

Diesel spillage

Best practice guide



April 2019

Contents

1. Introduction

1.1	What is the purpose of this guide and who is it aimed at?.....	1
1.2	What is Highways England trying to achieve?.....	1
1.3	What are the root causes of diesel spillages?.....	2
1.4	What does Highways England do to cope with diesel spillages?	3
1.5	What is the escalation process for dealing with spillages?	4

2. Guidance for drivers

2.1	What are the benefits of preventing and controlling diesel spillages?	5
2.2	What can drivers do to prevent diesel spills?.....	6
2.3	What actions should a driver take if they are involved in a spillage?	7
2.4	What training is available?.....	8

3. Guidance for operators

3.1	What can operators do to prevent diesel spills?	9
3.2	What additional safety measures are available?	10
3.3	What legislation do you need to be aware of?	12

4. Next steps and further information

4.1	Contact Highways England.....	14
4.2	What's next for Highways England?.....	14
4.3	Associated legal considerations?	14
4.4	Further reading	15
4.5	Useful contacts	15

Driver handouts at the back of the booklet

Prevention of diesel spillages guidance summary

Spillage response plan

Using booms and mats

Using putty / portable containers

Diesel spill treatment types

1. Introduction

At Highways England, our ambition is that no one should be harmed while working or traveling on our network. To achieve this, we're improving the safety of our roads through the way we design and build our schemes, how we maintain the network to a high standard, and how we manage traffic to keep our country connected. Our roads are among the safest in the world, but to reach our aim, we need to limit disruption and closures as much as possible.

When we look at where the most significant changes can be made to reduce incidents on our roads and improve safety, it's clear that diesel spillages are something we should be focusing on. The effect on our network is significant in these incidents, as are the costs for commercial vehicle drivers and fleet operators.

When there is a diesel spillage on the SRN it has a financial, social, environmental and economic impact. The repercussions affect those directly involved, other drivers and the UK economy.

1.1 What is the purpose of this guide and who is it aimed at?

The aim of this guide is to inform commercial vehicle drivers and fleet operators of the importance of preventing and minimising diesel spillages in order to reduce their frequency and severity on the strategic road network (SRN).

This guide presents useful information about the root causes of diesel spillages, what we do to manage these and the impact and effects of them on our network.

It also provides specific guidance for drivers and operators about what can be done to prevent spills and what actions should be taken if they are unfortunate enough to be involved in a diesel spillage.

Who is it for?

This guide is for commercial vehicle drivers and fleet operators who need to establish or update their processes for preventing and dealing with diesel spills.

Operators and drivers of other vehicles may also find it useful as the principles of preventing and dealing with diesel spillages are transferrable to all.

How should this guide be used?

This guide should be used as an information source. The driver handouts at the back of this guide provide an easy to follow summary and step-by-step approach to containing diesel spillages. These should be handed to your drivers as part of their Health and Safety / PPE pack and kept in the cab until needed.

1.2 What is Highways England trying to achieve?

Highways England is responsible for managing and maintaining the SRN in England. The SRN includes 4,300 miles of motorways and major roads and constitutes 2.4% of the road network in England. The network carries one third of all traffic and two thirds of all freight traffic. Incidents on the SRN have a significant and disproportionate effect in terms of network disruption and severity of injury collisions.

In 2018, Highways England recorded 314 diesel spillages involving HGVs, causing a range of events including journey time delays, risk to life and environmental issues.

(Source: Highways England Control Works data)

The spillage of diesel and other petroleum products on our roads is an important road safety issue. These spillages represent a risk to all of our customers, in particular motorcyclists.

Motorcyclists are disproportionately affected by spills. In 2017, motorcycles accounted for 23.29% of all incidents where a contributory factor included a deposit on the road (e.g. oil, mud, chippings). Motorcycle traffic volumes in 2017 was 944.09 HMVM which equated to less than 0.5% of all traffic on the SRN, however, accounted for 10.6 per cent of fatalities (25 of 236) and 17.6 per cent of KSI casualties (326 of 1,853) on the SRN. (Source: DfT: Stats19)

Through this best practice guidance, we want to improve awareness of the impact and cost of diesel spillages and encourage a more proactive approach to preventing diesel spills from occurring. We also want to ensure that where spills are unavoidable (e.g. from a road traffic collision) drivers have the knowledge to deal with the spillage in the correct manner.

At Highways England, we want to reduce:

- the number of incidents on the network
- journey time delays
- damage to road infrastructure
- the number of those killed or seriously injured (KSIs) on the strategic road network

To achieve a reduction, we are working on a programme of initiatives aimed at reducing incidents on the SRN. One of these initiatives is to reduce the frequency and severity of incidents associated with diesel spillages from commercial vehicle drivers and operators in the UK and overseas.

353 KSIs involved HGVs in 2017 with 84 fatalities.

We aim to clear 85% of incidents in an open lane within 1 hour, but with the increasing amount of HGVs on our roads it is becoming increasingly difficult to deal with these incidents and keep traffic flowing.

1.3 What are the root causes of diesel spillages?

Research conducted by TRL (2010)¹ indicates that the root causes of diesel spills are due to one or a combination of factors including:

- road traffic collision (RTC) with other road user
- filler cap not fully secure / closed properly
- filler cap damaged or missing
- filling the tank right up to the filler cap (necking it)
- lack of anti-spill devices being fitted into the tank
- mechanical failures and fuel system defects
- problems encountered during the transport of fuel
- ruptured tanks
- leakage from corroded or rusty tank

¹ Transport Research Laboratory. (2010). Review of diesel spillage clean-up procedures. pp3

1.4 What does Highways England do to cope with diesel spillages?

What happens when a spill occurs?

When diesel is spilt onto the road it begins to react and degrade the road surface. The time taken to contain the spill is therefore critical. The longer the spill takes to contain and treat, the greater the damage to the road surface and the higher the chance of contaminating water systems.

Every time we respond to a fuel spillage on our roads, we record details of the incident. This information is collected at the scene by our Traffic Officers and includes the date, time, duration and location of the incident, damage caused to structures, vehicles involved, weather conditions, lane closures, emergency services notified, the road user responsible and any other additional information that may be of use.

What does Highways England do with this data?

All of the collected information is stored on a database and used by us to investigate if we can recoup any of the costs of clean-up.

Can drivers and operators be held accountable for diesel spillages?

Liability for dealing with road spillages lies with the person who allowed the spillage to occur, however, in the interests of road safety, we may carry out whatever operations are necessary to restore the road condition and afterwards seek to recover costs.

In our Incident Prevention Study², we found that many operators who have not been involved in a diesel spillage incident in the past are not fully aware of the cost and damage associated with diesel spills and as such may not be investing in spillage protection or may not have a plan in place to prevent and control spills.

Drivers can be prosecuted under Section 161(1) of the Highways Act 1980, which carries a fine of up to £1,000 and diesel spillage related fines issued by DVSA can amount to £50 - £100 depending on the severity of the offence. Fines for operators can be considerably more.

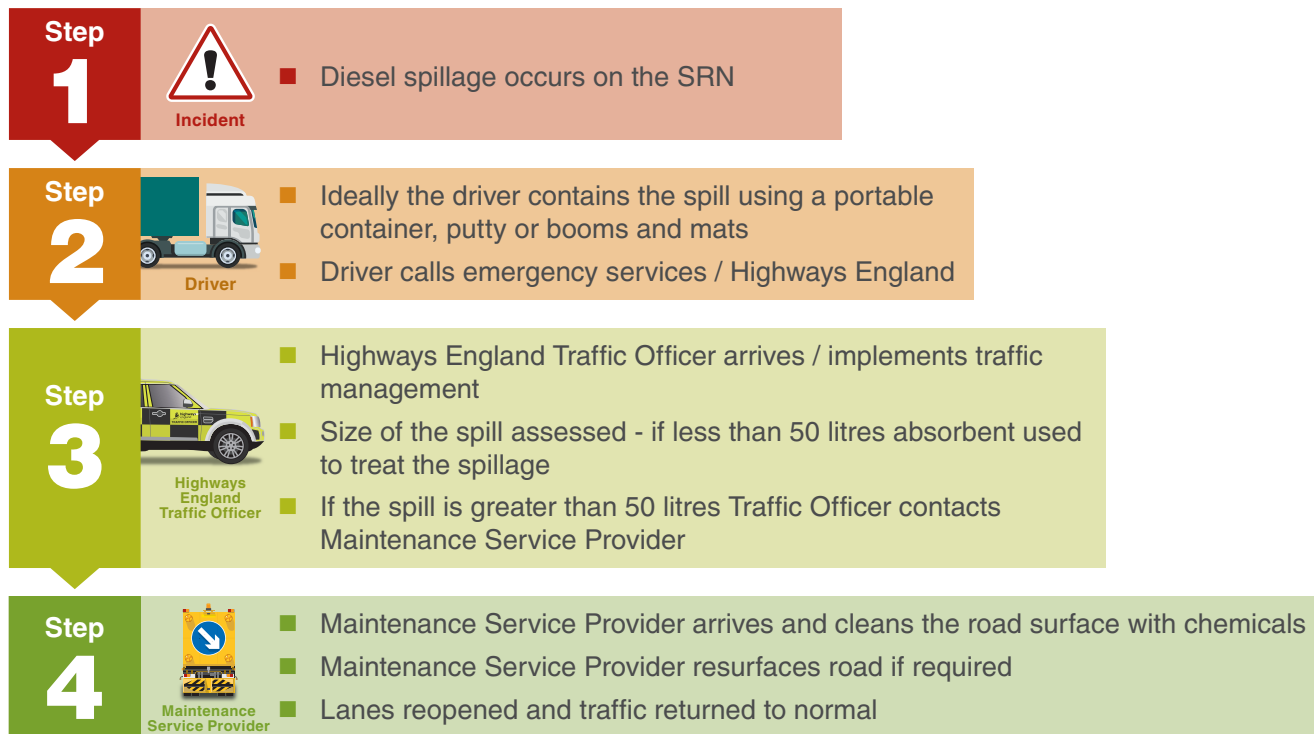
We are able to recover the costs, via insurance, from fleet operators that are found to be at fault for diesel spillages on the road network. The size of this cost is dependent on the size of the spill but this can be as much as £70,000³ with additional fines from the Environment Agency which can be unlimited upon conviction.

² Highways England. (2017). Incident Prevention Study

³ Highways England. 2015: IPT Presentation. Slide 2

1.5 What is the escalation process for dealing with spillages?

The diagram below illustrates the escalation process from the point the diesel spills onto the road to completion of clean up:



2. Guidance for drivers

2.1 What are the benefits of preventing and controlling diesel spills

Preventing and controlling drips, leaks and spillages can have the following benefits:

1. Improve road safety

Diesel spillages are hazards which can risk the safety of all road users. Diesel spills on the highway reduce skid resistance and compromise the safety of the road surface. This results in increased skid risk and longer braking distances which can lead to accidents, injuries and fatalities.

The most common places for “slippiness” caused by diesel are bends in the road, ramps and roundabouts. This poses significant danger for motorbikes as this is where they have the highest need for good friction.

2. Protect the environment

Diesel is a contaminant and can cause serious harm to humans and the environment. Any spillage, regardless of size, can have significant consequences. Diesel floats on water and if it gets into groundwater and enters the drainage system it can travel a long way quickly. It can flow into nearby streams or rivers and the environmental impacts can be severe and endanger local wildlife and vegetation.

3. Reduce congestion

In 2018, there were 314 diesel spillage incidents on the SRN.

Diesel spillage incidents often lead to lengthy delays especially in cases where resurfacing is required. Even where immediate resurfacing is not required it can cause the pavement surface to fail over a period of time.

4. Keep money in your own pocket

If your vehicle is pulled over by either the police or DVSA and is found to be defective, you could be issued with a fixed penalty notice or prosecuted (which can carry a fine of up to £1,000). Typical fines from DVSA include:

- Leakage from tank - £50
- Filler cap missing or defective - £50
- Diesel fuel leak from defect - £50
- Fuel system insecure and danger is caused or likely to be caused - £100

2.2 What can drivers do to prevent diesel spills?

Catching the root cause before a spill happens benefits both you and your company. DVSA have issued guidelines for what is acceptable and expected with regards to checking fuel tank safety and suitability (see table below).

Fuel and tank system	
Method of inspection	Reason for failure
<ol style="list-style-type: none"> 1. Check the fuel tank for security 2. Check tank straps and supports for: <ol style="list-style-type: none"> a) Condition and presence b) Security and strength 3. Check Fuel System for: <ol style="list-style-type: none"> a) Leaks b) Condition of pipes and that they are complete and secure c) Positioning of pipes so that they are unlikely to be damaged by moving parts 4. Check Filler Cap for: <ol style="list-style-type: none"> a) Presence b) Security c) Presence and condition of the sealing washer 	<ol style="list-style-type: none"> 1. Tank so insecure on its mountings that it is likely to drop away partially or completely when the vehicle is used 2. Tank strap or supports: <ol style="list-style-type: none"> a) broken or missing b) so insecure or weakened that the tank is likely to drop away partially or completely when the vehicle is used 3 Fuel System: <ol style="list-style-type: none"> a) leaking b) pipes so damaged (restricted/chafed), insecure or with an inadequate repair such that they are likely to fail and leak which would cause danger to persons on the vehicle or to other road users c) pipes damaged or so positioned that they collide with moving parts of the vehicle 4. Filler Cap: <ol style="list-style-type: none"> a) Missing b) Does not fasten securely: by a positive means, or such that pressure is not maintained on the sealing arrangement c) Sealing washer torn, deteriorated or missing, such that leakage of fuel is possible

2.3 What actions should a driver take if they are involved in a spillage?

Both fleet operators and commercial vehicle drivers are responsible for implementing a response plan to contain the fuel spillage.

A spill response plan has four stages. These are:

1. Assess

Arguably the most important stage of the spill response plan is 'Assess'. During this stage the driver should:

i. Check for safety

- Make sure you and any passengers are safe - check for hazards and if the area is free of moving traffic.
- Attend to anyone who may be in danger or in need of medical attention but only if it is safe and you are competent and comfortable to do so.

ii. Risk assess the incident

- Is fuel loss continuing or has it stopped?
- Is there a risk of fire? Look for an ignition source such as a naked flame.
- Is the smell overpowering? This can damage your health. If you start to feel dizzy or have a headache, move away from the area. Confined spaces can be particularly hazardous.
- What is the nature / size of the spill? Is this something you can deal with yourself or will you need assistance?
- Is the spill spreading onto areas where people or vehicles are likely to pass over it? If this is the case, try and raise the alarm if safe to do so.
- After completing your risk assessment, if you decide you cannot deal with the spill yourself, follow your company's emergency incident procedures (company specific). These will include emergency contact details and reporting procedures.

2. Contain

A spill kit can be used to contain the spillage and can comprise of portable containers, booms and mats and sealant putty. It is important that drivers know how to use different parts of the kit correctly.

i. Use portable containers

- Put portable containers under fuel tanks to collect diesel as it leaks out.



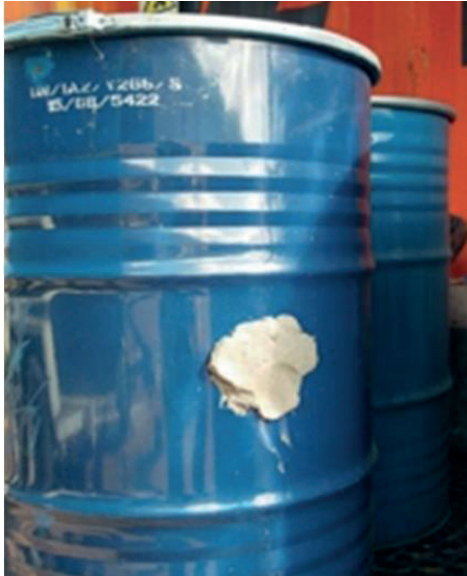
ii. Use booms and mats

- Place booms around the entire circumference of the spill and in or around any nearby gullies or drainage channels to stop it from spreading. Once this is done use mats to soak up the rest of the spillage.



iii. Use sealant putty

- Use sealant putty to plug the hole(s)



2.4 What training is available?

From your first day your company should have given you a health and safety briefing which should have had a section on the subject of diesel spillages. Explore what your company has in terms of policy and steer them to this guide if you deem necessary. There are various courses available and some of your Driver CPC (HGV Drivers) modules cover spillages.

3. Communicate

i. Call the emergency services

- Provide them with information about the incident
- If possible give them your exact coordinates (use Google Maps, GPS or telematics if possible)

ii. Inform your transport office

4. Record

i. Take photographs or make sketches (where safe to do so) of the incident scene

ii. Take note of:

- damage to vehicles and property (including old damage that might already be present)
- weather conditions, road surface condition, your speed at the time of the incident, speed of the other vehicle(s) (if any involved), traffic volume, signs or signals given or not given etc

3. Guidance for operators

3.1 What can operators do to prevent diesel spills?

Avoid the costs of clean-up being passed on

The process of cleaning up a diesel spillage can be very expensive and time consuming. Approximately 41% of these incidents are estimated to be two hours or less, 14% of incidents are between two to five hours and 22% of incidents are greater than five hours (there was no timed record of the other 23%)⁴.

Our data shows that the cost of delay to the economy of an incident lasting for four hours on a busy route equates to £541,440⁵.

As mentioned in section 1.4, we directly pass on the costs, via insurance, to fleet operators that are found to be at fault for diesel spillages on the road network. The size of this cost is dependent on the size of the spill but can be as much as £70,000⁶ with additional fines from the Environment Agency which can be unlimited upon conviction.

Poorly maintained HGVs are more likely to break down and suffer from engine oil or diesel leaks. HGV downtime can cause operational issues for fleet operators and can result in large repair bills and late or failed deliveries. This in turn can lead to fines from customers.

In addition there are fines used by DVSA for commercial vehicle drivers and fleet operators for failure to maintain the fuel system.

Our survey of over 200 operators revealed that 42% of fleet operators did not equip their vehicles with spill kits. If they are involved in a spillage incident it would remain untreated until a response unit arrives.

(Source: Incident prevention study 2017)

Prevent damage to the road

As previously mentioned, a diesel spillage has the ability to reduce the skid resistance of the road. This can lead to long term damage to the road structure if not removed promptly.

Diesel exposure for as little as 120 minutes has been shown to result in structural damage to road surfaces⁷

A fleet operator can help to reduce the amount of damage to the road surface by ensuring their vehicles are road worthy by keeping up-to-date with their vehicle servicing and maintenance schedules and reviewing driver defect information.

⁴ FMG. 2013: Fuel Tanks in LGV's Presentation Slide 8

⁵ Atkins. 2015: Commercial Vehicle Incident Prevention Strategy Outline Business Case. pp. 25

⁶ Highways England. 2015: IPT Presentation. Slide 2

⁷ J C Bullas, J Doxford, & P Hupton. Star. 2014: A study of measurement methods for diesel sorbent performance, and the components of road user delay associated with diesel spills on the UK SRN. pp 3

3.2 What additional safety measures are available?

There are a number of methods that operators can adopt to give their fleet additional safety. These can be added as aftermarket modifications to the HGV fuel system. These are discussed in more detail as follows.

Fuel caps

Anti-syphon devices that can be used to aid against spillage and are available as standard on most “newer” commercial vehicles.



Anti-syphon fuel cap with spill aid

The fuel cap sits on top of or as part of (slides away or attached via a chain) the anti-syphon device. The holes in the device stops fuel being extracted through a funnel entering the tank and thus reduce spilling from diesel thefts. The device also significantly reduces the amount of “splash back” from refuelling with the fuel dispersing through the holes.

Guard rails

The primary purpose of a guard rail is to help prevent vulnerable road users from going underneath the vehicle, but they can also be used to protect the fuel tank. With articulated vehicles, in the vast majority of cases, the separable tractor unit does not have any guard rails fitted which leaves the fuel tank exposed.



Positioning of guard rails on articulated vehicle (not protecting the fuel tank)

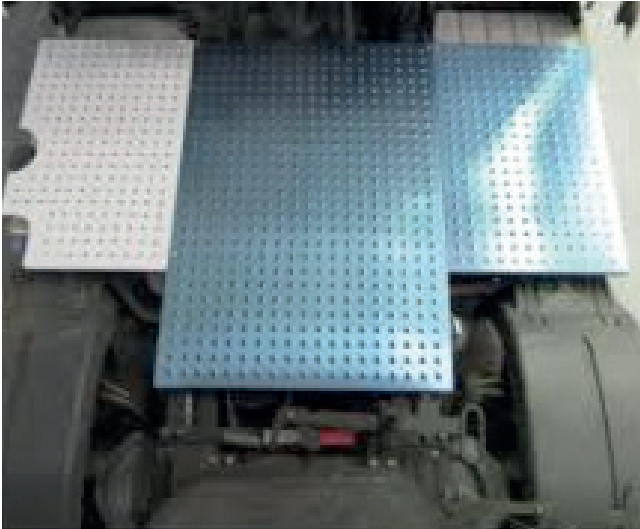
With rigid vehicles the fuel tank has generally been provided a degree of protection as it is housed behind the guard rail. Some operators have begun to use side panels as an after market adaptation to protect the fuel tanks. These upgrades give more protection as they reinforce the outer layer of the fuel tank with an aluminium barrier. The side panel also gives the tractor unit better aerodynamics which helps in reducing fuel costs.



Aluminium side panel

Extended cat-walk

Hauliers have also added extended “cat-walks” (the area where the HGV driver couples/ uncouples the trailer). These give added protection as they reinforce the area above the fuel tank and reduce damage being caused by drivers walking over the top of the fuel tank.

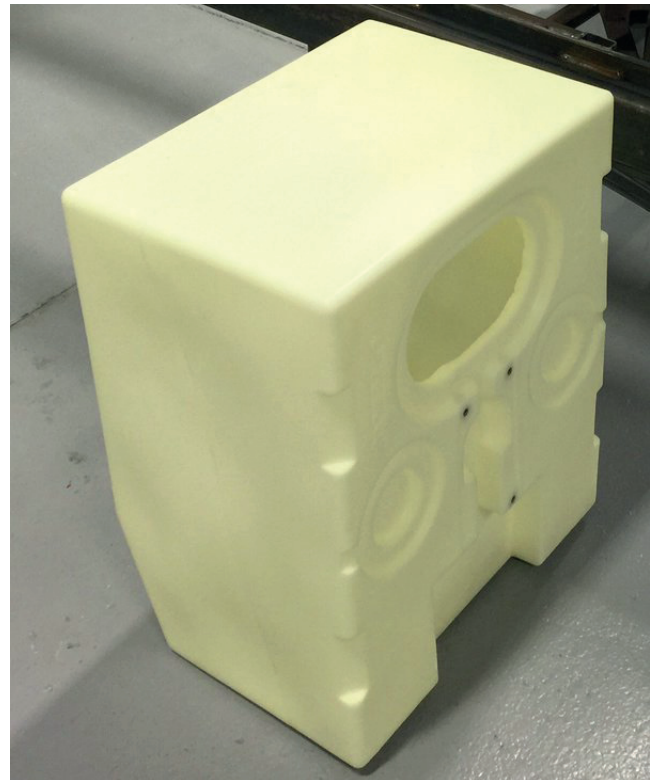


Extended cat-walk

Self-sealing / reinforced tanks

Self-sealing or reinforced tanks have commonly been used in aviation as they prevent fuel tanks and bladders from leaking fuel and igniting after being damaged. More recently these types of tanks have been used on military vehicles and in Formula1 motorsport.

Self-sealing tanks consist of two solid layers with a gel like material underneath. When a hole appears in the fuel tank, the gel reacts with the fuel, hardens up and blocks the hole to stop the leak. The material is strong and makes the fuel tank more durable which decreases damage impact in the event of an incident.



Self-sealing / reinforced fuel tank

Using alternative fuels

Some hauliers have started to use dual fuel vehicles which have a combination of diesel and liquefied natural gas (LNG). LNG is a clear, colourless, non-toxic, non-corrosive liquid which forms when natural gas is cooled to -162°C .

In the event of a spillage, the amount of diesel carried by a dual fuelled vehicle is reduced and therefore poses less of a threat to the road surface and other road users. Whilst the ambient temperature of the road surface would cause the vast majority of the LNG to vaporise into the air rather than remain as a slick on road.

Equip vehicles with spill kits

As detailed in the driver guidance in section 2 spill kits can comprise of a number of items. The most common contain booms and mats. These are readily available online, are inexpensive and can be easily stored in the cab or the storage locker.



Carry bag spill kit

Other options include portable containers which can be placed under fuel tanks to collect diesel as it leaks out and sealant putty which can be used to plug holes in the fuel tank and stop the leak. Again these are cheap, readily available online and can be easily stored in the vehicle.

3.3 What legislation do you need to be aware of?

Fuel tank capacities

The majority of UK operators use standard production sized tanks which usually carry in the range of 200-500 litres, dependent on the maximum permissible mass (MPM) of the particular vehicle.

Non GB HGVs enter the UK with around 760 litres of fuel and leave with about 480 litres. It is thought they purchase less than 10 litres of fuel on their trip to the UK meaning the likelihood of the driver spotting a leak from the fuel tank decreases as they spend more time conducting other activities.

Vehicles entering the UK appear to represent a larger risk of major spillage due to various factors including:

- A non GB HGV can carry up to 1,500 litres (Approximately 4 x the UK norm)
- They produce a greater volume of fuel in spillage incidents

Laws surrounding fuel tanks

EU Regulation 39 stipulates that any fuel must be carried in tanks that are “constructed and maintained so that the leakage of any liquid from the tank is adequately prevented” and “so that the leakage of vapours is adequately prevented”.

All vehicles (whether non GB or UK registered) must comply with Community Directive 70/221. Directive 70/221 requires tanks to be corrosion resistant, withstand a pressure of 1.3 bar, and they must not leak (apart from a drip) through the filler cap even if the vehicle overturns. The tanks must not be placed near sharp edges which, in the event of a front or rear impact, could rupture the tank.

Research conducted as part of this guide has revealed that there are no specifications relating to fuel tank clearance above the ground for HGVs. However, our research conducted in 2013⁸ suggests that the lower the fuel tank, the greater risk there is of damage from debris or a puncture. Awareness from operators when procuring new vehicles should take this into consideration when thinking about new fleet. Commercial vehicle drivers should also be made aware of clearance levels of the fuel tanks to prevent punctures and related damage with particular attention being paid when loaded (not overloading the axles relating to fifth wheel weight).

⁸ FMG. 2013: Fuel Tanks in LGV's Presentation

Tank construction and specification

Due to design limitations the typical location of fuel tanks on HGVs, especially articulated vehicles, leaves them exposed in the event of multi-vehicle collisions. On an articulated vehicle the fuel tank is located between two axles on the tractor unit and may not have guard rails. Rigid vehicles tend to have guard rails installed to minimise the likelihood of other road users going under the vehicle in the event of an incident, with the guard rail offering a form of protection for the fuel tank which reduces the impact of damage in the event of a multi-vehicle collision.

There are different types of fuel tanks available that represent differing levels of basic protection. Plastic presents the highest risk of splitting with steel or aluminium tanks having less risk.

Aluminium tanks are also 50% lighter than steel fuel tanks which would mean an opportunity to increase fuel efficiency as less weight is being carried. A number of materials are used for fuel tanks and each material presents a number of advantages and disadvantages as shown below:

Type of fuel tanks	
Steel	Standard, heavier, may rust over time
Aluminium	Lighter, more expensive, longer life
Plastic	Lighter, maybe limited in capacity

Fuel tank checks

There are no specific requirements or specifications for fuel caps or the fuel inlet location. However, MOT inspections in the UK require that a commercial vehicles tank filler cap must not leak under normal usage. Vehicles would fail their test should any sealing washer be damaged or missing, or any visible leakages appear from the tank.

Environmental legislation

If a diesel spillage enters the water system there can be a significant environmental impact to the surrounding area. Anyone deemed to have broken Regulation 38 (1) of the Environmental Permitting Regulations (2010) may be prosecuted by the Environment Agency and face a fine of up to £50,000 and imprisonment of up to twelve months. This can be increased to an unlimited fine and a five year prison sentence if pursued through the Crown Court.

Other environmental legislation that operators need to be aware of is the Environmental Damage (Prevention and Remediation) Act 2009, which was introduced to hold Directors / Managers of negligent companies accountable for damage to the environment. This legislation can also lead to fines of thousands of pounds and a custodial sentence.

4. Next steps and further information

4.1 Contact Highways England

Report a spillage

If you would like to get in touch with us to report a diesel spillage on a motorway or an A-road you can do so by calling 0300 123 5000.

4.2 What's next for Highways England?

Development of a diesel spillage cost document

The document 'What is the impact and cost of a diesel spillage?' has been developed and accompanies the Diesel Spillage: Best Practice Guide. It highlights the total impact of diesel spillage incidents on the SRN and provides a number of case studies of both minor and major spillages.

Driver handouts

The driver handouts in this guide are in a printable A4 format. They can be laminated and handed out to drivers as part of their Health and Safety/PPE pack.

4.3 Associated legal considerations

The guidance has been produced to assist commercial vehicle drivers and operators (both UK and overseas) to establish or update their process of preventing and dealing with diesel spillages. However, it is recommended that the following sources of information are also consulted as part of this process:

- Carriage of dangerous goods – carriage regulations
<http://www.hse.gov.uk/cdg/regs.htm>
- Control of Substances Hazardous to Health 2002
<http://www.hse.gov.uk/nanotechnology/coshh.htm>
- Control of the Major Accident Hazard Regulations (COMAH)
<http://www.hse.gov.uk/comah/>
- Council Directive 70/221/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to liquid fuel tanks and rear protective devices for motor vehicles and their trailers
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:31970L0221>
- Employer's Liability Act 1969
<http://www.hse.gov.uk/pubns/hse40.pdf>
- Health and Safety at Work Act 1974
<http://www.hse.gov.uk/legislation/hswa.htm>
- Management of Health and Safety at Work Regulations 1999
<http://www.legislation.gov.uk/uksi/1999/3242/contents/made>

- Oil and storage regulations for businesses
<https://www.gov.uk/guidance/storing-oil-at-a-home-or-business>
- Regulation No 34 of the Economic Commission for Europe of the United Nations (UNECE) — Uniform provisions concerning the approval of vehicles with regard to the prevention of fire risks [2016/1428]
<https://publications.europa.eu/en/publication-detail/-/publication/eea20583-6b50-11e6-9b08-01aa75ed71a1/language-en>
- Storing and handling drums and intermediate bulk containers, PPG26
<https://www.gov.uk/government/publications/storing-and-handling-drums-and-intermediate-bulk-containers-ppg26>
- The dangerous substances and explosive atmospheres regulations 2002
<http://www.hse.gov.uk/fireandexplosion/dsear.htm>
- The Environmental Damage or Liability Regulations
<https://www.legislation.gov.uk/ukxi/2015/810/contents/made>
- The Road Vehicles (Construction and Use) Regulations 1986, regulation 39
<http://www.legislation.gov.uk/ukxi/1986/1078/contents/made>
- The Environmental Permitting Regulations 2010, Regulation 38 (1)
<https://www.legislation.gov.uk/ukdsi/2010/9780111491423/contents>
- Environmental Damage (Prevention and Remediation) Act 2009
<http://www.legislation.gov.uk/ukxi/2009/153/contents/made>

4.4 Further reading

- Environment Agency - Guidance of selection for use of sorbents BSIF
<https://www.ukspill.org/spill-archive/resources/PPG22-consultation-document.pdf>
- Environment Agency – Oil clean-up products and their application in England and Wales
https://www.spillcontrolcentre.co.uk/download/Oil_clean_up_products_and_their_application_England_and_Wales.pdf
- Hall fuels – Safety data sheet – Esso diesel
<http://hallfuels.co.uk/media/3481/Esso-Diesel.pdf>
- HSE – Carriage of dangerous goods manual
<http://www.hse.gov.uk/cdg/manual/>
- HSE – Chemical safety data sheets – COSHH
<http://www.hse.gov.uk/coshh/basics/datasheets.htm>
- HSE – Emergency response / spill control
<http://www.hse.gov.uk/comah/sragtech/techmeasspill.htm>
- UK Spill – Pollution prevention guidelines
<https://www.ukspill.org/spill-archive/resources/PPG22-consultation-document.pdf>
- Water UK – Protocol for the disposal of contaminated water
<https://www.ukspill.org/spill-archive/resources/PPG22-consultation-document.pdf>

4.5 Useful contacts

- Highways England – Tel: 0300 123 5000, Email: info@highwaysengland.co.uk; Website: <https://www.highwaysengland.co.uk>
- Environment Agency – Tel: 03708 506 506, Email: enquiries@environment-agency.gov.uk

Prevention of diesel spillages guidance summary

What are the root causes of diesel spillages?

Diesel spillages occur due to various factors and often include other secondary impacts. Root causes include:

- filler cap not fully secure or closed properly
- filler cap damaged or missing
- filling the tank right up to the filler cap (necking it)
- lack of anti-spill devices being fitted into the tank
- mechanical failures and fuel system defects
- road traffic collisions
- problems encountered during the transport of fuel
- ruptured tanks
- leakage from corroded or rusty tank

What can you do to help?

1. Check the fuel tank for security
2. Check tank straps and supports – condition and presence / security and strength
3. Check fuel system – leaks / condition / position of pipes
4. Check filler cap and sealing washer – presence / security / condition
5. Don't overfill the tank - stop at the first click
6. If you notice issues, they should be remedied immediately

314

HGV diesel spillage incidents on our roads in 2018

What are the benefits of preventing and controlling drips, leaks and spillages?

- Improve road safety – Diesel reduces skid resistance. Common places for “slippiness” are horizontal curves, ramps and roundabouts.
- Protect the environment – Diesel is a contaminant and can travel a long way quickly especially if it gets into groundwater and enters the drainage system.
- Reduce congestion – Spillages often lead to lengthy delays especially where resurfacing is required.
- Keep money in your pocket – As a driver, you can be prosecuted and fined up to £1,000 if you are found to be at fault for a spill.
- Avoid the cost of clean-up being passed on – Operators found to be at fault could be liable for fines.

Motorcyclists are disproportionately affected by spills. In 2017, motorcycles accounted for 23.29% of all incidents where a contributory factor included a deposit on the road (e.g. oil, mud, chippings).

Spillage response plan (4 stages)

1. **Assess** – Are you and your passengers safe? Has fuel loss stopped? Is there risk of fire? Does it smell? What is the size of the spill? Is it spreading?
2. **Contain** – If you have them, put portable containers under fuel tanks, use putty to plug holes in fuel tank, place booms around the entire spill and prevent diesel seeping into drains. Then use mats to soak up the rest of the spillage.
3. **Communicate** – Call the emergency services and inform your transport office.
4. **Record** – Take photos of the incident and take note of vehicles involved, damage caused, weather, road surface condition, speed at time etc.

In 2014, DVSA conducted trials detecting 2,390 fuel system defects and issued over 1,500 prohibitions to vehicles with defective fuel systems

Diesel exposure for as little as 120 minutes has been shown to result in structural damage to road surfaces

Spillage response plan

Assess

1. Check for safety

- Make sure you are safe
- Attend to others in danger

2. Risk assess

- Has fuel loss stopped?
- Is there a risk of fire?
- Is smell overpowering?
- What is the size of spill?
- Is this spill spreading?

Contain

3a. Use sealant putty

- Use putty to plug holes in fuel tank and stop leak

3b. Use portable containers

- Put containers under fuel tanks to collect diesel as it leaks out

3c. Use booms and mats

- Place booms around entire circumference of spillage and in or around gullies / drainage channels
- Use mats to soak up rest of spillage

Communicate

4. Call the emergency services

- Ring **999** and / or **0300 123 5000**
- Provide as much information as possible
- Give your exact coordinates (think Google Maps / GPS / telematics)

5. Inform your transport office

- Provide as much information as possible
- Talk through emergency procedure

Record

6. Take photographs of incident or make sketches (where safe to do so) of the incident scene

7. Take note of:

- Vehicles involved
- Damage caused to vehicles / property
- Weather conditions
- Road surface condition
- Speed at time of incident
- Traffic volume
- Signs / signals given or not given

Before you start, ensure you have the correct PPE (e.g. Nitrile / protective gloves, safety boots, protective glasses and, where necessary, dust masks).
Avoid contact with skin.

Using mats and booms

Step 1



Begin placing booms around the spillage

Step 2



Continue until booms are around entire circumference of spillage and in or around any nearby gullies or drainage channels

Step 3



Use mats to soak up the rest of the spillage

Step 4



Ensure entire spill is covered by mats and leave until spill is fully absorbed

Before you start, ensure you have the correct PPE (e.g. Nitrile / protective gloves, safety boots, protective glasses and, where necessary, dust masks).
Avoid contact with skin.

Using putty

Step 1



Identify source of leak

Step 2



Plug hole with putty

Step 3



Leave putty on hole and empty container

Using portable containers

Step 1



Carry portable container to source of spillage

Step 2



Expand container and place under fuel tank

Diesel spillage treatment types

Universal maintenance – absorbent pads, rolls, pillows, spill socks and booms



Maintenance pads



Maintenance rolls



Maintenance socks



Maintenance booms



Maintenance cushions

Oil absorbents



Oil pads



Oil rolls



Oil socks



Oil booms



Oil pompoms

Spill kits



Truck spill kit



Bunker spill kit

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.

© Crown copyright 2019.

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/

write to the **Information Policy Team, The National Archives, Kew, London TW9 4DU**,

or email psi@nationalarchives.gsi.gov.uk.

Mapping (where present): © Crown copyright and database rights 2019 OS 100030649. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

This document is also available on our website at www.highwaysengland.co.uk

For an accessible version of this publication please call **0300 123 5000** and we will help you.

If you have any enquiries about this publication email info@highwaysengland.co.uk

or call **0300 123 5000***. Please quote the Highways England publications code **PR210/18**.

Highways England creative job number MCR19_0011

*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.

These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

Printed on paper from well-managed forests and other controlled sources when issued directly by Highways England.

Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ

Highways England Company Limited registered in England and Wales number 09346363