

# What is the impact and cost of a diesel spillage?



April 2019

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# 1. Introduction

This document presents four case studies of incidents that have occurred on the strategic road network (SRN), provides a brief overview of the process our response team follows during an incident and highlights useful contact numbers for fleet operators and commercial vehicle drivers.

## 1.1 Who is it for?

This document is for commercial vehicle drivers and fleet operators and aims to highlight the importance of preventing and minimising diesel spillages on the SRN.

## 1.2 How should this document be used?

This document should be used in conjunction with our accompanying document Diesel Spillage: Best Practice Guide. The Best Practice Guide highlights how both commercial vehicle drivers and fleet operators can prevent and reduce the impact of diesel spillages by conducting daily vehicle checks, installing aftermarket safety equipment, investing in spill kits and following a response plan in the event of a spillage occurring.

## 1.3 What is Highways England trying to achieve?

We want to reduce the number of people killed or seriously injured (KSI) on the SRN. As highlighted in the Diesel Spillage: Best Practice Guide, the amount of KSIs involving HGVs in 2017 was 353 of which there were 84 fatalities. We want to improve understanding of the impact and cost of diesel spillages amongst commercial vehicle drivers and fleet operators. The guidance helps to highlight proactive steps to prevent diesel spills from occurring in the first place and reduce the severity and impact of those that do.

We understand that not all diesel spillage incidents are caused by commercial vehicle drivers and we're working hard to increase awareness of the various root causes of diesel spillages with all the relevant parties. As mentioned in the Diesel Spillage: Best Practice Guide, incidents can be caused by a single or a multitude of factors including traffic collisions causing mechanical failures, or ruptured tanks leading to diesel spillages on the SRN.

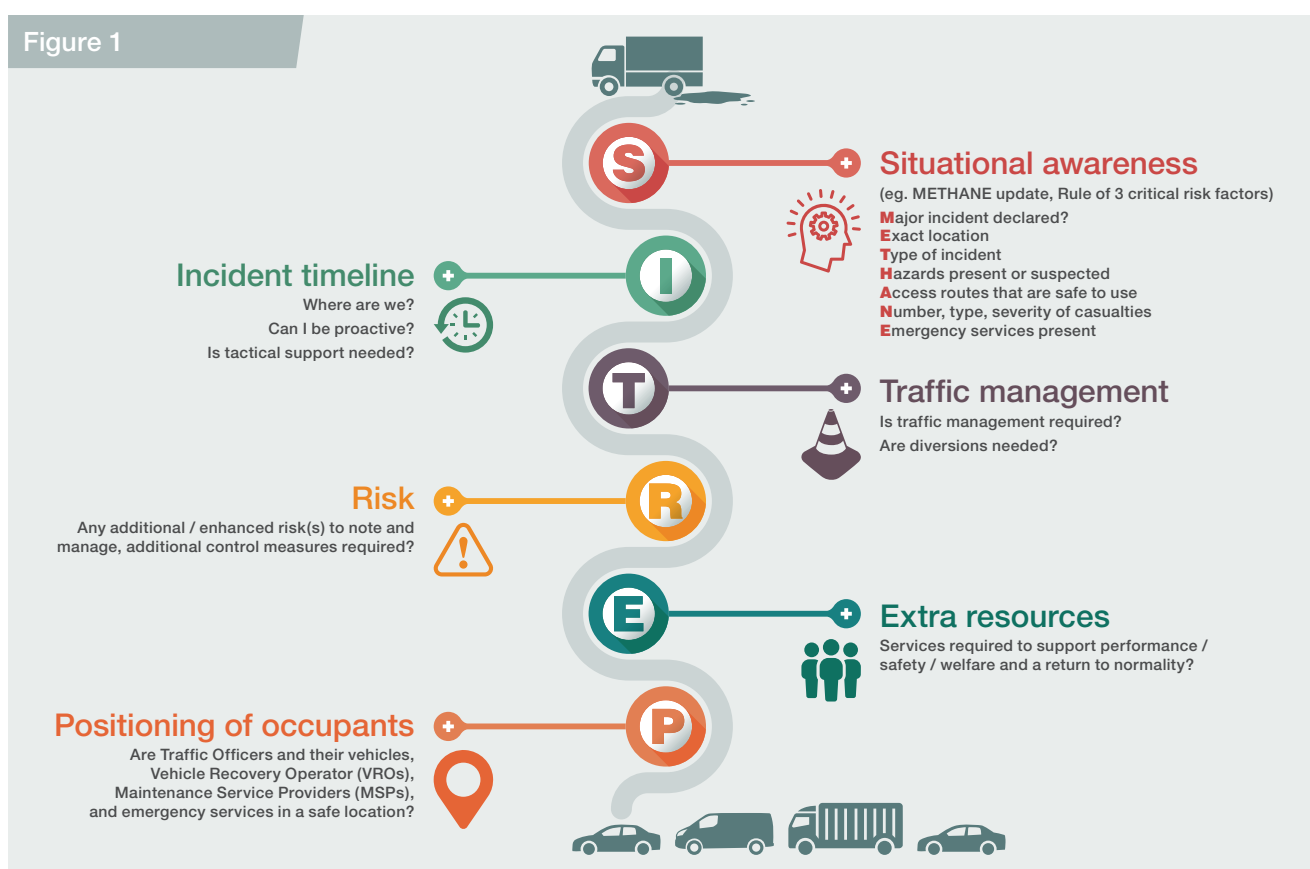
We want to provide a safer, more free-flowing network where delays are less likely and are improving the way we respond to incidents and congestion.

## 2. Process for dealing with diesel spillages

Our response team on duty at the time of incident, implement SITREP analysis which gives a focused response to the over-arching strategy, keeps communication channels open, and all parties updated.

### 2.1 SITREP analysis

The SITREP process is shown in Figure 1 below:



Using SITREP facilitates a safe and effective step-by-step approach to carrying out correctional works which can be adopted by everyone involved in the clean-up of the diesel spillage (this includes Highways England, the emergency services, Maintenance Service Providers (MSPs) and sub-contractors). SITREP also allows our teams to summarise and learn from diesel spillage incidents giving them the information they need to make their processes better for next time.

Following on from the correctional work, our legal team contact the person(s) responsible for the incident. This is either directly, or through their insurers with costs recovered either in full, in part or in some cases absorbed by the company. If there's a case where the person held liable does not have insurance, our legal team will pass the details onto the police.



## 3. Case studies

This section features four case studies which provide real examples of the type of incidents occurring on the SRN on a regular basis.

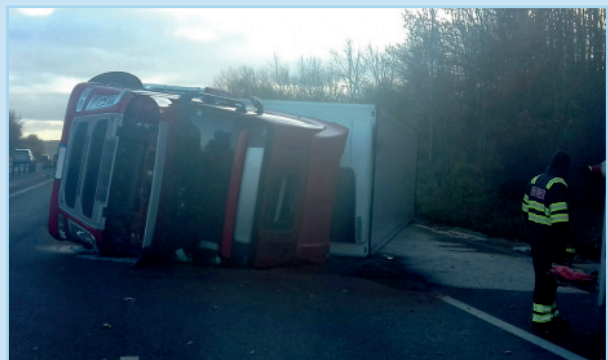
### The cost and impact of diesel spillages – case study 1

For more in-depth information please consult the best practice guide

#### Background

On the 25th November 2017 at approximately 11.15am an articulated HGV was travelling northbound along the M11 when the driver swerved to avoid another vehicle. This action led to the HGV ending up on its side. This caused the diesel tank to rupture and leak 500 litres of diesel onto the road surface.

The emergency services were first to the scene and put a road block in place across 2 lanes of the motorway as the HGV had come to rest blocking the hard shoulder and lane 1.



#### Impact and cost

Total cost of repair: **£15,216**

Labour cost: **£3,383**

Aux. Plant Equip./Vehicles: **£1,299**

Clean-up materials: **£61**

Subcontractors: **£10,473**

Recovered cost: **Ongoing claim**

Length of delays: **13 hours 15 minutes**

Estimated cost to UK PLC: **£45,120\***

Responders involved: **Highways England Traffic Officers, Emergency Services, MSP and specialist clean-up crew**

#### Summary

Despite delays in treating the spillage the MSP was able to use a spillage kit and neutralise the diesel spill. On this occasion the weather slowed down the corrosion of the road surface from the diesel spillage. A combination of the sand and the freezing temperature stopped the diesel spillage soaking into the asphalt.

The cost of this particular spillage was relatively low in comparison to others in this document. This is mainly due to the road surface not needing to be relayed immediately; although due to the size of the spillage and the necessary scene management, there were long delays which held up motorway users for 13 hours 15 minutes.

The £15,216 cost of “returning the network to normal” is being pursued by our legal team through the insurer of the operator of the HGV, of which, the full cost of the clean up is expected to be recovered.

## The cost and impact of diesel spillages – case study 2

For more in-depth information please consult the best practice guide

### Background

On the 7th September 2017 at approximately 04:00 an articulated HGV was travelling southbound along the M11 near to junction 12, when the HGV hit the central reservation demolishing both protective barriers on the southbound and the northbound carriageways.

The impact resulted in a puncture to the HGV's fuel tank leaking 400 litres of diesel onto the southbound carriageway.

The emergency services and the MSP had put in place traffic management, directing traffic using the "Up and Over" method of diverting the traffic up and back down the slip roads to avoid the accident.



### Impact and cost

Total cost of repair: **£49,534**

Labour cost: **£17,183**

Aux. Plant Equip./Vehicles: **£11,056**

Clean-up materials: **£6,913**

Subcontractors: **£14,382**

Recovered cost: **Ongoing claim**

Length of delays: **29 hours 50 minutes**

Estimated cost to UK PLC: **£1,488,960\***

Responders involved: **Highways England Traffic Officers, Emergency Services, MSP, specialist clean-up crew and the Environment Agency**

### Summary

In this case the SITREP was used to good effect, as all parties worked well together formulating a plan quickly to stop the M11 coming to a complete standstill. Although there were delays, a diversion was put in place quickly. The HGV was recovered in a timely manner and the diesel spillage could be dealt with.

The extra resource was needed to deal with contaminated soil, which contributed to a large proportion of the cost of the recovery. Contaminated soil in the central reservation area had to be replaced where the truck had pierced its fuel tank, despite a spillage kit being put to good use to treat the diesel on the road surface.

The total road closure lasted nearly 30 hours and due to the closure of a major motorway the incident cost the UK an estimated £1,488,960.

The £49,534 cost of "returning the network to normal" is being pursued by our legal team through the insurer of the operator of the HGV, of which, the full cost of the clean up is expected to be recovered.

## The cost and impact of diesel spillages – case study 3

For more in-depth information please consult the best practice guide

### Background

On the 18th September 2016 at approximately 06:00 an articulated HGV was travelling westbound along the A14 near to junction 13. The driver lost control of the vehicle due to a burst tyre and was unable to stop the HGV before colliding with the central reservation.

When the vehicle collided with the central reservation the vehicle overturned, rupturing the fuel tank leading to a complete fuel system failure. The subsequent failure resulted in a diesel spillage stretching 200 metres along the carriageway. The diesel was prevented from entering the water ways by the use of mats and booms.



### Impact and cost

Total cost of repair: **£21,075**

Labour cost: **£2,963**

Aux. Plant Equip./Vehicles: **£1,214**

Clean-up materials: **£480**

Subcontractors: **£16,418**

Recovered cost: **£16,771**

Length of delays: **11 hours 59 minutes**

Estimated cost to UK PLC: **£541,440\***

Responders involved: **Highways England  
Traffic Officers, Emergency Services,  
MSP and specialist clean-up crew**

### Summary

The emergency services and our traffic officers were quick to react to this incident. They minimised the severity of the delays to other road users by putting in diversions and making both sides of the carriageway safe.

The initial spillage was so severe that the damage to the road surface was irrecoverable and resurfacing was the only option. This then caused long delays and a cost of £541,440 to the UK economy.

Although there were road closures on a large part of the SRN, it was necessary as the risk to other road users (as per the SITREP analysis) was deemed to be high. The return to normality works were carried out with additional resource brought in to hurry the resurfacing and clean-up of the diesel spillage.

The £21,075 cost of “returning the network to normal” was pursued by our legal team through the insurer of the operator of HGV 1, of which, £16,771 was recovered.



## The cost and impact of diesel spillages – case study 4

For more in-depth information please consult the best practice guide

### Background

On the 1st April 2016 at approximately 21:14 an articulated HGV was travelling northbound on the M1 near to junction 11. The HGV driver swerved to avoid hitting another vehicle which resulted in the HGV jack-knifing across all lanes of the M1 northbound.

A passenger vehicle travelling behind the HGV could not stop in time resulting in a collision with the HGV's fuel tank causing diesel to spill out across the carriageway. There was also some fuel leakage from the passenger vehicle that was wedged under the HGV.



### Impact and cost

Total cost of repair: **£123,380**

Labour cost: **£42,953**

Aux. Plant Equip./Vehicles: **£2,768**

Clean-up materials: **£533**

Subcontractors: **£77,126**

Recovered cost: **£42,953**

Length of delays: **17 hours 46 minutes**

Estimated cost to UK PLC: **£1,488,960\***

Responders involved: **Highways England Traffic Officers, Emergency Services, MSP, specialist clean-up crew, and the Environment Agency**

### Summary

The response plan was well executed by the emergency services, MSP and our traffic officers. Using the SITREP analysis, the response plan went well taking into consideration the size of the diesel spillage.

To reduce the impact of the incident, traffic management was set up along with a full diversion around junction 11. This was to aid the speed of the recovery of the vehicle and treatment of the spillage. There were diversions in place for nearly 18 hours with the cost of the incident to the UK economy being an estimated £1,488,960.

There was a need to involve the Environment Agency as the diesel spillage had entered into the water course. The cost of the spill was large, due to the amount of extra resource and specialist equipment needed to clear the diesel spillage and for the road to be resurfaced.

The £123,380 cost of "returning the network to normal" was pursued by our legal team through the insurer of the operator of HGV 1, of which, £42,953 was recovered.



## 4. Summary

The information provided here supports our Diesel Spillage: Best Practice Guide. We want to raise awareness amongst fleet operators and commercial vehicle drivers of the impacts and costs of diesel spillages on the SRN and highlight the importance of preventing and minimising them.

As highlighted in both the Diesel Spillage: Best Practice Guide and this document all motorists are affected by spillages but motorcyclists are disproportionately affected. In 2017, motorcycles made up less than 0.5% of all traffic on the SRN, but accounted for 10.6% of fatalities and 17.6% of KSI casualties. Additionally, motorcycles accounted for 23.29% of all incidents where a contributory factor included a deposit on the road (e.g. oil, mud, chippings). Motorcyclists are at risk when a HGV overfills their fuel tank and the excess fuel spills onto the road surface – often at roundabouts or locations near to a service station. This can be avoided if the driver stopped at the first click when filling their tanks.

Our goal is to improve road safety and reduce the number of people killed or seriously injured on our roads. One way we can do this is to increase the understanding of all road users on the types of incidents that happen on the SRN, as well as explain how we respond to incidents so that road users are better equipped to assist us in preventing these incidents from occurring in the first place.

The case studies detailed in this document provide real world examples of diesel spillage incidents on the network and demonstrate that nobody deliberately sets out to cause a diesel spillage incident, but unfortunately these incidents are sometimes unavoidable. By following the Diesel Spillage: Best Practice Guide and understanding the process for dealing with diesel spillages, you can help to prevent and reduce the impact.

## 5. Useful contacts

### **Highways England**

Tel: [0300 123 5000](tel:03001235000)

Website: [www.highwaysengland.co.uk](http://www.highwaysengland.co.uk)

### **Environment Agency**

Tel: [03708 506 506](tel:03708506506)

Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

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

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