most common in the 2008 survey to sixth most common in the 2010 survey.
- Many factors affected vehicle condition.
- Age was most important factor, followed by area and country.
- The confidence intervals on the prohibition rate indicate that the true rate of prohibitions lies between 19.3% and 24.3% (i.e. 21.8% +/- 2.5%).

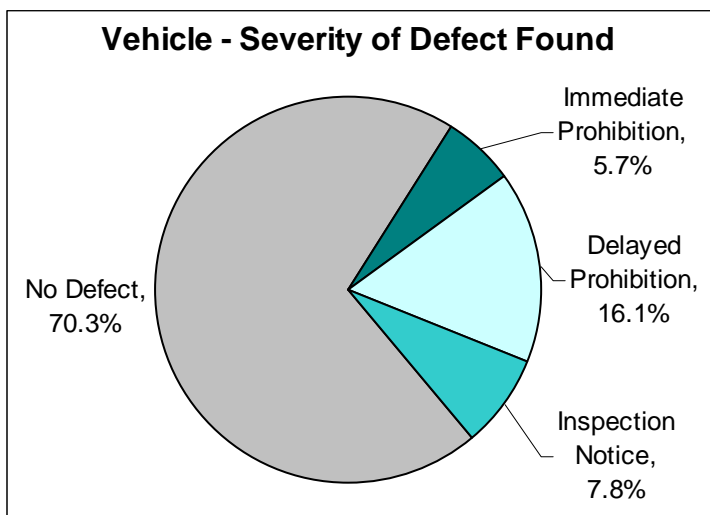
3.1.1 Overall results

Of the 3048 vehicles stopped in the survey, examiners checked 2715 for mechanical defects.

5.7% of vehicles were issued with immediate prohibitions and 16.1% with delayed prohibitions. In total, 21.8% of the vehicles checked were found to have prohibitable defects.

7.8% of vehicles had a roadworthiness defect that warranted an inspection notice, but no prohibitable defect. 70.3% of all vehicles checked were free from roadworthiness defects. The following chart shows the proportion of vehicles with defects.

Severity of vehicle defects



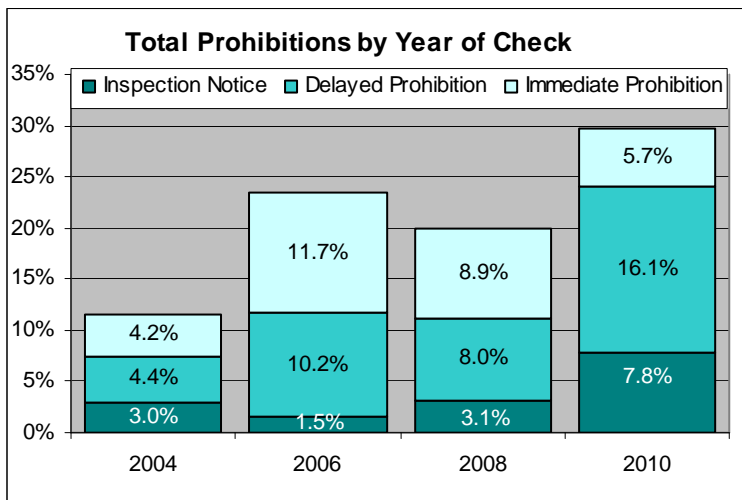
66 vehicles were issued with at least one GFPD (seven were issued with two GFPDs and two were issued with three GFPDs). In total 77 GFPDs were found among the 66 vehicles with GFPD's. A total of £5,440 was collected in GFPDs for vehicles.

The GFPDs were given as follows:

Amount	Reason
£200	Failing to comply with a prohibition (8 issued)
£120	Tyre tread below 1mm (5 issued)
£120	Speed limiter not restricted to the legal maximum (4 issued)
£60	Braking System Defective (7 issued)
£60	Tyre Condition/Maintenance (6 issued)
£60	Defective Steering (4 issued)
£60	Dangerous Condition – Maintenance (3 issued)
£60	Road wheel condition/security - failure imminent (3 issued)
£60	Body exterior damaged/protruding (2 issued)
£60	Suspension (steering) defective affecting control (2 issued)
£60	Spray suppression/wing insecure- detachment imminent (1 issued)
£60	Step/ Step ring damaged or insecure (1 issued)
£60	Steering Wheel condition/insecure (1 issued)
£60	Running gear component Defective (1 issued)
£60	Light or Lamp insecure – detachment imminent (1 issued)
£30	View to front (18 issued)
£30	Exhaust system faulty (3 issued).
£30	Glass window excessively tinted (2 issued)
£30	Defective/missing/obscured headlights (2 issued)
£30	Defective/missing/obscured direction indicators (2 issued)
£30	No Front Lights (1 issued)

3.1.2 Year on year comparison

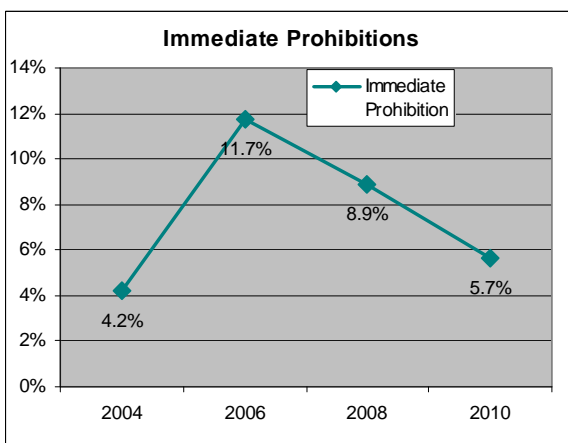
Defects by year of check



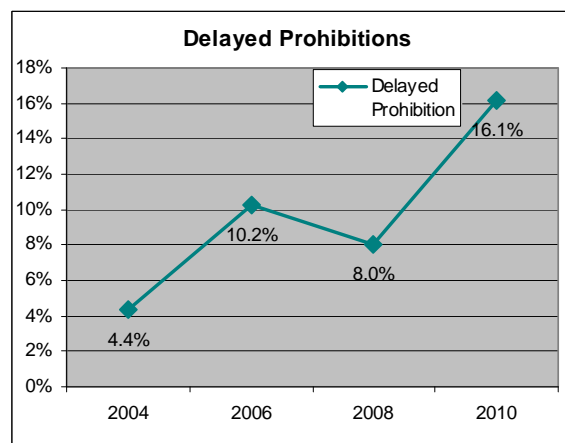
The overall prohibition rate has varied over the last four surveys; no clear trend was found. The overall prohibition rate for 2010 (21.8%) was significantly higher than the rate seen in both 2004 (8.6%) and 2008 (16.9%), but it was not significantly different from the rate in 2006 (22.0%). However, the immediate prohibition rate in 2010 (5.7%) was significantly lower than the rate in both 2006 (11.7%) and 2008 (8.9%).

The charts below show the proportion of vehicles issued with an immediate prohibition, delayed prohibition and inspection notice over the years.

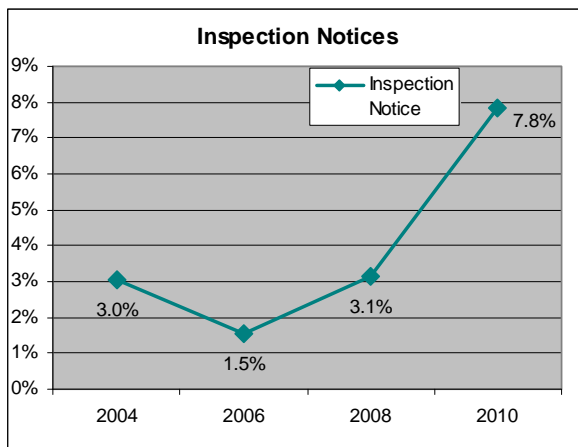
Proportion of vehicles issued with an immediate prohibition



Proportion of vehicles issued with a Delayed Prohibition



Proportion of vehicles issued with an Inspection Notice

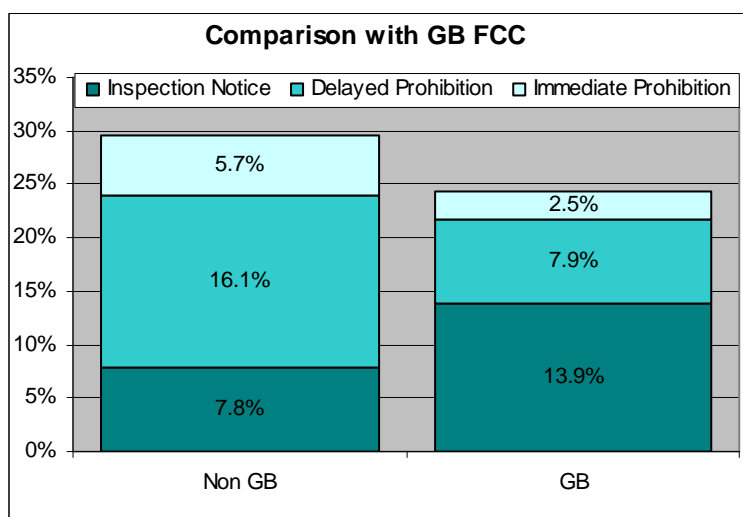


3.1.3 Comparison with GB Survey

The Non-GB survey was compared with the GB survey, with the following caveats:

- The sampling method for the two surveys is different: the GB HGV FCC provides results of compliance per mile travelled, while the Non-GB HGV FCC provides results of compliance per HGV journey.
- In the Non-GB survey: for prohibitions which only include delayed items, these are shown in the results as delayed prohibitions although a non-GB-registered vehicle would actually receive an immediate prohibition, which is delayed by the issue of a variation notice.
- When making comparisons, consideration should be given to the fact that Non-GB HGV traffic accounts for around 5% of all HGV traffic in Great Britain, so population sizes vary.

Results of GB and Non-GB Fleet Compliance Checks



In the GB survey, a significantly higher proportion of checks revealed no defects than the Non-GB survey. In particular there were a significantly higher proportion of checks with immediate and with delayed prohibitions in the Non-GB survey compared with the GB survey, with 21.8% of vehicles receiving a prohibition (immediate or delayed) in the Non-GB survey compared with only 10.4% in the GB survey. However there were a

significantly lower proportion of checks with inspection notices in the Non-GB survey compared with the GB survey.

The main reasons for defects were generally the same for both the GB and the Non-GB check, although in a different order of frequency (shown in the table below). However the most common reason for immediate prohibitions in the Non-GB check was Glass and View of the road, which was not a major issue in the GB checks. VOSA see no reason why non-GB vehicles are any more susceptible to windscreen damage. Therefore, one possible assumption would be that a high proportion of these prohibitions will not relate to the mechanical condition of the vehicle but will have been necessary for driver-introduced obstructions with the windscreen swept area (such as flags, stickers or open laptops).

Main Categories Non - GB	Main Categories GB
Brake Systems and Components (23.3%)	Brake Systems and Components (30.4% of the total)
Service Brake Operation (15.4%)	Condition of Tyres (15.9% of the total)
Condition of Tyres (12.6%)	Service Brake Operation (9.1% of the total).

Immediate Prohibitions Non-GB	Immediate Prohibitions GB
Glass & View of the Road (22.4%)	Direction Indicators and Hazard Warning Lamps (18.4%)
Lamps (20.1%)	Condition of Tyres (17.3%)
Condition of Tyres (13.2%)	Lamps (14.3%)
Direction Indicators and Hazard Warning Lamps (13.2%)	Brake Systems and Components (13.3%)

3.1.4 Number of defects

174 immediately prohibitable defects were found across the 154 vehicles with immediately prohibitable defects. In total, 741 defects (immediate or delayed) were found across the 592 vehicles with at least one prohibitable defect.

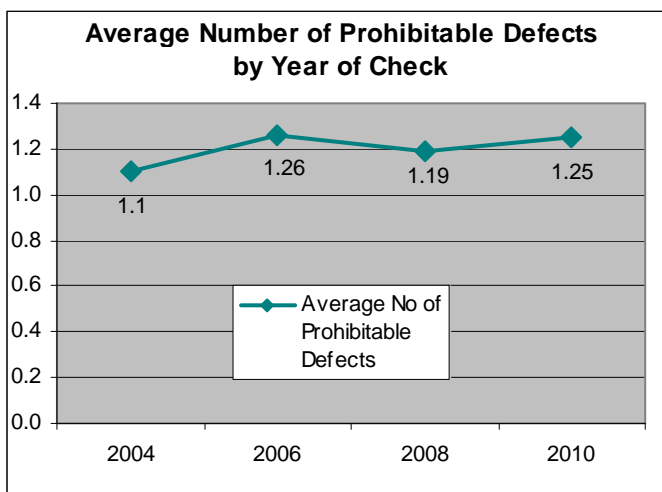
143 vehicles had one immediately prohibitable defect; seven had two defects; two had three defects; one had four defects; one had seven defects. These vehicles may also have had delayed prohibitable defects.

487 vehicles had one defect (immediate or delayed), 81 had two, and 24 had three or more prohibitable defects. The highest number of defects found on a single vehicle was nine (seven were prohibitable and two resulted in an inspection notice being issued). The highest number of prohibitable defects found on a single vehicle was eight (seven were immediate prohibitions and one was a delayed prohibition).

The table below details the count of different numbers of prohibitable defects found in each year that the Non-GB HGV FCC survey has been run. The maximum number of prohibitable defects found on a single vehicle in 2010 was higher than the maximum of any vehicle from the past three surveys.

Year	Number of Prohibitable Defects Found									Total Number in survey	
	1	2	3	4	5	6	7	8	Total		
2004	156	17								173	2015
2006	499	80	24	6	1	2				612	2784
2008	402	49	11	6	0	1				469	2778
2010	487	81	15	4	2	1	1	1		592	2715

The graph below shows the average number of vehicle defects, where a prohibitable defect has been detected, by year. The value seen in 2010 (1.25) is close to the highest average number of defects (1.26 in 2006).



3.1.5 Type of defects

Annex D contains a full list of the categories of prohibitable defects found on vehicles. The categories featuring most often in total prohibitions (immediate and delayed) were:

- Brake Systems & Components (173 prohibitions or 23.3% of the total)
- Service Brake Operation (114 prohibitions or 15.4% of the total)
- Condition of Tyres (93 prohibitions or 12.6% of the total)

The four main defect categories for immediate prohibitions were:

- Glass and View of the Road (39 immediate prohibitions or 22.4% of the total)
- Lamps (35 immediate prohibitions or 20.1% of the total)
- Condition of Tyres (23 immediate prohibitions or 13.2% of the total)
- Direction Indicators and Hazard Warning Lamps (23 or 13.2% of the total).

There was a dramatic change in the type of defects recorded between 2008 and 2010. In 2008 “Glass & View of the road” made up 31% of prohibitions (and 62% of immediate prohibitions). However, in 2010 this defect made up only 5% of all prohibitions (22% of all immediate prohibitions). This category dropped from being the most common defect in 2008 to being only sixth most common in 2010, although still a common feature within immediate prohibitions. The next five most common defects in 2008 became the most common five defects in 2010 (in the same order as 2008). As “Glass & View of the road” made up a much smaller proportion of the prohibitions in 2010, most other categories made up a larger proportion, for example “Brake Systems & Components” increased from accounting for 17% of prohibitions in 2008 to 23% in 2010 (the most common defect in 2010).

All defects detected more than five times in 2008 were also detected in the 2010 survey. However, there were 15 prohibitions issued for “Seat Belt” defects in 2010 (2% of the total), whereas there had not been any in 2008.

3.2 Significant factors in predicting vehicle defects

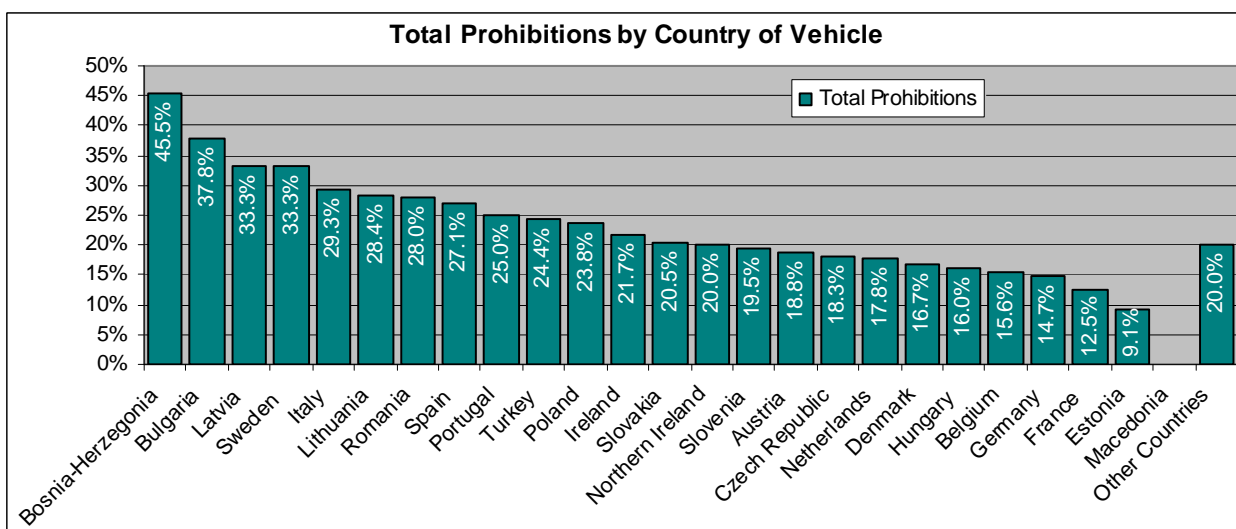
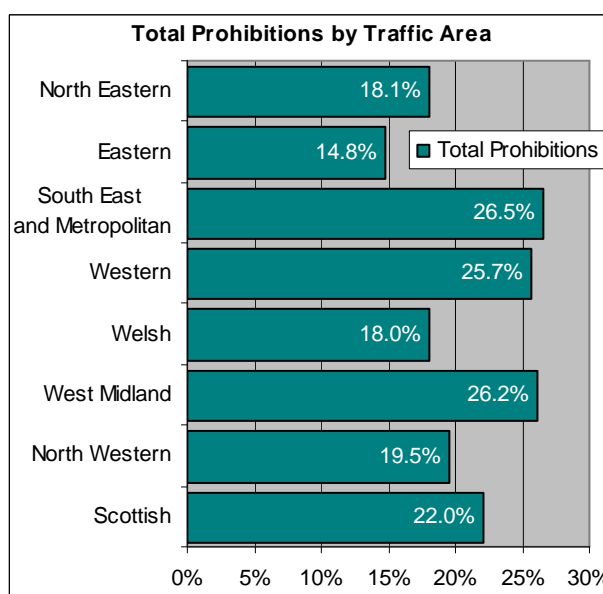
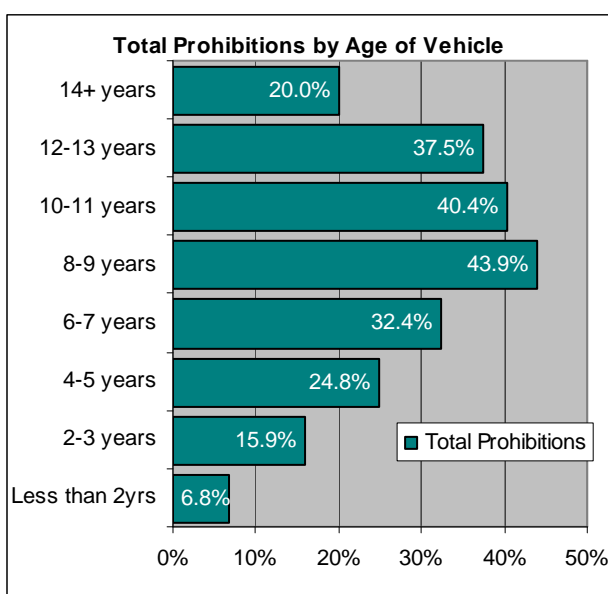
All vehicle / check characteristics were analysed together to look for factors that appear to be linked with whether a vehicle has a prohibitable defect. The significant factors were: age, traffic area, VOSA area, registered country, day of week, and road type. The list below shows the significant factors, in decreasing order of importance. These variables (factors) together made up the best model to predict the outcome of an individual check.

- Year of Manufacture (higher defect rate for older vehicles)
- South East and Metropolitan Traffic Area (higher defect rate for vehicles checked in this area)
- VOSA Area 7 - Staffordshire and Shropshire (higher defect rate for vehicles checked in this area)
- VOSA Area 6 - Merseyside and Cheshire (higher defect rate for vehicles checked in this area)
- VOSA Area 10 - Bristol and Gloucester (higher defect rate for vehicles checked in this area)
- Age 14+ years (lower defect rate for this age group when overall age trend has been taken into account)
- VOSA Area 13 – Southern Central (lower defect rate for vehicles checked in this area)
- Age under 2 years (lower defect rate for this age group when overall age trend has been taken into account)
- VOSA Area 23 – Tyne and Tees (lower defect rate for vehicles checked in this area)
- France (lower defect rate for vehicles registered in this country)
- North Western Traffic area (lower defect rate for vehicles checked in this area)
- VOSA Area 16 - Hertfordshire and Essex (lower defect rate for vehicles checked in this area)
- Thursday (lower defect rate for vehicles checked on this day)

- Vehicles checked on a motorway (higher defect rate for vehicles checked on this road type)
- VOSA Area 22 – West and North Yorkshire (lower defect rate for vehicles checked in this area)
- 12-13 years (lower defect rate when all of the above factors have been taken into account)
- Bulgaria (higher defect rate for vehicles registered in this country)

The charts below show the vehicle defect rate for the three most important variables: age, area (Traffic Area is used instead of VOSA area, as it is difficult to show 23 areas together) and country (countries with fewer than 5 vehicles checked have been grouped as “other countries”).

Vehicle defect rate for the three most important variables: Age, area and country



3.3 Individual factors

As well as the analysis above focussing on all factors together, each individual factor was taken in turn and tested to see whether it was linked to the level of vehicle prohibitions,

as shown in the table below. Note that the variables are related and this table does not try to take account of this – see introduction section 2.2 for further details.

Factor	Significantly higher	Significantly lower
Age	4-5 years, 6-7 years, 8-9 years, 10-11 years	Under 2 years and 2-3 years
VOSA Area *	Area 6, Area 7, Area 10, Area 14, Area 15	Area 4, Area 5, Area 16, Area 22
Country	Bulgaria	France, Germany
Vehicle Type		Artic
Body Type	Flat and Curtain Sider	
Road Type	Motorway	Trunk
Day	Sunday	
Time of Day	10pm-6am	6am-2pm
Weighed	Vehicle was weighed	
Traffic Area	West Midlands, South East and Metropolitan	Eastern, North Eastern
Existence of trailer		Trailer was present

* Areas higher than average: Merseyside and Cheshire (Area 6), Staffordshire and Shropshire (Area 7), Bristol and Gloucester (Area 10), South East (Area 14), Metropolitan (Area 15).

* Areas lower than average: Cumbria and Lancashire (Area 4), Greater Manchester and Derbyshire (area 5), Hertfordshire and Essex (Area 16), West and North Yorkshire (Area 22).

The following factors were not significant in predicting vehicle defects:

- Vehicle Axles
- Road Density (rural or urban)
- Weight
- Whether or not the vehicle was carrying hazardous chemicals
- Trailer Type.

Chapter 4: Trailers

4.1 Main Results

Key findings

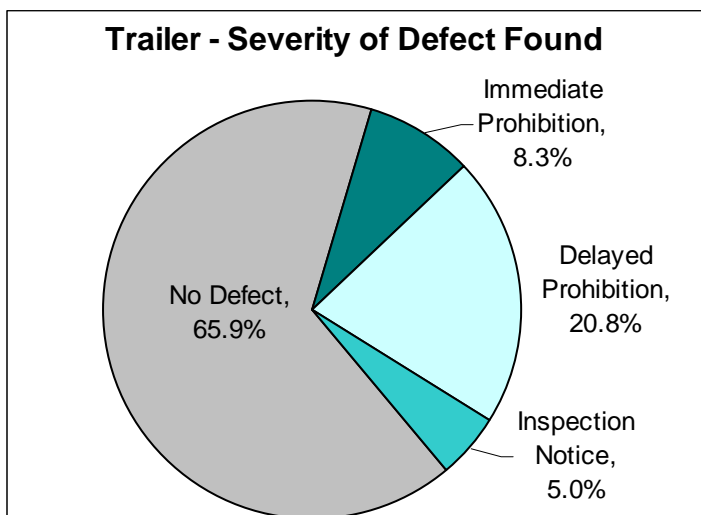
- 29.1% of trailers were issued with prohibitions (8.3% immediate; 20.8% delayed).
- 5.0% warranted an inspection notice.
- 65.9% had no roadworthiness defects.
- Faults on 'Brake Systems & Components' were the most common defects, accounting for 28.9% of all prohibitions.
- 'Trailer Parking and Emergency Brakes, & Air Line Connections' was the most common defect for immediate prohibitions (16.5% of all immediate prohibitions).
- Significantly higher prohibition rate for trailers compared with the GB 2010 survey, and a lower rate of inspection notices issued.
- Significantly worse prohibition rate than in previous years that checks have been carried out.
- "Brake Systems and Components" remains as the most common defect, though at a smaller proportion than the 2008 check.
- Several factors affected trailer condition but towing vehicle age was the most important factor, followed by area and country of towing vehicle.
- The confidence intervals on the prohibition rate indicates that the true rate of prohibitions lies between 26.2% and 32.0% (i.e. 29.1% +/- 2.9%).

4.1.1 Overall results

Of the 2934 vehicles that were pulling a trailer in the survey, examiners checked 2605 trailers for mechanical defects.

8.3% of trailers were issued with immediate prohibitions and 20.8% with delayed prohibitions. In total, 29.1% of the trailers checked were found to have prohibitable defects. 5.0% were issued with an inspection notice, and 65.9% of all trailers checked were free from roadworthiness defects. The chart below shows the severity of defects found on trailers.

Trailer defects



Drivers were issued with GFPDS for 107 trailers (two GFPDs were issued for eleven trailers, and three GFPDs were issued for one trailer). In total, drivers were issued 120 GFPDS for the 107 trailers. A total of £7,360 was collected in GFPDs for trailers.

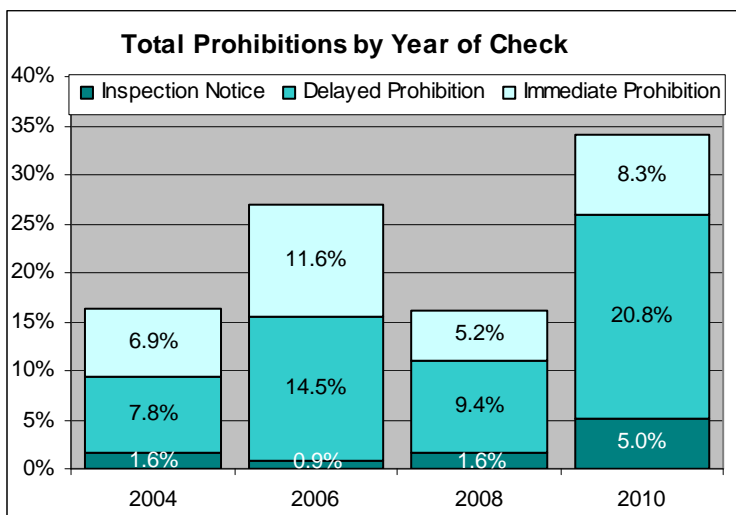
The reasons for GFPDs that were issued are detailed below:

Amount	Reason
£200	Failing to comply with a prohibition (2 issued)
£120	Tyre tread below 1mm (5 issued)
£60	Braking System Defective (73 issued)
£60	Side guards damaged/insecure (1 issued)
£60	Tyre Condition/Maintenance (6 issued)
£60	Road wheel condition/security - failure imminent (11 issued)
£60	Dangerous Condition – Maintenance (3 issued)
£60	Suspension (not steering) defective (13 issued)
£60	Additional braking system insecure
£60	Chassis Unsafe Condition (1 issued)
£60	Spare wheel/carrier insecure – detachment imminent (1 issued)
£30	Defective/missing/obscured direction indicators (1 issued)
£30	Defective/missing/obscured brake lights (13 issued)
£30	Defective/missing/obscured rear lights (1 issued)
£30	Defective indicators (1 issued)

4.1.2 Year on year comparison

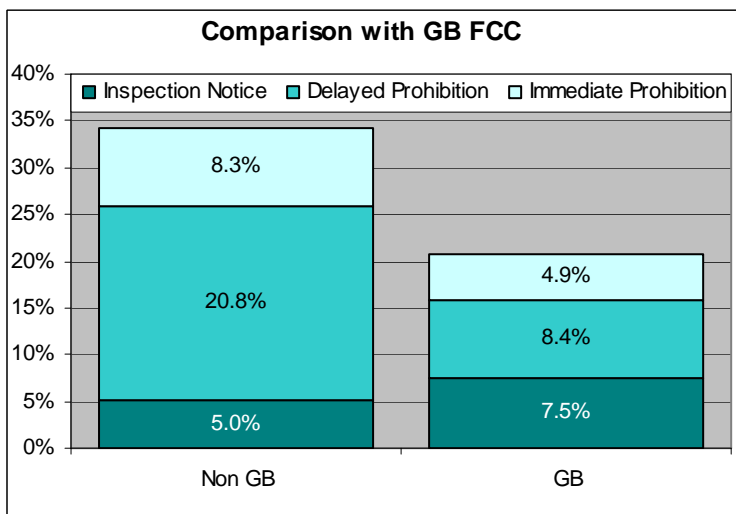
The chart below shows the defect rate for trailers, by year of check.

Trailer defect rate by year



The overall prohibition rate has varied over the last four surveys, with no clear trend. However, 2010 had the highest level of prohibitions and inspection notices yet: there were a significantly higher proportion of prohibitions in the 2010 survey compared with all of the other years (29.1% had prohibitions in the 2010 survey); in particular the proportion of delayed prohibitions was higher in 2010 compared with all years that the checks had been carried out. However there were a significantly lower proportion of immediate prohibitions compared with the 2006 check (8.3% immediate prohibitions in 2010 compared with 11.6% in 2006). The proportion of checks with inspection notices had also increased significantly compared with all other years.

4.1.3 Comparison with GB Survey



A significantly higher proportion of checks in the Non-GB survey were found to have trailer defects than in the GB survey. There was also a significantly higher proportion of checks with immediate prohibitions and with delayed prohibitions in the Non-GB survey compared with the GB survey, with 29.1% trailers receiving a prohibition (immediate or delayed) in the Non-GB survey compared with 13.3% in the GB survey.

The main reasons for a prohibition in the Non-GB survey were similar to those in the GB survey; the main reasons for both surveys are given below. However the main reason for immediate prohibitions in the Non-GB survey was ‘Trailer Parking And Emergency Brakes, & Air Line Connections’ and accounted for 16.5% of all reasons for immediate prohibition, which in the GB survey only accounted for 5.7%.

Main Categories Non - GB	Main Categories GB
Brake Systems & Components (28.9%)	Brake Systems and Components (26.3%)
Condition of Tyres (15.8%)	Condition of Tyres (18.3)
Suspension (12.3%)	Service Brake Operation (15.5%)

Immediate Prohibitions Non-GB	Immediate Prohibitions GB
Trailer Parking And Emergency Brakes, & Air Line Connections (16.5%)	Condition of Tyres (17.0%),
Brake Systems & Components (15.7%)	Direction Indicators and Hazard Warning Lamps (14.8%),
Lamps (10.6%)	Lamps (12.5%)

4.1.4 Number of defects

254 immediately prohibitable defects were found across the 215 trailers that had immediately prohibitable defects. In total, 1026 defects (immediate or delayed) were found across the 758 trailers with at least one prohibitable defect.

574 trailers had one defect (immediate or delayed), 132 had two, and 52 had three or more prohibitable defects. The highest number of defects found on a single trailer was eight (five were prohibitable). Two vehicles also had seven prohibitable defects (one had six immediate prohibitions and one had five immediate prohibitions).

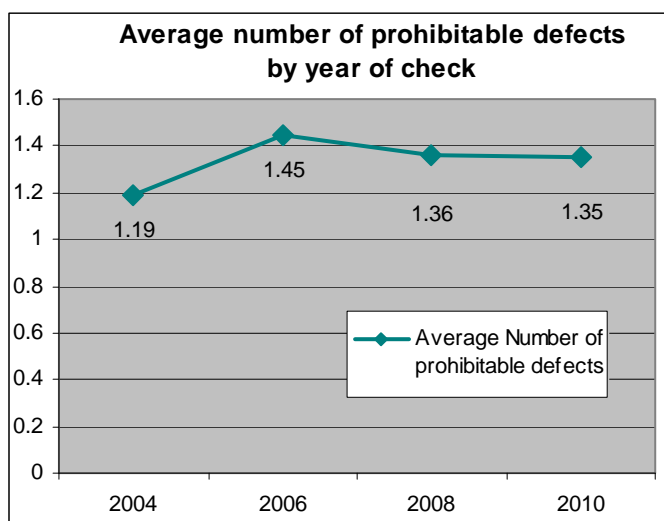
188 trailers had one immediately prohibitable defect; 19 trailers had two immediately prohibitable defects; five trailers had three; two had four; one had five. These trailers may also have had delayed prohibitable defects.

The table below details the count of different numbers of prohibitable defects found in each year the Non-GB check has been conducted. The highest number of defects on a single vehicle was 16 defects in 2006, compared with seven defects in 2010.

Year	Number of Prohibitable Defects Found											Total	Total Number in survey
	1	2	3	4	5	6	7	8	9	13	16		
2004	238	41	6									281	1935
2006	534	109	37	15	7	0	3	1	1	1	1	709	2717
2008	291	85	13	4	5							398	2734
2010	574	132	32	13	4	1	2					758	2605

The graph below plots the average number of prohibitable trailer defects, where a prohibitable defect has been detected, by year of the Non-GB HGV FCC check.

Average number of trailer defects by year



4.1.5 Type of defects

Annex D contains a full list of the categories of prohibitable defects found on trailers. The categories with the most total prohibitions (immediate and delayed) were:

- Brake Systems and Components (297 prohibitions or 28.9% of the total)
- Condition of Tyres (162 prohibitions or 15.8% of the total)
- Suspension (126 or 12.3%)
- Service Brake Operation (122 or 11.9%).

The most common defect categories for immediate prohibitions were different for trailers than they were for vehicles, the top four categories are:

- Trailer Parking and Emergency Brakes, & Air Line Connections (42 immediate prohibitions or 16.5% of all immediate prohibitions)
- Brake Systems and Components (40 immediate prohibitions or 15.7%)
- Lamps (27 immediate prohibitions or 10.6%)
- Condition of Tyres (23 immediate prohibitions or 9.1%)

The top two defect categories in the 2008 check (“Brake Systems and Components” and “Condition of Tyres”) have remained the top two categories in the 2010 check. However, “Brake Systems and Components” made up a smaller proportion this year with 28.9% of total prohibitions (15.7% of immediate prohibitions) in 2010 instead of 37.5% in 2008 (29.6% of immediate prohibitions). Other defects have increased in proportion. “Spray Suppression Wings and Wheel Arches” has increased from 4.3% in 2008 to 7.9% in 2010, and “Condition of Tyres” has increased from 12.9% in 2008 to 15.8% in 2010.

“Trailer Parking and Emergency Brakes” became the most common defect for immediate prohibitions in 2010 (16.5% in 2010 compared with 12.4% in 2008), replacing “Brakes Systems and Components”.

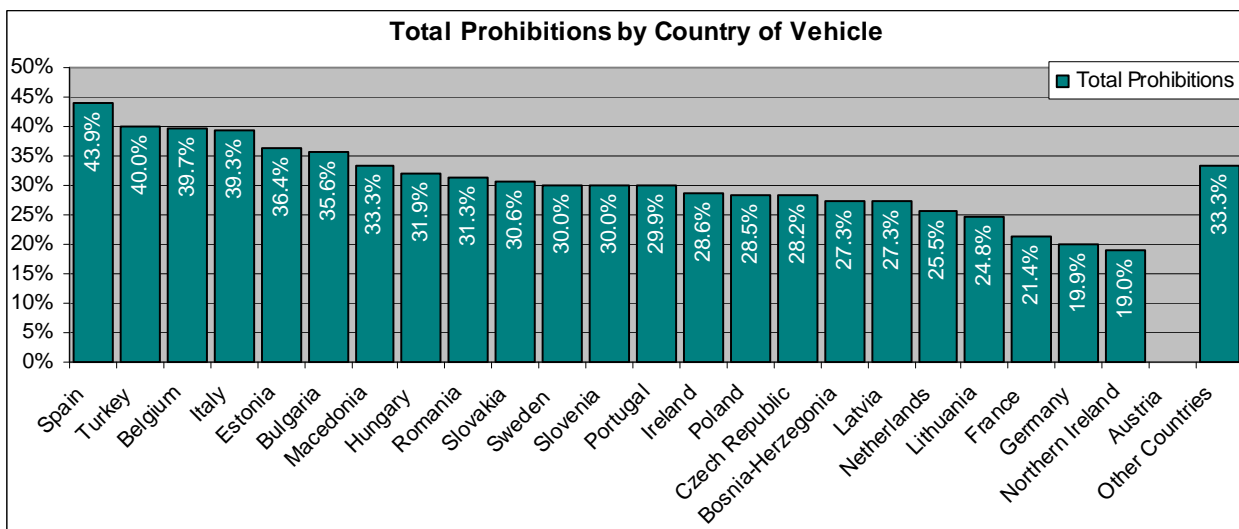
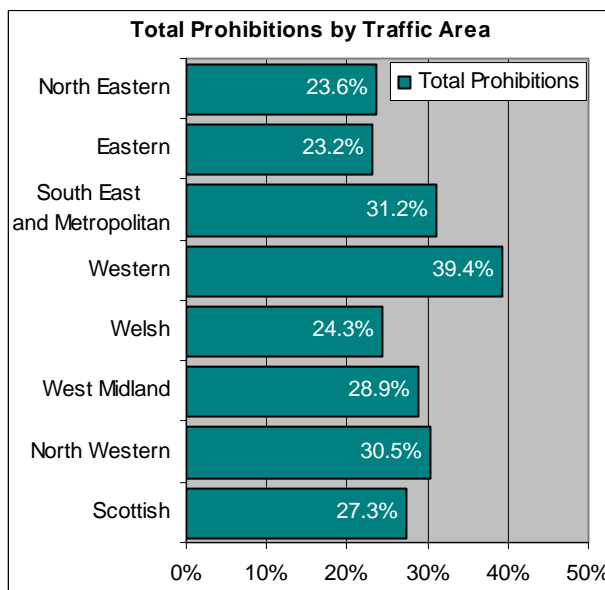
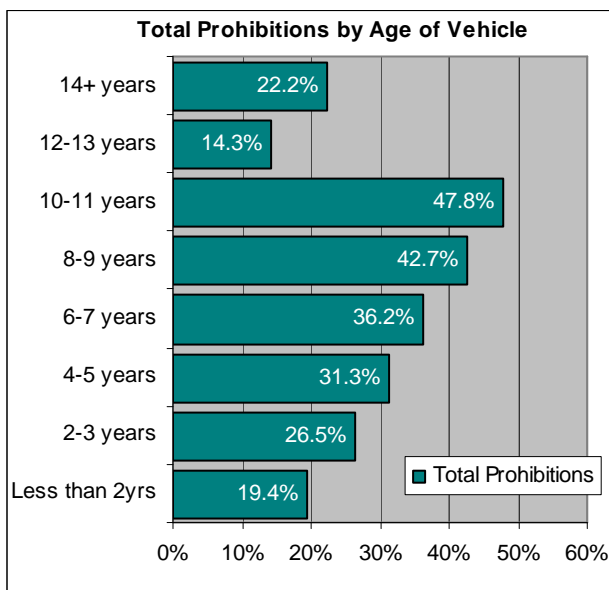
4.2 Significant factors in predicting trailer defects

All vehicle / check characteristics were analysed together to look at the factors that appeared to influence whether a trailer had a prohibition or not. The significant factors were: age of drawing vehicle, VOSA area, Traffic Area, and country. The list below shows the significant variables that affected the level of prohibitions, in decreasing order of importance. These variables together made up the best model to predict the outcome of an individual check.

- Vehicle Year of Manufacture (older vehicles more likely to have a trailer prohibition)
- VOSA Area 14 – South East (higher defect rate for trailers checked in this area)
- Western Traffic Area (higher defect rate for trailers checked in this area)
- VOSA Area 6 - Merseyside and Cheshire (higher defect rate for trailers checked in this area)
- VOSA Area 7 - Staffordshire and Shropshire (higher defect rate for trailers checked in this area)
- Spain (higher defect rate for trailers where vehicles are from this country)
- 12-13 years (lower defect rate for trailers where the vehicle is in this age group after all the above variables taken into account)
- Austria (lower defect rate for trailers where vehicles are from this country)
- VOSA Area 4 - Cumbria and Lancashire (lower defect rate for trailers checked in this area)
- 14 years + (lower defect rate for trailers where the vehicle is in this age group after all the above variables taken into account)

The charts below show the trailer defect rate for the three most important variables: age of towing vehicle, area (Traffic Area is used instead of VOSA area, as it is difficult to show 23 areas together) and country (countries with fewer than 5 vehicles checked have been grouped as “other countries”).

Trailer defect rate for the two most important variables: age and area



4.3 Individual factors

As well as the analysis above focussing on all factors together, each individual factor was taken in turn and tested to see whether it was linked to the level of trailer prohibitions, as shown in the table below. Note that the variables are related and this table does not try to take account of this – see introduction section 2.2 for further details.

Factor	Significantly higher	Significantly lower
Age	6-7 years, 8-9 years, 10-11 years	Under 2 years, 2-3 years
VOSA Area *	Area 6, Area 7, Area 10, Area 12, Area 14	Area 4, Area 8, Area 13, Area 15, Area 18
Traffic Area of Check	Western	Eastern, North Eastern
Country	Belgium, Spain	Austria, Germany
Road Type	Primary Roads	
Time Group	2pm-10pm	
Body type	Car Transporter	

* Areas higher than average: Merseyside and Cheshire (Area 6), Staffordshire and Shropshire (Area 7), Bristol and Gloucester (Area 10), Wessex (Area 12), South East (Area 14).

* Areas lower than average: Cumbria and Lancashire (Area 4), Central and South West Midlands (Area 8), Southern Central (Area 13), Metropolitan (Area 15), East Midlands (Area 18).

The following factors were not significant in predicting trailer defects:

- Day of Week
- Road Density (rural or urban)
- Number of Axles on vehicle and trailer
- Trailer Type
- Vehicle type
- Weight
- Hazardous chemicals
- Whether weighed or not.

Chapter 5: Traffic Offences

5.1 Main Results

Key Findings

- 14.4% of drivers / operators were committing serious traffic offences (0.5% reported for prosecution; 13.9% other serious offences).
- 2.0% warranted a verbal warning; 83.6% found no traffic offences.
- Significantly lower serious offence rate compared with all other checks in previous years, and a significant downward trend in the proportion of verbal warnings.
- A total of £50,080 was collected in GFPDs.
- Significantly higher serious offence rate than the GB 2010 survey, although a significantly lower proportion of drivers reported for prosecution.
- Drivers' Hours and Overloading were the most common offences, accounting for 68.5% of all known serious offences.
- Many factors affected the level of serious traffic offences but area was the most important factor, followed by country and vehicle age.
- The confidence intervals on the serious offence rate indicate that the true rate of serious offences lies between 12.2% and 16.6% (i.e. 14.4% +/- 2.2%).

5.1.1 Overall Results

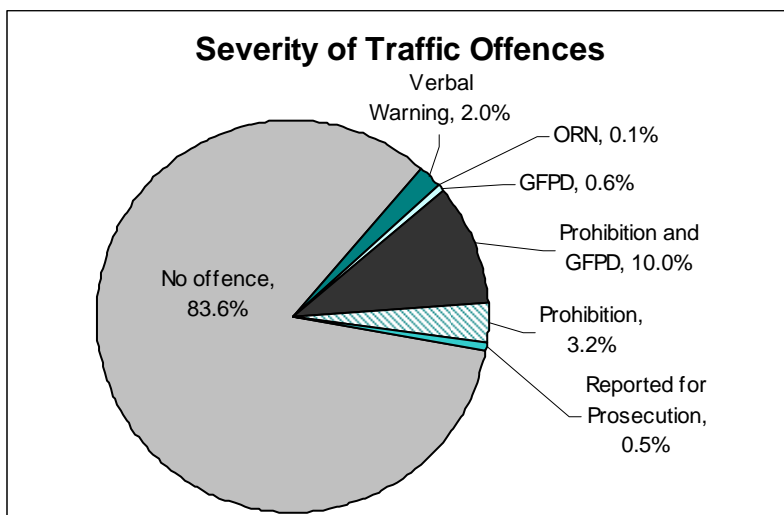
Of the 3048 vehicles stopped in the survey, examiners checked 2852 drivers for traffic offences.

14.4% of drivers / operators were committing a serious traffic offence, of which 0.5% of drivers were reported for prosecution. 2.0% received a verbal warning for traffic offences, and 83.6% were not found to be committing traffic offences.

GFPDs were issued to a total of 299 drivers, (a further 6 drivers were recorded as having a GFPD although the amount and reason was not known). Of these 299 checks, 29 had two GFPDs and 10 had three GFPDs issued. Altogether 348 separate GFPDs were issued and a total of £50,080 was collected.

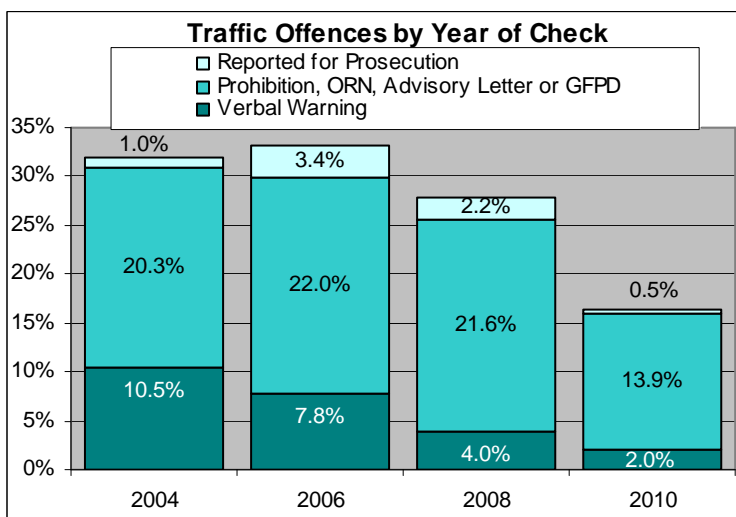
The chart below shows the outcome of all traffic offence checks.

Traffic offence severity



5.1.2 Year on year comparison

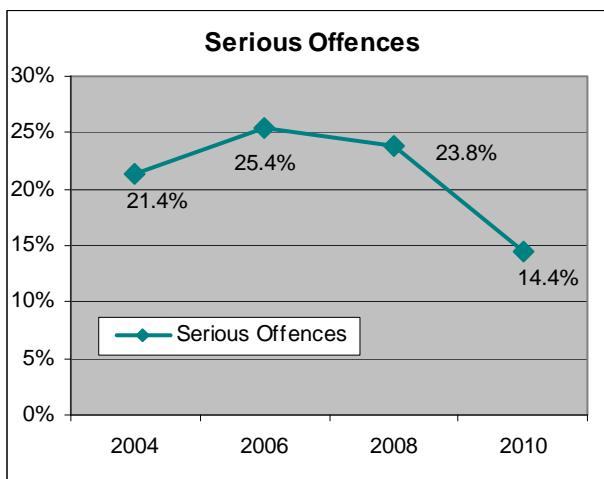
Severity of traffic offences by year of check



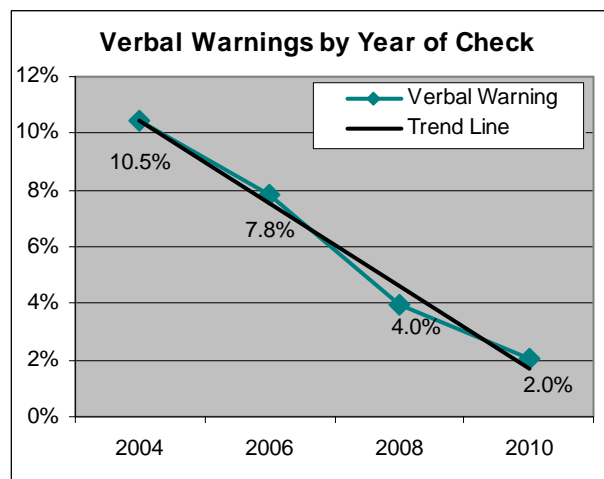
The proportion of serious offences over the last three years has been decreasing although this trend is not significant. However there is a significant downward trend in the proportion of checks receiving verbal warnings, suggesting a drop at an average rate of 1.5% (+/- 0.5% at the 95% confidence interval) annually.

The charts below shows the rate of serious offences and verbal warnings by year of check.

Serious Offences by Year of Check



Verbal Warnings by year of check

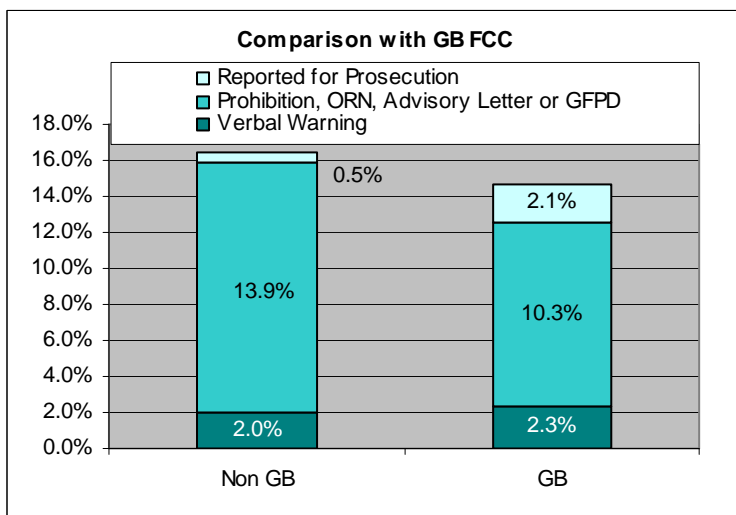


Although no significant trend, the level of serious offences was significantly lower in 2010 (14.4% of checks had a serious offence) compared with each of the other years individually and compared with the average across all of the other years (23.8% of checks had a serious offence across 2004 to 2008).

The proportion of vehicles that had been weighed could have contributed to the significant drop in serious offences. (95.3% vehicles had been weighed in 2008 compared with only 18.3% in 2010).

5.1.3 Comparison with GB Survey

The chart below shows the offence rates for the GB and Non-GB 2010 FCC surveys:



The Non-GB survey reported a significantly higher proportion of checks with a serious offence (excluding verbal warnings) than the GB survey. In particular the proportion of checks with both prohibition and GFPDs in the Non-GB survey was much higher than the proportion in the GB survey (10.0% of all checks in the Non-GB survey had both prohibition and GFPDs compared with only 2.0% in the GB survey). However the proportion reported for prosecution in the Non-GB survey was significantly lower than in

the GB survey. Although there were a higher proportion of checks with no offence in the GB survey, this was not significantly higher.

The categories for offence in both surveys are shown in the table below.

Main Categories Non - GB	Main Categories GB
Drivers' Hours (8.0% drivers were found committing a traffic offence)	Tacograph (4.7% drivers were found committing a traffic offence)
Overloading (7.1%)	Drivers' Hours (4.6%)
Tacograph (4.5%)	Unknown (3.1%)

5.1.4 Number of offences

For the 469 checks with at least one offence (including verbal warnings), a *total* of 683 offences were found (a number of checks had more than one offence). 618 *serious* offences were found among 411 checks that had at least one serious offence.

242 checks revealed a serious offence in one offence category; 134 revealed two; 32 revealed three; three checks revealed serious traffic offences in four categories (Tachograph, Drivers' Hours, Overloading and Other offence). These drivers may also have been given a verbal warning for other offences.

295 checks revealed an offence in one category (serious or resulting in a warning), 137 revealed two, 34 revealed three and 3 revealed offences in four categories.

The following table shows the number of offences found on a single check by year of check:

Year	Number of Serious Offences Found					Total number in survey
	0	1	2	3	4	
2004	1584	387	40	4		2015
2006	2182	648	86	6	1	2923
2008	2117	600	56	5		2778
2010	2441	242	134	32	3	2852

5.1.5 Type of offence

Annex D contains a full list of the categories of offence found. The two most frequent offence categories were drivers' hours (228 offences of which 211 were serious offences) and overloading (203 offences of which 184 were serious offences). These two categories made up 63.3% of all serious offences, and 68.5% of all known serious offences (excluding the 48 where the reason was not known).

Other categories of offence included: Tachograph (120 serious; 128 total), Community Authorisation (8 total, all are serious) Drivers Licence (3 total, all are serious), and Other (51 serious: 65 total). 48 offences were marked as an unknown offence.

The 65 'Other' offences were for:

- Cabotage (33 offences)
- Dangerous goods inspection notice (12 offences)⁴
- Dangerous goods prohibition notice (8 offences including one for an insecure load)
- Failure to comply with a prohibition (6 offences)
- Rigid vehicle and trailer over 18.75m length (3 offences)
- Daily rest offences (2 boat movements) (1 offence)
- Hazardous chemicals (1 offence)
- Registration plate not affixed (1 offence)

The 33 “Cabotage” cases also had an overweight prohibition, and three of the six “Failure to comply with a prohibition” offences also had other traffic offences.

5.2 Significant factors in predicting traffic offences

All vehicle / check characteristics were analysed together to look at the factors that appeared to be linked to traffic offences. The significant factors were: VOSA area, country, and age. The list below shows the significant variables that affected the level of prohibitions, in decreasing order of importance. These variables together made up the best model to predict the outcome of an individual check.

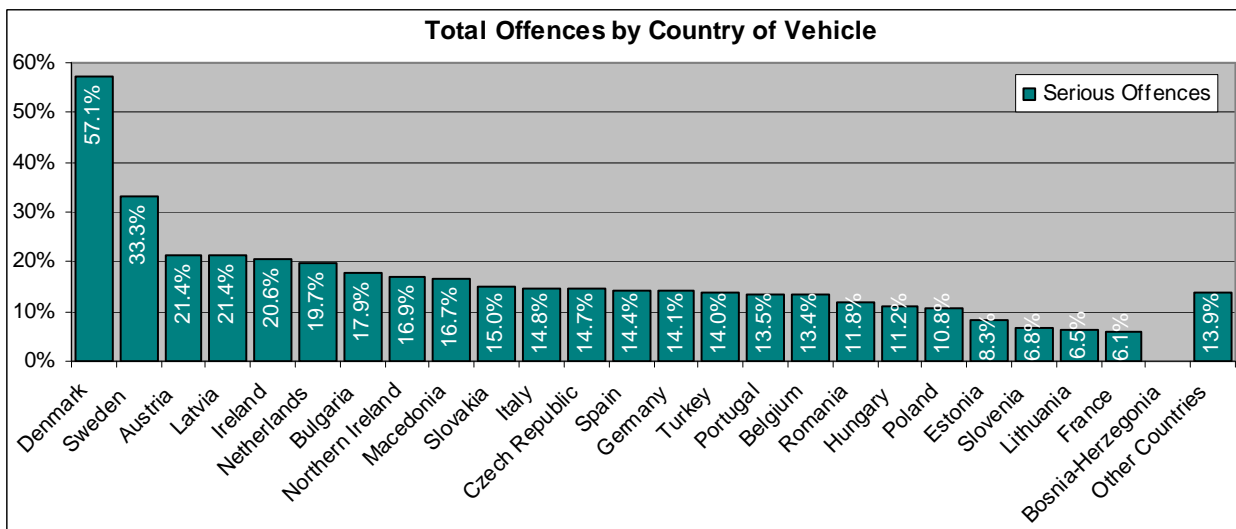
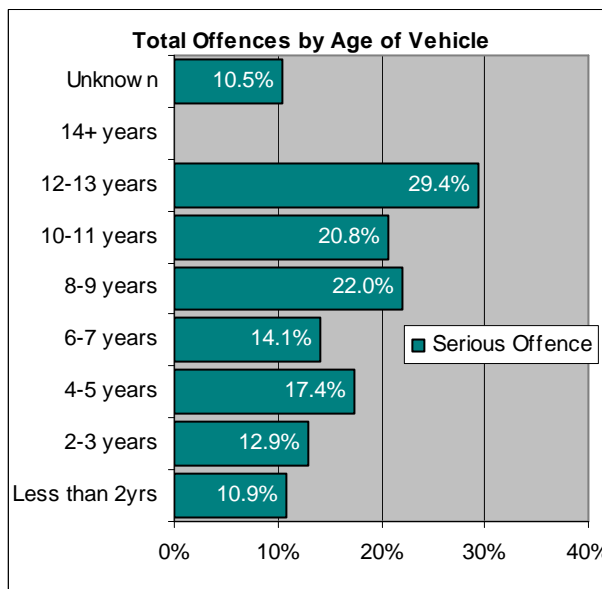
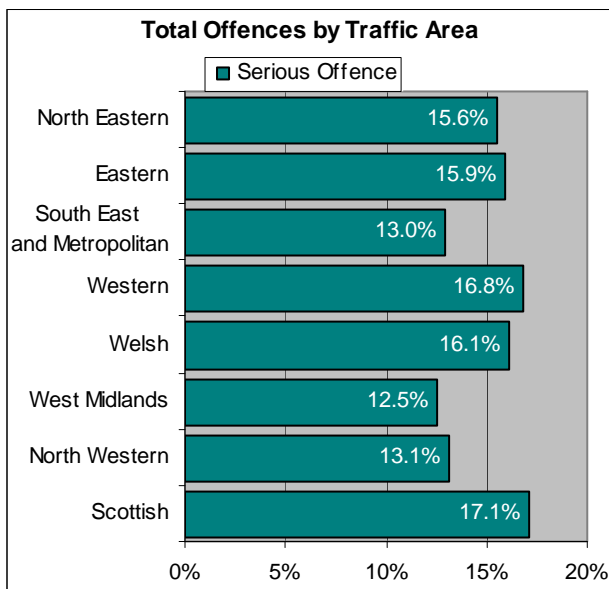
- VOSA Area 4 – Cumbria and Lancashire (lower offence rate for vehicles checked in this area)
- Ireland (higher offence rate for vehicles checked from this country)
- VOSA Area 21 – Humberside (higher offence rate for vehicles checked in this area)
- VOSA Area 5 - Greater Manchester and Derbyshire (lower offence rate for vehicles checked in this area)
- Year of Manufacture (higher rate of offences for older vehicles)
- North Eastern Traffic Area (lower offence rate for vehicles checked in this area)
- VOSA Area 8 – Central and South West Midlands (lower offence rate for vehicles checked in this area)
- Motorway (higher offence rate for vehicles checked on this road type)
- Netherlands (higher offence rate from vehicles checked from this country)
- Denmark (higher offence rate for vehicles checked from this country)
- Trailer 3500kg or Less (higher offence rate for vehicles with this type of trailer)
- 14 years + (lower offence rate for vehicles in this age group after all the above variables are taken into account)

⁴ Dangerous Goods Inspection Notices are shown here as a type of offence level, which is consistent with previous reports. However, these are notifications of an inspection of that type and not offences. This will be corrected in future reports. If these were excluded, the overall ‘no offence’ rate in this report would rise from 83.6% to 83.9%. The rate of serious offences is unaffected.

- 6-7 years (lower offence rate for vehicles in this age group after all the above variables are taken into account)

The charts below show the serious traffic offence rate for the three most important variables: age, area (traffic area is used instead of enforcement area, as it is difficult to show 23 areas together) and country (countries with fewer than 5 vehicles checked have been grouped as “other countries”).

Serious traffic offence rate for the three most important variables: area, age and country



5.3 Individual factors

As well as the analysis above focussing on all factors together, each individual factor was taken in turn and tested to see whether it was linked to the level of serious traffic offences, as shown in the table below. Note that the variables are related and this table does not try to take account of this – see introduction section 2.2 for further details.

Factor	Significantly higher	Significantly lower
Age	4-5 years, 8-9 years	Under 2 years
VOSA Area *	Area 6, Area 21	Area 5, Area 8, Area 20, Area 22
Vehicle Type	HGV Rigid 12,000kg or less	
Body Type	Car Transporter, Flat	Curtain Sider
Weight	3,500-9,999kg	
Time Period	10pm-6am	6am-2pm
Day	Saturday	
Road Type	Minor Roads	
Country Code	Denmark, Ireland, Netherlands	France, Lithuania, Poland
Trailer Type	Trailer 3500kg or Less	
Existence of a trailer		Trailer was present
Hazardous Chemicals	Vehicle was carrying hazardous chemicals	
Vehicle Weighed	Vehicle was weighed	
Year of Manufacture		Younger vehicles

* Areas higher than average: Merseyside and Cheshire (Area 6), Humberside (Area 21).

* Areas lower than average: Greater Manchester and Derbyshire (Area 5), Central and South West Midlands (Area 8), Nottinghamshire and South Yorkshire (Area 20), West and North Yorkshire (Area 22).

The following factors were not significant in predicting traffic offences:

- Traffic Area
- Vehicle Axles
- Road Density (rural or urban)