



Driver CPC Module Number

2.3

MINIMISING RISKS AND MANAGING EMERGENCIES IN ROAD TRANSPORT

Session 1

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It is the absolute obligation of the holder of the Certificate of Professional Competence to be familiar with and comply with all aspects of the law relating to the Certificate of Professional Competence and in particular the obligation to obtain and maintain the level of training and instruction required for the Certificate of Professional Competence.

The training process has been designed and developed by the Road Safety Authority for the express purpose of facilitating the training of all classes of drivers required to acquire and hold the Certificate of Professional Competence.

The Road Safety Authority does not accept any obligation and/or responsibility arising out of the use of and/or the application of the materials, whether directly and/or indirectly, and the information used in the training of drivers is not intended to replace knowledge of the laws and regulations relating to the Certificate of Professional Competence.

The contents of this manual are expressed in general terms and are not intended to be a detailed analysis of the law. It is based on the assumption that readers are familiar with many of the technical terms used when referring to HGV and PSV vehicles. (Also known as HCV Heavy Commercial Vehicles). This guide does not, and is not intended to provide legal advice or to represent a legal interpretation of the law.

It is the primary obligation of the driver to know the laws and regulations relating to their profession.



RSA Head Office

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email: info@rsa.ie **website:** www.rsa.ie

For information relating to the tachograph, drivers hours, vehicle standards and CVRT contact the Road Safety Authority, Clonfert House, Bride Street, Loughrea, Co. Galway. H62 ET93.

email: enforcement@rsa.ie

FOREWORD FROM THE RSA DRIVER EDUCATION SECTION

This Driver Certificate of Professional Competence (Driver CPC) syllabus has been developed by the RSA with the assistance of the transport industry and experienced training organisations.

The information contained in this manual (No. 2.3. Minimising Risks and Managing Emergencies in Road Transport) together with the information provided in CPC Manuals 1, 3, 4, 5 and 6 combines to become an excellent resource for use by professional drivers. Drivers are encouraged to keep all of the manuals together in a safe place and to refer to them from time to time whenever they want some clarification or guidance on how to approach a particular issue.

The next few pages set out what the programme has to offer those attending, whether you are already working as a professional truck or bus driver, or you are new to the profession and want to become a qualified driver with a view to working in the transport industry. By following the guidance provided and adhering to 'best practice' outlined in this manual, you will significantly reduce the likelihood of being involved in a serious incident. These incidents could ultimately involve financial penalties, loss of business and a risk of being involved in a serious injury or fatal collision.

The course is broken down into modules covering a wide range of areas outlined in the Driver CPC EU Directive and Irish National legislation, which will be of interest to all professional bus and truck drivers and all good employers. Some areas may be new to you, in other parts it may simply be a case of refreshing your skills or knowledge – in either case we are certain that you will find the programme challenging, yet enjoyable.

Driver CPC covers key aspects such as the Health and Safety of professional drivers as well as the rational use of fuel and important road safety related matters. As such you will possibly have encountered some of these topics before. However, these topics have such a significant impact on the safe movement of passengers and goods that key messages are repeated and/or reinforced.

The Board of the RSA considers Driver CPC to be a key step in our common aim to reduce death and serious injuries on our roads. There will also be benefits to the transport industry through improved safety, enhanced eco-driving, lower insurance costs and a highly trained resource of professional drivers. By participating in Driver CPC training, you will be developing and refreshing the knowledge and skills required for your profession. It will help you to not only keep on top of your profession but also to remain a safe and socially responsible driver.

By taking this training at an RSA approved training centre you can be confident that the provider has met all the quality assurance targets required of an RSA registered training provider and is committed to helping you achieve your own personal objectives from this course.

Please be prepared to ask questions of your trainer and the group and to share your own experiences. By actively joining in with each training session you will be initiating and contributing to debate among your group of peers. Sharing your experiences and listening to others will help to benefit everyone and may in itself make an important contribution to Irish road safety.

Once you have completed any of the training you will be able to view your Driver CPC training record by logging onto the RSA website and visiting 'MY CPC' (see the guide at the back of this manual).

From there you can print off your record and if required, you can provide a copy to your employer to prove your status as a professional driver or use it to support a job application when applying for work as a professional truck or bus driver.

May we take this opportunity to wish you well with the course and we look forward to your contribution in the ever-increasing demand for quality drivers.

Yours sincerely,

The Driver Education Section

IMPORTANT NOTICE

The RSA endeavours to provide you with the latest information but please be aware that Road Traffic and other applicable legislation is continuously changing. As a consequence the information contained in this manual or provided via any of the related PowerPoint presentations is also subject to change. The RSA will continue to add up-dates or refresh the material from time to time but can in no way guarantee that this version contains the very latest information available. If you have any doubts about the validity of information contained within this manual or any of the presentation slides, please seek clarification from either your trainer, your employer or transport manager (as appropriate).

If necessary you may also wish to obtain independent legal opinion.

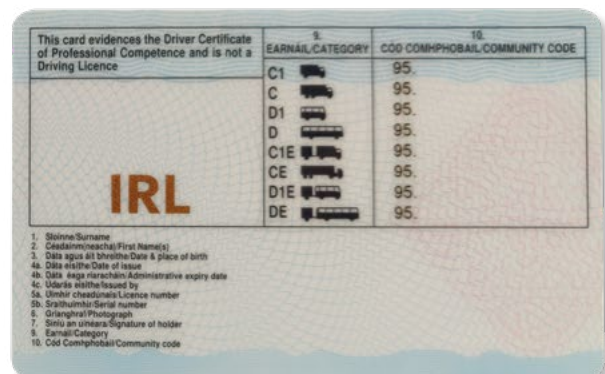
To ensure you have the latest version of this module, check our website for details, just click on the Driver CPC section of www.rsa.ie.

While every effort is made to ensure that the material in this manual is accurate at the time of going to press, it remains the responsibility of drivers to ensure they are informed of and familiar with all regulations, conditions and requirements relating to all aspects of their profession.

Sample CPC Card

Once you have completed your Initial Driver CPC training you can apply for your Drivers Qualification Card.

If you are the holder of a CPC Qualification Card for one category, (truck or bus) and then successfully complete the other category, you should contact the RSA as soon as possible to have the Code '95' added to the CPC Qualification Card opposite the other category.



When driving a truck or a bus in a professional capacity, a driver must carry a valid

- CPC card for the category
- Driving licence for the category
- Tachograph card or tachograph charts

On the CPC card, the code number '95' is inserted opposite the categories of licence for which CPC training has been completed.

Some EU countries do not issue Driver CPC cards. Instead, they insert the CPC code number '95' on the driving licence opposite the categories for which CPC training has been completed.

Ireland is now part of a European network whereby the Authorities in any E U Member State can check the validity of a Driver CPC Qualification Card at a roadside inspection.

INTRODUCTION

The following information is provided for persons who wish to become professional truck or bus drivers, and for those who are already qualified in the profession. It outlines the steps to be taken in order to obtain Initial Qualification and to maintain their CPC entitlement (Periodic Qualification).

Welcome to the Road Safety Authority's Approved Training Programme for the Drivers Certificate of Professional Competence. (CPC).

Driver CPC is a Certificate of Professional Competence issued to drivers who are entitled to hold one. It was first introduced across the EU in 2008 for professional bus drivers and 2009 for professional truck drivers.

The EU requires its member states to provide better training for professional drivers. Many professional drivers in the EU were working without the benefit of training or the opportunity to regularly refresh their skills. As a result, the EU introduced Directive 2003/59/EC, as amended by Directive (EU) 2018/645, which makes it compulsory for member states to have a driver CPC programme in place for professional drivers.

In Ireland, this is given effect by S. I. (Statutory Instrument) 359 of 2008.

This course fulfils part of the requirements for CPC driver training under Directive 2003/59/EC.

For CPC purposes, a professional driver is someone who drives a truck or a bus, whether as self-employed, for a salary, on own account or for hire or reward, and who holds one or more of the following categories of driving licence; C1, C1E, C, CE, (trucks) or D1, D1E, D, DE. (buses). A driver who does not wish to drive a truck or a bus in a professional capacity (and therefore does not need a CPC qualification) must be at least 21 years of age (trucks) and 24 years of age (buses) before they can obtain the relevant licence.

Drivers of vehicles which can be driven by the holder of a Category B licence – cars and light commercial vehicles with a MAM (Maximum Authorised Mass) not exceeding 3,500 kg., and vehicles with passenger accommodation for not more than 8 persons - are not required to undergo CPC training. (The MAM of category B vehicles which are powered by batteries or gas has increased to 4,250 kg to allow solely for the increased weight of those propulsion systems).

IMPORTANT – A Driver CPC Qualification Card is not a driving licence. In order to drive a truck or bus you must:

- be the holder of a current valid driving licence for the category of vehicle you are driving, and
- be the holder of a current valid driver's CPC card for the category of vehicle you are driving professionally.

Once you are fully CPC qualified you can apply for and receive your Drivers CPC card. Both your driving licence and Drivers CPC card must be carried by you whenever you are driving your truck or bus professionally. You must also carry a digital tachograph card if your vehicle is fitted with a digital tachograph. The driver of an eligible vehicle must insert their tachograph card/chart into the vehicle tachograph head/unit and operate it as legislation requires.

Key aims

The key aims of the Driver CPC programme are

- Ensuring all professional bus and truck drivers have high standards of driving and of road safety practices and that those standards are maintained throughout their driving careers
- Ensuring high standards of their personal health and safety
- Ensuring high standards in relation to fuel efficiency and reduced pollution
- Creating a common standard for the training and testing of drivers throughout the EU
- Reducing fatalities and serious injuries on the roads. The RSA's target is for Ireland to have one of the lowest casualty rates in Europe.

The Driver CPC

Professional drivers fall into two categories from a Driver CPC perspective:

- those who were already working as professional drivers when the scheme was put in place, and
- those who are new to the profession.

‘Acquired rights’ to Driver CPC

Acquired rights to a Drivers CPC qualification applies to those drivers who were already working as professional drivers when the scheme was put in place. If you got your bus licence on or before the 9 September 2008, or your truck licence on or before 9 September 2009, you are automatically entitled to a Driver CPC qualification, known as ‘acquired rights’.

To keep your Driver CPC, you must then undergo 35 hours of periodic training over the next five years, and in each subsequent five year period throughout your professional driving career.

Training is on a one-day-per-year basis (minimum of 7 training hours each day).

If you are maintaining both a bus and a truck CPC entitlement you must complete 42 hours of training over each five year period. The RSA strongly recommends that dual licence holders undergo the vehicle specific modules in the same CPC year.

Periodic training is compulsory and is designed to help you be:

- A better safer and socially responsible professional driver
- A more environmentally aware, fuel efficient and cost conscious driver
- Physically healthier

In Ireland CPC Periodic refresher training is only provided by RSA approved trainers at RSA approved training centres. When booking training check to make sure your trainer and centre are approved by the RSA. Unapproved training will not count towards your Drivers CPC.

If you don’t qualify for ‘acquired rights’ for Driver CPC

If you obtain your bus licence on or after 10 September 2008 or your truck licence on or after 10 September 2009 you don’t qualify for acquired rights and must obtain your ‘Initial CPC’ qualification.

There are four steps in this process.

To become a professional bus or truck driver and obtain your ‘Initial CPC’ qualification you first must pass:

- Step 1 – The new truck, the new bus or the new Combined Truck and Bus theory test as appropriate. (This new theory test also permits successful candidates to apply for their learner permit).
- Step 2 – A two-hour case study theory test
- Step 3 – The standard 90-minute driving test.
- Step 4 – A 30-minute practical knowledge test.

Before applying for a bus or truck learner permit you must hold a Category B licence, and also pass a medical exam.

Please note: If you obtained your bus or truck learner permit before 30th September 2014 you will need to complete the CPC Step 1 theory test (set out at step No 1 above).

In addition, you must then maintain your Driver CPC by completing the Periodic refresher training of at least 35 hours of training over each subsequent five year period as mentioned above. If you are maintaining both a bus and a truck CPC you must complete 42 hours of training over each five year period.

Test locations

The Driver CPC bus/truck test and practical test can be carried out in any existing bus/truck test location, but not every type of vehicle can be tested at all centres. You should enquire beforehand as to which type of vehicle can be tested in each test centre.

Theory tests

The Driver CPC theory tests are part of the Driver CPC process, which is mandatory for all new professional drivers.

- Step 1: Drivers must first pass the relevant theory test and obtain their learner permit
- Step 2: Drivers then must take and pass their CPC Case study theory test/s.

CPC Step 1:

You have a number of options depending on what licences you want to get and what tests you have already completed. Option 1 – applies for either a bus or truck theory test. This test consists of 100 multiple choice questions - you must correctly answer at least 74 of them to pass either the bus or the truck exam. Option 2 – applies for a combined bus and truck theory test. This test consists of 140 multiple choice questions. If you want to drive buses and trucks, you may opt to take the combined bus and truck exam. You must correctly answer at least 104 questions to pass this combined bus and truck exam. If you have already passed either one of the new bus or truck theory tests since 30th September 2014 - you may then choose to add the alternate category by passing the bus module or truck module test (as appropriate). These Module tests consist of 40 questions. To pass you must correctly answer at least 30 questions.

CPC Step 2:

Step 2 consists of three case studies which are short scenarios that describe various situations a driver might face in a typical driving day. There are 15 questions in each case study (45 in total). To pass, you must correctly answer 28 of the 45 questions, with a minimum of 5 questions correctly answered on each case study.

To prepare for any of these theory tests

Study material including advice on how to prepare for both the new exams and the CPC case study tests is available from Prometric Ireland. Visit www.theorytest.ie.

CPC Step 3:

The CPC standard driving test

When successfully completed, the standard driving test, which lasts for approx. 90 minutes, entitles a driver to apply for their driving licence in the relevant category

CPC Step 4:

This test is also conducted by the driver tester in the driving test centre and is usually taken directly after the standard driving test and using the same vehicle.

A vehicle must be available for the test, which is a practical knowledge test lasting approx. 30 minutes. It covers areas such as

- safety
- passenger comfort
- legal matters relating to driving
- vehicle loading and stability
- ability to deal with an emergency
- physical risks involved in driving

Booking a test

To book a Driver CPC theory test go to www.theorytest.ie. To book a Driver CPC standard driving and practical knowledge test go to the RSA's online booking facility at www.rsa.ie. If you wish, you can attend training in RSA-approved training centres to help you prepare for your Driver CPC examination.

Proof of certification

Drivers with acquired rights – applying for a CPC Qualification Card

For drivers who held ‘acquired rights’ - your licence will have an issue date before the September deadlines in the relevant category as proof of your acquired rights. When you complete your periodic training and apply for one, you will be issued with your CPC qualification card. Check this carefully as if you did not already hold a licence before the start dates you do not hold a drivers CPC qualification and any periodic refresher training completed will not count – you must obtain the correct Drivers CPC first.

Newly qualified drivers – applying for a CPC Qualification Card

After you have passed your Driver theory test, the case study tests and the two practical driving tests, you should first apply for and be the holder of a full licence. You should then download an application form for a Driver CPC Qualification Card from www.rsa.ie. Complete and return the form to the Driver Education Section, RSA, Primrose Hill, Ballina, Co Mayo. F26 V6E4. You can generally expect to receive your card within 10 working days

Exemptions

Driver CPC certification is not required for drivers of vehicles used:

For non-commercial purposes, e.g., driving as a volunteer; drivers of emergency or rescue vehicles e.g., Gardai, Defence forces, Ambulance and Irish Prison service.

For registered RSA approved Driving Instructors who are giving driving instruction.

In the course of someone’s work, provided that driving the vehicle is not the driver’s principal occupation, e.g., a plumber using a light truck to transport their plumbing materials.

Vehicles with a maximum speed not exceeding 45 km/h

See Appendix 12 for the complete list of exemptions.

There is no exemption to the requirement for a CPC qualification for drivers wishing to take out a learner permit/full licence for category C or CE when under the age of 21, or for category D or DE when under the age of 24.

If you have any queries about whether your driving duties require you to hold a drivers CPC card check with your Transport Manager, with your legal advisor, with your Insurance Company, or consult the RSA. Where a doubt exists, the RSA recommends that you undergo the CPC training. However, clarification may ultimately be decided by the Courts.

More information on Driver CPC is available from:

Driver Education Section

Road Safety Authority

Moy Valley Business Park
Primrose Hill
Ballina
Co Mayo
F26 V6E4

It is recognised that many people who will participate in this training may be owner/operators, while others will work for transport organisations. Please note, any time the text mentions ‘company’ or ‘your employer’, those who are owner/operators should consider this to refer to them. This training material will contain references to best practice in relation to specific areas which all professional drivers should follow. Local arrangements or manufacturers guidelines for your vehicle may differ, and should be followed. In areas where the term ‘must’ refers to legislation, this should be read as absolute.

Penalties for non-compliance with Driver CPC Regulations.

| Possible Fines for the Driver | Euro |
|--|--------|
| Driving while not the holder of a valid CPC Card | €2,000 |
| Driving while not carrying a valid CPC Card | €1,000 |
| Failing to produce a valid CPC Card to a Garda or an RSA Transport Officer | €1,000 |
| Driving with fraudulent documentation | €5,000 |
| Possible Fines for the Employer/Operator | |
| Allowing a non-compliant person to drive a vehicle | €5,000 |

OVERALL OBJECTIVES OF THE DRIVER CPC PROGRAMME

The purpose of the CPC training programme is to confirm and expand on the existing knowledge and skills of each driver, ensuring professional drivers continue to be safe, courteous and fuel-efficient drivers who drive from a road-sharing perspective.

It is intended that the development of a defensive driving style - anticipating danger, making allowance for other road users – together with rational fuel consumption, will have a positive impact both on society and on the road transport sector itself.

In particular, it is designed to ensure that drivers know

- the characteristics of the transmission system in order to make the best possible use of it
- the technical characteristics and operation of the safety controls in order to control the vehicle, minimize wear and tear and prevent disfunctioning
- how to load the vehicle (goods) with due regard for safety rules and proper vehicle use
- how to load the vehicle (passenger) with due regard for safety rules and proper vehicle use
- how to ensure passenger comfort and safety
- the regulations governing the carriage of goods
- the social environment of road transport and the rules governing it
- the regulations governing the carriage of passengers
- the risks of the road and of accidents at work
- how to prevent criminality and trafficking in illegal immigrants
- how to prevent physical risks
- their responsibility as a driver for managing their own health and only to drive when medically fit to do so
- the importance of physical and mental ability
- how to assess emergency situations
- how to adopt behaviour to help enhance the image of the company
- the economic environment of road haulage and the organisation of the market
- the economic environment of the carriage of passengers by road and the organisation of the market
- how to optimise fuel consumption



Typical Driver CPC Training Arrangements

The RSA sets down standards for the CPC Training Organisations to follow. If you are not satisfied with any of the training room arrangements, please raise the matter with your CPC Trainer in the first instance. If it is not possible to resolve the issue, please refer to the CPC Training organisation. Finally, if you remain dissatisfied, please bring the matter to the attention of The Manager, Driver Education Section, RSA, Primrose Hill, Ballina, Co. Mayo. F26 V6E4.



GROUP GROUND RULES

The course trainer will facilitate a discussion aimed at agreeing a set of `Ground Rules` by which the class agrees to abide.

By abiding by these rules the class will;

- Cover the required material
- Finish on time
- Not have people disrupting the training
- Be able to concentrate
- Not be distracting each other

By agreeing a set of rules together we all have an opportunity to clearly understand what is expected of ourselves and others.

By obeying your agreed rules, drivers can be confident that they will be able to avoid issues like those listed above. The day will be more enjoyable and easier to follow if we all observe the set of agreed ground rules.

Please consider what sort of things can or should be included and contribute to the discussion.

You may wish to note what has been agreed by the group in the box below.

Agreed Ground Rules

Outline of a typical training day.

The trainer will firstly carry out a registration session, gathering each participants details, including name, driver number and PPS Number. Drivers should produce their Driving Licence to the trainer.

If a driver should inadvertently attend the wrong training module, additional significant costs will be incurred by him or her to complete a further training day to correct the error.

The trainer will then carry out a short briefing session outlining the days agenda and informing drivers on typical housekeeping arrangements such as break times, emergency procedures, no smoking rules, no phone calls, etc.

The trainer will then carry out introductions during which he/she and all course participants will give a short introduction of themselves and a brief description of their driving career to date. These introductions will help the trainer to plan the delivery of the days training. During the course, the trainer will seek to engage each participant and draw on their driving experiences to date, good or bad.

Directive 2003/59/EC as amended by Directive (EU) 2018/645.

The table below sets out the training aims for this CPC Module 2.3 along with an indication of the EU Directive requirements being covered.

MODULE 2.3 OBJECTIVES

Directive text

Ability to anticipate, assess and adapt to risks in traffic.

- To be aware of and adapt to different road, traffic and weather conditions
- To understand how to prepare and plan a journey during abnormal weather conditions
- To be familiar with the use of related safety equipment and to understand when a journey has to be postponed or cancelled due to extreme weather conditions
- Anticipate forthcoming events
- To adapt to the risks of traffic, including dangerous behaviour in traffic or distracted driving through the use of electronic devices, eating, drinking, etc.
- To recognise and adapt to dangerous situations and be able to cope with stress deriving therefrom, in particular in relation to the size and weight of the vehicle and vulnerable road users such as pedestrians, cyclists, persons with limited mobility and powered two-wheelers
- To identify possible hazardous situations and properly interpret how these potentially hazardous situations may turn into situations where crashes can no longer be averted, and selecting and implementing actions that increase the safety margins to such an extent that a crash can still be averted in case the potential hazards should occur
- To reduce the environmental impact of driving

To make drivers aware of the risks of the road and of accidents at work

- Types of accidents at work in the transport sector
- Road accident statistics
- Involvement of lorries/coaches
- Human, material and financial consequences

Ability to assess emergency situations

- Behaviour in an emergency situation
- Assessment of the situation
- Avoiding complications of an accident
- Summoning assistance
- Assisting casualties and giving first aid
- Reaction in the event of fire
- Evacuation of occupants of a lorry/bus passengers
- Ensuring the safety of all passengers
- Reacting in the event of aggression
- Basic principles for the drafting of an accident report



Driver CPC Module Number

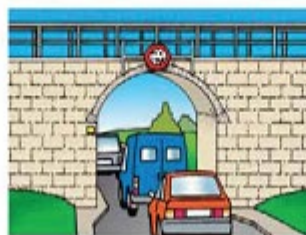
2.3

MINIMISING RISKS AND MANAGING EMERGENCIES IN ROAD TRANSPORT

Session 1

CONTENTS – SESSION 1

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SECTION A – ROAD SAFETY QUESTIONNAIRE

The following questions are based on road safety issues. Please tick the box opposite whatever answer you think is correct.

1. How can 'sleep apnoea' affect a professional driver?

| | |
|---|--|
| a) It means the driver had a good night's sleep. | |
| b) It means the drivers circadian rhythm is balanced. | |
| c) It means the drivers sleep pattern was disturbed. | |

2. Who is responsible for ensuring that the driver of a bus is trained in the use of a fire extinguisher?

| | |
|---------------------------|--|
| a) The bus operator. | |
| b) The driver. | |
| c) The CVRT inspectorate. | |

3. A person has driven for 4 hours and then does 'other work' for 2 hours. What should s/he do next?

| | |
|--|--|
| a) Drive for 30 minutes. | |
| b) Drive for 2 hours. | |
| c) Stop and take a break of at least 30 minutes. | |

4. Can you overtake on the outside lane of a Motorway when you are driving a vehicle which is limited to a maximum speed of 90 km/h?

| | |
|---|--|
| a) Yes. | |
| b) No. | |
| c) Only when you have checked that it is safe to do so. | |

5. What is the minimum height of the LUAS electric cables.

| | |
|----------------|--|
| a) 7.5 metres. | |
| b) 6 metres. | |
| c) 6.5 metres. | |

6. Where should the red warning triangle be placed on a Motorway?

| | |
|---|--|
| a) It should not be placed on a Motorway. | |
| b) Approximately 20 metres behind the vehicle. | |
| c) Approximately 100 metres behind the vehicle. | |

7. When should the fuel filler cap be checked?

| | |
|------------------------------------|--|
| a) During the 'cockpit drill'. | |
| b) During the 'walkaround checks'. | |
| c) When uncoupling a trailer. | |

8. Are you required to inform your employer if you are taking medication for a health condition?

| | |
|--|--|
| a) Yes. | |
| b) No. | |
| c) Only if you are a full-time driver. | |

9. What is the number to call to report a bridge strike?

| | |
|-------------------|--|
| a) 112. | |
| b) Your employer. | |
| c) (01) 8555454. | |

10. If your ABS fails, how should you brake in an emergency?

| | |
|--|--|
| a) Use cadence braking. | |
| b) Maintain heavy pressure on the pedal. | |
| c) Maintain light pressure on the pedal. | |

11. When driving at night on an unlit road which of the following should you be most aware of?

| | |
|------------------------------------|--|
| a) The speed limit. | |
| b) Pedestrians with dark clothing. | |
| c) Potholes. | |

12. At a speed of more than 50 km/h what is the recommended clearance to pass a cyclist?

| | |
|----------------|--|
| a) 0.5 metres. | |
| b) 1 metre. | |
| c) 1.5 metres. | |

13. When driving towards a school you see a group of children on the pavement. You should

| | |
|---|--|
| a) Reduce your speed and check your mirrors until you are well past them. | |
| b) Change down a gear to create more engine noise as a warning. | |
| c) Increase your speed and check your mirrors as you pass them. | |

14. You have been driving your vehicle for most of the week and have taken the required breaks. Nevertheless you feel tired. You should

| | |
|---|--|
| a) Force yourself to stay alert. | |
| b) Stop and take a further break. | |
| c) Increase your overall speed to reduce the journey times. | |

15. Narcolepsy is a medical condition which must be reported to the NDLS. (National Driver Licensing Service). What is narcolepsy?

| | |
|---|--|
| a) It is an imbalance in blood sugars. | |
| b) It is a difficulty with breathing when under stress. | |
| c) It is a chronic sleep disorder. | |

16. You have been celebrating a family occasion the previous night. You should

| | |
|---|--|
| a) Only drive on local routes for several hours. | |
| b) Not drive until you have checked that all the alcohol is clear of your system. | |
| c) Drink a caffeine and sugar drink to boost alertness. | |

17. You are making a left-hand turn on a busy intersection on a wet night. You notice a cyclist in your left-hand mirror. You should

| | |
|---|--|
| a) Not complete the turn until the cyclist has gone on their way. | |
| b) Complete the turn with a wider turning circle. | |
| c) Drive close to the kerb to compel the cyclist to stay behind. | |

18. You are driving a vehicle on a wet night which has a greasy windscreen. It is recommended that you should

| | |
|--|--|
| a) Switch the wipers on to high speed. | |
| b) Drive with the high beams on at all times. | |
| c) Stop as soon as possible in a safe place and clean it thoroughly. | |

19. How many Penalty Points does the driver incur on conviction for driving a vehicle which does not have a CVRT displayed? (Certificate of Vehicle Roadworthiness).

| | |
|-------|--|
| a) 2. | |
| b) 5. | |
| c) 3. | |

20. Your vehicle has 'Cyclops' Mirrors fitted. These mirrors

| | |
|--|--|
| a) Do not distort visibility. | |
| b) Provide good visibility at night. | |
| c) Cover some of the vehicles blind spots. | |

SECTION B – THE EU ROAD SAFETY STRATEGY 2021-2030

18,844 people lost their lives in road traffic in the EU in 2020, 10,847 fewer than in 2010, representing a 37% decrease on that year.

Since 2010, the EU27 achieved an overall reduction in road deaths of 24%, which equates to a 2.7% annual average reduction.

The EU target of halving road deaths by 2020 has not been achieved.

Both deaths and serious injuries carry a huge cost to society.

In monetary terms alone, the yearly cost of road crashes in the EU has been estimated in a new study to be around €280 billion, equivalent to about 2% of GDP.

EU Strategic Action Plan for Road safety.

In 2018, the European Commission (EC) adopted its EU Strategic Action Plan for Road Safety which included a new target to halve road deaths by 2030 compared to 2020 levels, as well as, for the first time, a target to halve the number of seriously injured over the same period.

The EU Road Safety Framework (2019) set up a new governance framework with four themes including:

- infrastructure safety,
- vehicle safety,
- safe road use, including speed, alcohol, drugs, distraction and the use of protective equipment,
- the emergency response, as well as the two cross-cutting issues of enforcement and training.

The European Commission has adopted the EU Road Safety Policy Framework 2021-2030, outlining specific policy measures planned for 2021-2030, and building on the EU Strategic Action Plan on Road Safety published in May 2018. The Commission's proposals include;

- A new target to halve road deaths in the EU between 2020 and 2030 as well as, for the first time, a target to reduce serious injuries by the same amount.
- Specific measures to be introduced by member states to reduce road deaths and serious injuries, in light of the new targets.
- Road Safety Key Performance Indicators (KPIs) to be measured across EU member states.
- New funding to be provided to support road

safety, including the establishment of a "Safer Transport Platform".

- New legislation to be introduced on road traffic enforcement, driving licences and automated vehicles.
- Stronger enforcement measures to be introduced on areas such as drunk driving, drug driving and driver distraction.
- Updated legislation to take account of new vehicles and new technologies, such as micro-mobility (e-scooters) and automated driving.

The Road Safety Framework proposes new Key Performance Indicators (KPIs) against which EU Member State performance will be analysed,

- Clearer priority measures for action as well as a detailed road map against which performance is measured, and delivery is made accountable to specific bodies, e. g., An Garda Síochána, the RSA (Road Safety Authority) and the HSA (Health and Safety Authority).
- Prioritisation of measures to reduce serious injuries such as tackling speed - especially in urban areas
- Policy measures on issues such as driver distraction and drug driving enforcement;
- Legislation, instead of voluntary commitments;
- Recognition of the need to revise and update legislation in the medium term (i.e. in 2025).
- The General Safety Regulation for new vehicles will be updated to encompass new technological developments as they come on stream.

VISION ZERO

**NO ROAD DEATHS
OR SERIOUS INJURIES BY 2050**

Ten-Year Government Road Safety Strategy - first step to 'Vision Zero'

The aim of the government's new road safety strategy is to reduce the number of deaths and serious injuries on Irish roads by 50% over the next 10 years. This means reducing deaths on Ireland's roads annually from 144 to 72 or lower and reducing serious injuries from 1,259 to 630 or lower by 2030.

There will be a projected €3.8bn investment in road safety during first phase of the action plan to 2024.

The strategy is the first step in achieving the 2020 Programme for Government commitment of bringing Ireland to 'Vision Zero'. This is intended to eliminate all road deaths and serious injuries on Irish roads by the year 2050.

This Road Safety Strategy commits to reducing road trauma through focused, measurable actions, deeper existing partnerships, new partnerships & collaboration, transformation, and stronger governance.

For the 2021–2030 strategy, seven Safe System priority intervention areas have been adopted:

- **Safe roads and roadsides.** To improve the protective quality of our roads and infrastructure.
- **Safe speeds.** To reduce speeds to safe, appropriate levels for the roads being used, and the road users using them.
- **Safe vehicles.** To enhance the safety features and roadworthiness of vehicles on our roads.
- **Safe road use.** To improve road user standards and behaviours in line with traffic legislation, supported by enforcement.
- **Post-crash response.** To improve the treatment and rehabilitation of collision casualties.

- **Safe and healthy modes of travel.** To promote and protect road users engaging in public or active transport.
- **Safe work-related road use.** To improve safety management of work-related journeys.

The adoption of the Safe System approach underpins this 2021–2030 strategy and Ireland's long-term goal of achieving Vision Zero (i.e. zero road deaths or serious injuries) by 2050. Vision Zero was formally adopted in Ireland's Programme for Government in 2020 and underpins the EU Road Safety Policy Framework (2021–2030).

Definition of a traffic-related crash

Not all crashes involving pedestrians and/or cyclists are considered to be traffic-related. A definition of road traffic accidents is those accidents:

- Which occurred or originated on a way or street open to public traffic;
- Which resulted in one or more persons being killed or injured;
- In which at least one moving vehicle was involved.

These accidents therefore include collisions between vehicles, between vehicles and pedestrians, and between vehicles and animals or fixed obstacles. Single-vehicle accidents, in which one vehicle alone (and no other road user) was involved, are included. Multi-vehicle collisions are counted as only one accident, provided that the successive collisions happen at very short intervals.

No speed, no mass, and no protection

Speed is a fundamental risk factor in traffic. Firstly, speed is related to crash rate. Several studies have concluded that higher vehicle speeds are related to an increase in crash rates and injury severity.

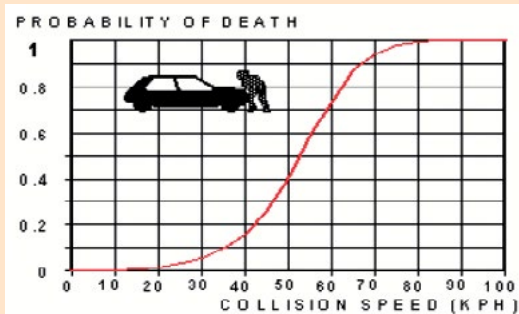
For any given road, clear physical relationships lead to higher severity of injury outcomes as speed increases. When the collision speed increases, the amount of energy that is released increases as well.

Part of the energy will be 'absorbed' by the human body. However, the human body tolerates only a limited amount of external forces. When the amount of external forces exceeds the physical threshold, severe or fatal injury will occur. Hence, higher speeds result in more severe injury. This is particularly true for occupants of light vehicles, when colliding with heavier vehicles, and for vulnerable road users, such as pedestrians and cyclists when colliding with motorised vehicles.

Goods vehicles and passenger services vehicles

When a heavy and a light vehicle collide, the occupants of light vehicles are far more at risk of sustaining severe injury. This is because the energy that is released in the collision is mainly absorbed by the lighter vehicle. Pedestrians, cyclists and moped riders have the largest risk of severe injury when colliding with a motor vehicle. The difference in mass is huge and the collision energy is mainly absorbed by the lighter “object”.

For a collision between a vehicle and a pedestrian, the following relationship between speed and survival chance was established:



Drivers attitude

Whether experienced or not, external pressures can sometimes cause drivers to drive to the limits of their competency and beyond. One of the most important aspects of driving safely, whatever the speed, is that the driver must have the correct attitude before setting out on their journey and maintain this attitude during the journey regardless of any external pressures that come to bear on them. Remember that driver assistance aids are not fool-proof.

In addition, pedestrians and cyclists are completely unprotected – no iron framework, no seatbelts and no airbags to absorb part of the energy.

Nevertheless, inappropriate speed remains a greater factor than mass differences in contributing to numbers of severe accidents.



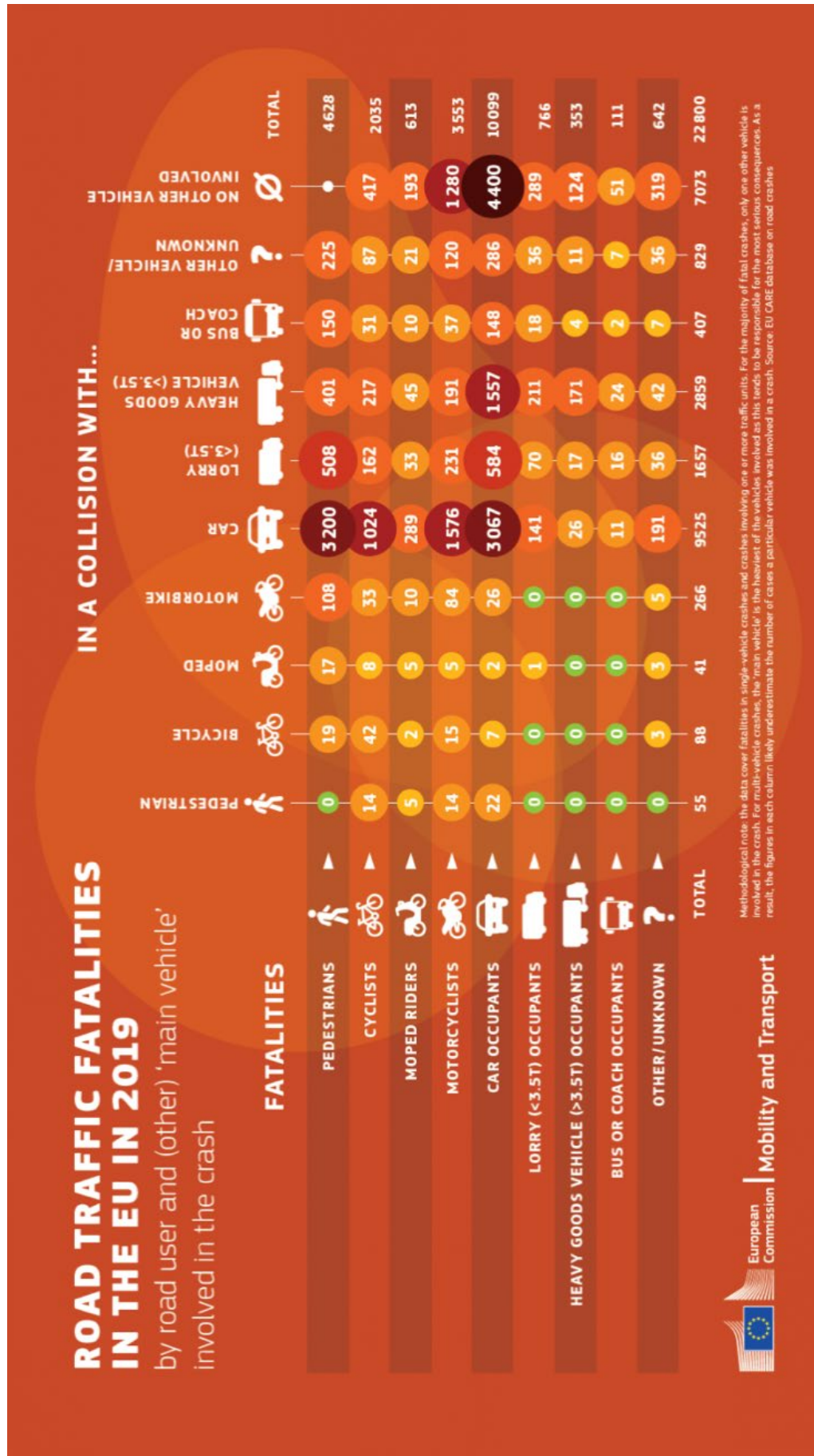


Chart of accident types.
Figures are subject to change.

SELF-ASSESSMENT OF KNOWLEDGE

Please complete the following questions to assess your understanding of the module so far.

Q.1 How many people were killed on the roads in the EU in 2020?

Your Response

Q.2 What does Vision Zero aim to achieve?

Your Response

Q.3 If hit by a vehicle at 60km/h, what are the chances of a pedestrian being killed?

Your Response

Q.4 How many pedestrians were killed in collisions with HGVs in the EU in 2019?

Your Response

Q.5 How can a drivers attitude affect their behaviour on the road?

Your Response

SECTION C – DRIVING IN DIFFERENT WEATHER CONDITIONS

You should ensure on your daily walkaround checks that all lights and reflectors – including the side and rear reflector strips, indicators, side marker lamps, number plate lights and hazard warning lights are clean and in good working order.

Driving in different conditions can involve wind, rain, snow or frost and the loss of grip a vehicle experiences on a road surface encountering any of these conditions.

Good weather conditions can create their own hazards as a very bright day can cause drivers to misjudge distances and can also cause glare and eye fatigue.

Driving in different weather conditions

As a professional bus or truck driver, your work will inevitably require you to drive in different weather conditions. These conditions will change with the seasons but will include driving in

- bright sunny conditions
- dark cloudy conditions
- fog
- rain or floods
- snow or sleet
- ice
- high winds

At night time, any combination of the conditions outlined above always makes driving more difficult.

You will be trying to keep to a delivery schedule or a timetable to get your goods or passengers to their destinations safely and on time.

When planning your journey, you should be aware of any traffic reports and weather warnings issued by the Meteorology services.

You may also have contacts in your destination area who can give you some advice regarding weather and road conditions there before you set out.

Frosty weather

Driving in frosty weather brings on the likelihood of slippery road surfaces.

If your steering feels lighter than usual, you could well be driving on ice.

If your vehicle does not respond as usual to acceleration when moving off, the drive wheels could be spinning on ice.

Braking on icy road surfaces should be gentle and done over much longer distances than normal –

it can take up to ten times longer to stop on ice than on a clear dry surface, and longer still when travelling downhill.

This is more pronounced with articulated vehicles and when towing a trailer.

Vulnerable road users such as children, pedestrians, cyclists and motorcyclists are more likely to experience skids or slips and may stop suddenly or fall when on icy surfaces.

You should drive much more slowly than usual and avoid any sudden braking, steering, gear changes or acceleration, as these actions can induce a skid.

Some road surfaces could be treated with salt or grit which will help tyre grip, but you may suddenly drive on to an untreated stretch where your vehicle could skid.

This is more difficult to recognise at night where black ice may be present but invisible.

Snow

Always ensure that your vehicle is Winter ready.

Heavy falling snow, hail or sleet reduces visibility for you and for other road users.

Your wipers and demister system should be used to keep the windscreen clear.

A crust of frozen snow can build up on your headlights and indicator lenses and make them less effective.

Be particularly alert in shaded areas.

Other road users may not see your vehicle clearly as their visibility could also be reduced.

If snow or slush covers the radar sensors, some safety systems may not operate properly or at all.

You should ensure that all safety systems are kept clear and functional.

You should be aware that snow and ice can accumulate on the roof area of a bus or on a truck cab and on the box body of a truck, and be a hazard to other road users, including cyclists and pedestrians, when it slides or is blown off.

As with icy surfaces, braking distances can be up to ten times longer than normal on hard packed snow, and harsh acceleration, braking and steering should be avoided.

A steep road camber may tend to make your vehicle slide from its normal straight line.

Ascending or descending steep hills will make it much more difficult to control your vehicle, as tyre grip and braking is greatly reduced.

Road signs and road markings can be obscured by snow lodging on them, and footpaths, kerbs, verges and drains can also be hidden in deep snow.

Local Authority grit or salt trucks may be in operation but all traffic should travel at reduced speeds.

This will affect your delivery schedule or timetable, and may have knock-on effects for passenger connections.

Overtaking a gritting truck will mean that you are travelling on an untreated surface which is likely to be much more slippery than the one you were on before overtaking.

Road surfaces are particularly slippery when there has been a partial thaw, and have refrozen.

If your vehicle becomes stuck in snow, engage the rocking mode if one is fitted. It may enable you to escape from the rut.

If not, you will have to call on a tow service.

Remember to switch it off as soon as you are in the clear as considerable damage can be done to the driveline if the diff-lock is still engaged while turning left or right.

If your vehicle becomes stranded, you should consider alerting the Gardai to your location, especially if your vehicle could present a hazard to other road users.

Use a higher than normal gear and gently accelerate either forward or in reverse if the way is clear. You should know where the tow bolt should be attached both to the front and to the rear of your vehicle, and always carry the tow bolt.

In some countries you may be required to carry snow chains. If so, you should know how to use them.

Restrictions may be imposed on some routes at certain times of the year.

It is advisable to always carry - and wear - a high visibility jacket, work gloves, and wear protective footwear.



Example of Motorway snow.

Fog

Driving in dense fog should be avoided if possible.

It is very difficult for you to see other road users and for them to see you, both to the front and to the rear.

You should switch on your dipped headlights and fog lights, front and rear, but remember to switch the fog lights off when the fog has cleared, as the high intensity lenses can dazzle other road users in normal conditions. They can also make the brake lights less conspicuous.

You should drive only at a speed that will enable you to stop the vehicle safely within the distance you can see to be clear.

Traffic may be stopped in front of you, and following traffic may run into the rear of your vehicle when you brake.

At night, do not switch on the high beam headlights, as they can reflect light back through the windscreen and reduce your visibility.

If an impatient driver tries to overtake you, give them as much space as possible. If they meet an oncoming vehicle they may veer closely to your vehicle.

Likewise, be prepared to meet an oncoming driver on your side of the road who is overtaking another vehicle, possibly with no lights on.

Some reflective studs, road markings and rumble strips can be helpful in establishing your position on the road, but may not always be present.

Remember that oncoming drivers may also be relying on them for their position.

High winds

High winds can affect the stability of most large vehicles, especially on elevated or exposed stretches of roads and bridges. Unladen and high sided vehicles are most at risk of being blown off course, or of being overturned, by strong side winds.

Strong gusts of wind can catch a driver unawares, and cause the vehicle to veer to one side with little or no warning, or can catch an oncoming driver unawares, whose vehicle may be blown into your path.

Pedestrians, cyclists and motorcyclists are particularly vulnerable in windy weather where umbrellas, rain hoods and helmets may prevent them from hearing or seeing your vehicle approach.

The possibility of fallen trees or branches, or of fallen power lines always exists, and these are much more difficult to see at night.

You should listen for weather forecasts and traffic reports before setting out on your journey, which may

provide useful information on your intended route.

Ferry sailings are likely to be delayed or postponed by severe winds, which will mean your delivery schedule will be affected.

Heavy rain

Driving in heavy rain means that your visibility, and that of other road users is reduced.

You are depending on your wipers and demister to keep the windscreen clear, so it is vital that they are in good condition.

Your wiper blades should be checked regularly and replaced when they show signs of wear.

When following behind other vehicles, spray will blow back on to your windscreen, so you should stay back further than normal.

This can be made worse when the road is muddy or where there has been an oil-spill, where a film of oil can be blown back on to your windscreen which greatly reduces visibility.

Regular windscreen washer fluid may not clear the windscreen effectively.

In such a case you should stop in a safe place as soon as possible, and clean the windscreen thoroughly.

Those conditions are made much worse at night when oncoming headlights will create glare which is very difficult to see through.

Spray from your own wheels can also affect other road users, and your spray suppression equipment should be secure and in good condition.

Reducing your speed can reduce the spray, which can improve visibility for other road users.

Spray can also build up on your mirrors and distort the view in them.

When rain falls following a long dry spell of weather, the road surface can be greasy and tyre grip is reduced.

Braking distances are longer on wet roads, so you should allow more space between your vehicle and the vehicle in front.

Driving in heavy rain also gives rise to the possibility of floods, or pools of water lying on the road.

You should avoid splashing pedestrians, cyclists and motorcyclists with surface water from your wheels.

Driving through floods can adversely affect steering and braking, and should be done at slow speed. This also helps to avoid aquaplaning.

Other vehicles may create bow-waves which can raise the level of the water.

Flood water may enter electronic compartments on your vehicle and cause damage.

It can also enter luggage or low-profile cargo compartments and contaminate the contents.

Smaller vehicles can become stuck in flood water and the road can be completely blocked.

Vehicles

Vehicles will respond in different ways to the way they are driven, depending on size, weight, condition and age.

If driving an unfamiliar vehicle, drivers should always ensure that they familiarise themselves with the primary and secondary controls, and whether the vehicle is loaded, part loaded or unloaded.

Your vehicle must be in roadworthy condition at all times and should be maintained in accordance with

the manufacturers specifications. It should be able to cope with the various road, weather and traffic conditions which may be encountered. If your vehicle is equipped with DRLs (Daylight Running Lights) they must be in good working order.

Generally, most DRL systems only operate to the front of the vehicle and do not show any lights to the rear, so in murky conditions your vehicle may not be easily visible to following drivers. Where conditions warrant it, you should switch on the dipped headlights which also activate the tail lights and side marker lights. As an additional safety precaution if you have to stop unexpectedly on the road, e. g., due to a checkpoint, roadworks, livestock, accident, etc., you should switch on your hazard warning lights to warn following traffic that you are stopped and they should not try to overtake you.



SELF-ASSESSMENT OF KNOWLEDGE

Please complete the following questions to assess your understanding of the module so far.

Q.1 How does heavy rain affect braking distances?

Your Response

Q.2 Name four types of vulnerable road users.

Your Response

Q.3 How should you brake on icy roads?

Your Response

Q.4 What should you do if another driver overtakes you in dense fog?

Your Response

Q.5 What dangers can occur when driving in high winds?

Your Response

SECTION D – DRIVING IN DIFFERENT ROAD AND TRAFFIC CONDITIONS

Traffic congestion is an increasing problem on the roads, and can lead to frustration and delays when delivery deadlines and connections are missed and customers complain.

Rush hour traffic delays in particular are well known to be generated by large numbers of people traveling to and from work and school in the early morning and late afternoon periods.

Where traffic conditions allow and the road ahead is clear you should try to drive at a steady speed that is within the speed limit of the road and of your vehicle.

You should always drive at a speed which will enable you to stop the vehicle safely on your own side of the road within the distance you can see to be clear.

Driving in different road conditions

Urban driving is generally done at lower speeds, but requires you to be particularly alert for multiple actions by large numbers of other road users, most of whom will be impatient to go about their own business and will give little thought or have little understanding of the concerns of the professional driver.

Unpredictable behaviour by other road users must be recognised and dealt with in a safe and considerate manner.

Your vehicle may be too wide for the lane markings which are in place, and may have to occupy a lane and part of an adjoining lane.

You may need to take extra road space when making a left hand or right hand turn.

This can cause frustration and annoyance to other road users who may not understand why you are taking so much road space and may react impatiently, or do something dangerous, such as try to overtake/pass where it is not safe to do so.

Cyclists, motorcyclists or pedestrians may try to overtake/pass on the left hand side of your vehicle and find themselves caught between your vehicle and the kerb.

In addition to forward observation, close monitoring of your mirrors is essential in urban driving conditions, in order to ensure that accidents or incidents are avoided.

Open road and motorway driving is generally done at higher speeds than on urban roads, and traffic is usually more free-flowing.

However, the higher speeds can cause the traffic situation to change much more quickly than on other roads.

Stopping distance is increased when travelling at higher speeds.

Regular use of the mirrors/mirror cams is essential to check for following traffic.

Traffic from side roads or slip roads may try to join your lane with little allowance for safety or for your speed.

You should be patient and allow them to go on their way.

Route planning

Route planning is an important element of a drivers day when arranging collections and deliveries.

It may be useful to have an alternative route in mind just in case the original route is blocked.

You should listen for traffic reports on a regular basis.

Bus drivers should make full use of the bus corridors which enable them to by-pass some of the longer traffic queues, and collect and deliver their passengers in reasonable time to and from their destinations.

If you are to travel on a route which is not familiar to you, check carefully beforehand using a map or suitable sat-nav to establish the best route to use.

You should not attempt to read the map or written directions while you are driving.

Satellite navigation systems can be helpful, and up to 9 journey destinations can be programmed in to them at any time, but they should not be relied on completely as they can be out of date, or can be designed for cars rather than for large vehicles.

As such, they may not highlight features such as low or weak bridges, weight and axle restrictions, tunnels and narrow roads.

You should not allow any sat-nav system, or any type of technology to distract you or obscure your vision from the road ahead.

If you get lost, you may have to reverse for a distance.

You may be able to call for directions using a mobile phone, but you should not use a phone while on the move.

If you are on a motorway, you must not stop to make a call – you must leave the motorway and find a safe place to pull in and stop.

The shortest route may not always be the quickest or the safest.

Check for low or narrow bridges, roads or bridges with weight restrictions, stretches of road which may be too narrow for large vehicles to meet, one-way roads or roads which do not permit left or right turns at some junctions, and roads which may have sharp bends or corners which your vehicle may not be able to negotiate.

If possible you should allow plenty of time for your journey.

Bus and coach drivers normally have to drive in accordance with a passenger collection and delivery timetable which they cannot alter, and therefore must cope with the traffic conditions which they encounter en route.

Bus and coach drivers must not drive ahead of their set schedule.

Forward planning

Other road users may do something suddenly and without any warning – move off, change lane, stop, turn left or right or reverse, and you must be constantly reading and assessing their behaviour in order to plan your own safe course of action.

Children, pedestrians, the elderly, people with a disability, cyclists, motorcyclists, car and van drivers as well as bus and truck drivers may do something unexpectedly and you must be ready to deal with it safely as soon as it arises.

All animals such as dogs, cats, cattle, and horses can present situations which require careful assessment and attention.

The size and noise of your vehicle can be an aggravating factor where animals are concerned, and can cause them to panic.

If a dog or cat runs onto the road, you should try to avoid it but do not swerve or stop in a manner that could endanger your passengers or other road users.

Drivers are obliged to take directions from persons in charge of animals on the road, and must stop if requested to do so.

In some areas there may be warning signs about animals such as ponies, deer or livestock being on the road.

The road may be muddy or greasy in the vicinity of animals.

At night, drovers may use lights to warn drivers of animals on the road.

At night time, traffic is much more difficult to deal with due to reduced visibility and sometimes poor lighting on vehicles.

Headlight, taillight, side marker, brake light, indicator and number plate bulbs can blow, and make a vehicle much less visible.

Side and rear markings can be muddy or missing.

Visibility is made worse when you are dazzled by oncoming traffic.

The lights on your own vehicle should be checked at the daily walkaround check and any which are defective should be repaired before starting the journey.

All lenses should be cleaned regularly.

Hazard recognition

Driver error is a feature of nearly all collisions on the road. The following attributes are essential for hazard recognition and negotiation

- correct attitude,
- near, middle and far distance scanning of the road and the environment,
- recognizing, anticipating and prioritizing hazards
- forming a safe and achievable driving plan
- manoeuvring your vehicle accurately and smoothly

Hazard recognition is the ability to look well ahead to see what other road users are doing or are likely to do, which will have a bearing on what you will do yourself.

This will help you to anticipate what other road users may do, and to plan your own driving to allow for their actions.

When you see a change in driver behaviour or in the traffic pattern up ahead that could cause you to slow down or to alter course or to stop, you should ease off the accelerator and let your vehicle reduce speed gradually, rather than leaving it late to react and then having to brake sharply.

Sharp braking should only be necessary in an emergency.

The traffic situation may have resolved itself by the time you get there and you may then be able to resume your journey with the minimum delay.

This will require fewer, if any gear changes, less fuel consumption and less stress on yourself.

Stationary hazards include:

- Junctions
- Low bridges
- Low cables
- Railway crossings
- Road surface/works
- Temporary traffic lights
- Traffic islands
- Road signs
- Tram crossings and tram infrastructure
- Street furniture, e.g. lamp-posts, bins, bollards
- Pedestrian/zebra crossings
- Tunnels
- Speed humps/pinch points

Moving hazards include:

- Rear-view mirrors striking pedestrians or cyclists
- Pedestrians
- Cyclists
- Motor cyclists
- Other vehicles
- Animals

Environmental hazards include:

- Snow
- Ice
- High winds, etc.
- Low sun
- Rain
- Glare
- Shadows
- Hedges
- Road surface conditions – floods, oil slick, potholes, mud, leaves, chippings, gravel
- Spilled loads.

Economical driving

Many studies have shown a strong relationship between eco-driving, improved fuel economy and reductions in emissions.

Exhaust emissions from the use of fossil fuels are a cause of increasing concern to many people who are worried about the damage which is being caused to the environment.

Some cities around Europe now penalise or ban the use of heavy vehicles in certain areas, and it is likely that this trend will spread to more cities over time.

It is likely that the use of battery powered or gas powered vehicles will increasingly become the norm in urban environments.

By improving your hazard perception and forward planning skills, you can make maximum use of the vehicles momentum.

By doing this, you will avoid late braking and harsh acceleration.

An economical driving style helps to reduce the number of gear changes that might otherwise be needed – for example, when approaching traffic lights, a junction, a roundabout or other potential holdups, you may be able to time your approach to avail of a gap in traffic so that you do not have to come to a complete halt.

If you can keep the vehicle moving, you reduce the number of gear changes, reduce wear and tear on the clutch, brakes and tyres, reduce fuel consumption and exhaust emissions, reduce stress and inconvenience on yourself, and reduce noise pollution.

It is not always necessary to change up and down the gearbox through each gear in sequence - block gear changing should be used whenever it is appropriate to do so.

Where possible, use Cruise Control if it is fitted to your vehicle, but you should not allow it to lull you into a false sense of security.

Traffic conditions can change very rapidly and you must be fully alert to be ready to disengage the cruise control when necessary.

It takes much longer to stop a large heavy vehicle from a given speed than a smaller lighter vehicle, and your reaction time is crucial in getting to the brake pedal in good time.

It is important to have a fuel monitoring programme in place which can quickly identify any vehicle which appears to be consuming more fuel than other similar makes and models on similar operations.

Any excessive use should be investigated for engine problems such as a faulty fuel pump, faulty injectors, blocked filters, or leaking pipes or connections.

The fuel tank cap, straps and brackets should be secure and overfilling of the tank should be avoided as fuel expands in hot weather and can overflow the tank and is lost to evaporation.

Diesel spillages will predominantly take place where there are cambers on the road or at certain types of junctions, bends or roundabouts. This, coupled with wet or damp roads can become a lethal combination for the motorcyclist / cyclist / other road users, increasing the risk of serious crashes or fatalities.

A driver who may be on tight delivery deadlines may not use the accelerator smoothly and progressively, and may not make use of the vehicles momentum to allow it to slow down gradually.

Such a driving style consumes much more fuel than would otherwise be the case.

It takes much more fuel to get a vehicle moving from standstill than it does to keep it moving.





Example 1: If fuel costs €1.80 per litre and your vehicle is using one litre of fuel to travel 3 kilometres, it costs €60,000 to travel 100,000 kilometres.

By adjusting your driving style to achieve 3.3 kilometres per litre, it costs €54,545 to travel 100,000 kilometres – a saving of €5,455.

Example 2: If fuel costs €2.00 per litre, and your vehicle is using one litre of fuel to travel 3 kilometres, it costs €66,666 to travel 100,000 km.

By adjusting your driving style to achieve 3.3 kilometres per litre, it costs €60,606 to travel 100,000 kilometres – a saving of €6,060.

The figures above relate to a single vehicle. You should multiply accordingly depending on the size of the vehicle fleet.

Tailgating, or driving too close to the vehicle in front for the speed at which you are travelling will require you to apply the brakes and change gears more often than would have been the case if you had kept a safe distance from the vehicle.

Tailgating can cause rear-end collisions.

To maximise fuel economy, think 'high gear-low revs', and always try to keep the tachometer (rev-counter) in the green band.

Long periods of engine idling consumes fuel and produces a lot of exhaust fumes, so unless the engine is needed to power components on the vehicle it should be switched off when making deliveries or when on breaks.

Aerodynamic fairing helps to reduce drag on the vehicle by reducing wind resistance.

Correctly installed side and roof wind deflectors can improve fuel economy.

You should always source your fuel, and other fluids, from reliable suppliers in order to ensure the quality of the product.

Tachometer optimum range

Modern large vehicle engines have a fairly small optimum range in the engine revolution band, giving maximum output at minimal fuel consumption. Manufacturers provide driver guidance in this respect by marking the optimum range – usually in green – on the face of the tachometer (rev counter). The driver should aim to keep the needle within this optimum band, and should also remember that the build and characteristics of diesel engines are such that they are capable of pulling considerable weight at comparatively low rpm.

The environment

There is an increasing awareness of the impact of the transport industry on air quality and the environment.

The vast majority of goods and passengers are moved by road, and the volume is increasing year by year.

Vehicle emissions are an increasing cause of concern to modern society.

The EU has published plans to improve overall air quality - by 2050, the road transport industry must cut emissions by 60% compared with 1990 levels, and continue to reduce vehicle pollution after that. Vehicle manufacturers are striving to meet these reduced emission targets.

In Ireland, the Climate Action and Low Carbon (Amendment) Act 2021 was passed in July 2021.

It commits Ireland to:

- Reducing greenhouse gas emissions by 51% by 31 December 2030 compared to 31 December 2018.
- Achieving a climate neutral economy by 2050 - this is known as the 'national climate objective'.

A climate neutral economy is an economy with net-zero greenhouse gas emissions.

Net-zero emissions means the amount of emissions produced equals the emissions removed from the atmosphere - this is also known as 'carbon neutrality'.

The plan contains strategies to reduce emissions in areas such as energy, transport, agriculture, telecommunication, public service and waste management.

The EU's National Emission Ceilings Directive sets out emission-reduction commitments for 2030 for air pollutants including nitrogen oxide, sulphur dioxide and ammonia, carbon monoxide, lead and benzene.

The implementation of sustainable and innovative means of transport plays an important role in the EU's energy and climate objectives.

As societies become ever more mobile, EU policy supports transport systems to meet challenges such as

- congestion, which affects both road and air traffic,
- sustainability, because transport still depends on oil for most of its energy needs, which is environmentally and economically untenable

- infrastructure, because the quality of transport infrastructure is uneven across the EU, and
- competition, because the EU's transport sector faces growing competition from fast-developing transport markets in other regions

Most heavy vehicles are currently powered by diesel fuel and it is likely that that will continue to be the case for the foreseeable future, particularly for long-distance transport.

The EU Clean Fuel Strategy involves ongoing trials and development of alternative fuels such as

- Electricity: a common EU wide plug or battery charging system is an essential element for the roll out of this power source. To end uncertainty in the market, the Commission has announced the use of the "Type 2" plug as the common standard for the whole of Europe.

Remember that electrically propelled vehicles are almost silent and many road users may not hear them approach.

- Compressed Natural Gas (CNG),
- Liquefied Natural Gas (LNG),
- Hybrids, which involve a combination of battery power and an internal combustion engine.
- Hydrogen powered engines are also being trialled and results are being evaluated.

The roll-out of a refuelling and recharging infrastructure to support large numbers of gas or electrically powered vehicles is ongoing.

The introduction of the Euro 6 engine standard combined with low-sulphur diesel has significantly reduced the volume of air pollution which had hitherto been produced by diesel powered engines.

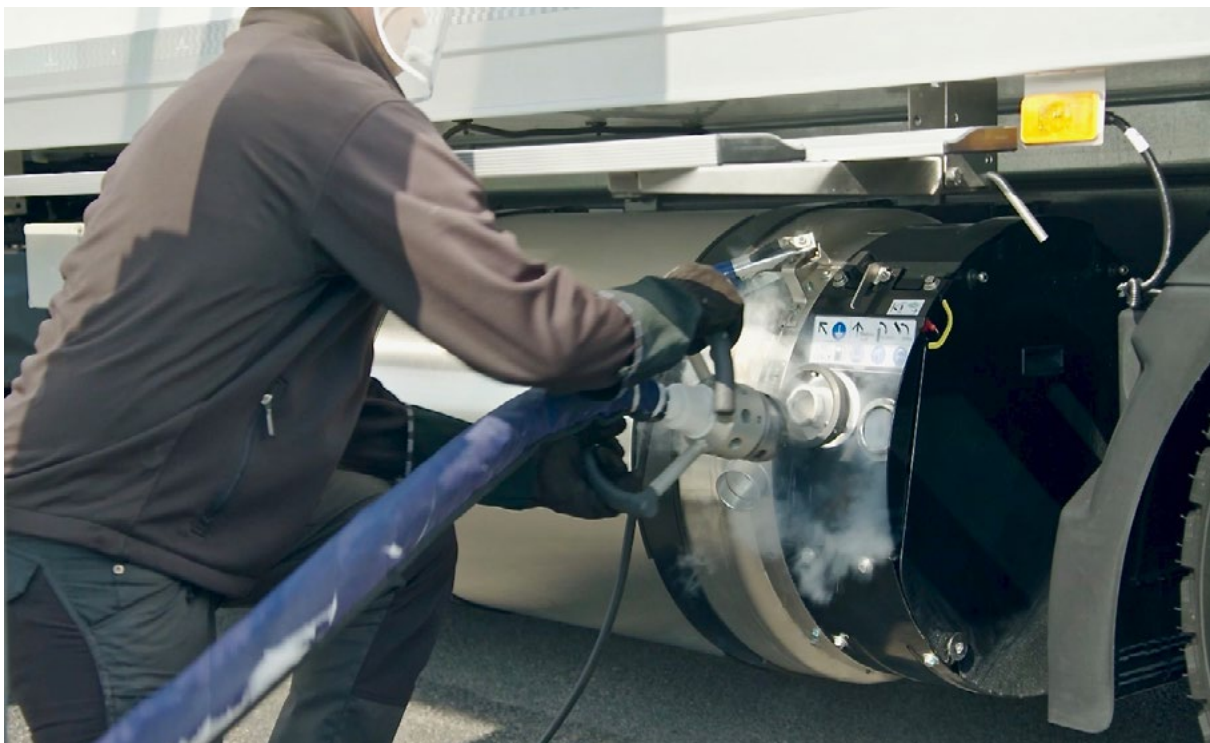
According to a recent emissions inventory, Heavy Duty Vehicles (HDVs) alone contributed over 19% of Ireland's total land transport emissions in 2019. Clearly, emissions from the freight sector are difficult to address as HDVs account for around 5% of vehicles on EU roads but are responsible for approximately 25% of all EU road transport emissions.



At an EU level, the need to reduce emissions from transport has led to agreement on implementing increasingly stringent emissions standards for new HDVs, together with a broad policy shift away from supporting conventional diesel and petrol technologies. New HDVs must emit 15% less CO₂ by 2025, and 30% less by 2030 relative to average emissions over the period from July 2019 to June 2020. As part of the transition to EU climate neutrality by 2050, Green Deal policy

objectives also include phasing out fossil fuels and transitioning transport to zero- or lower-emitting alternative vehicle technologies. These objectives will be supported in the short to medium term by the projected global rise in fossil fuel prices and by progressive increases to carbon taxes at EU Member State level.

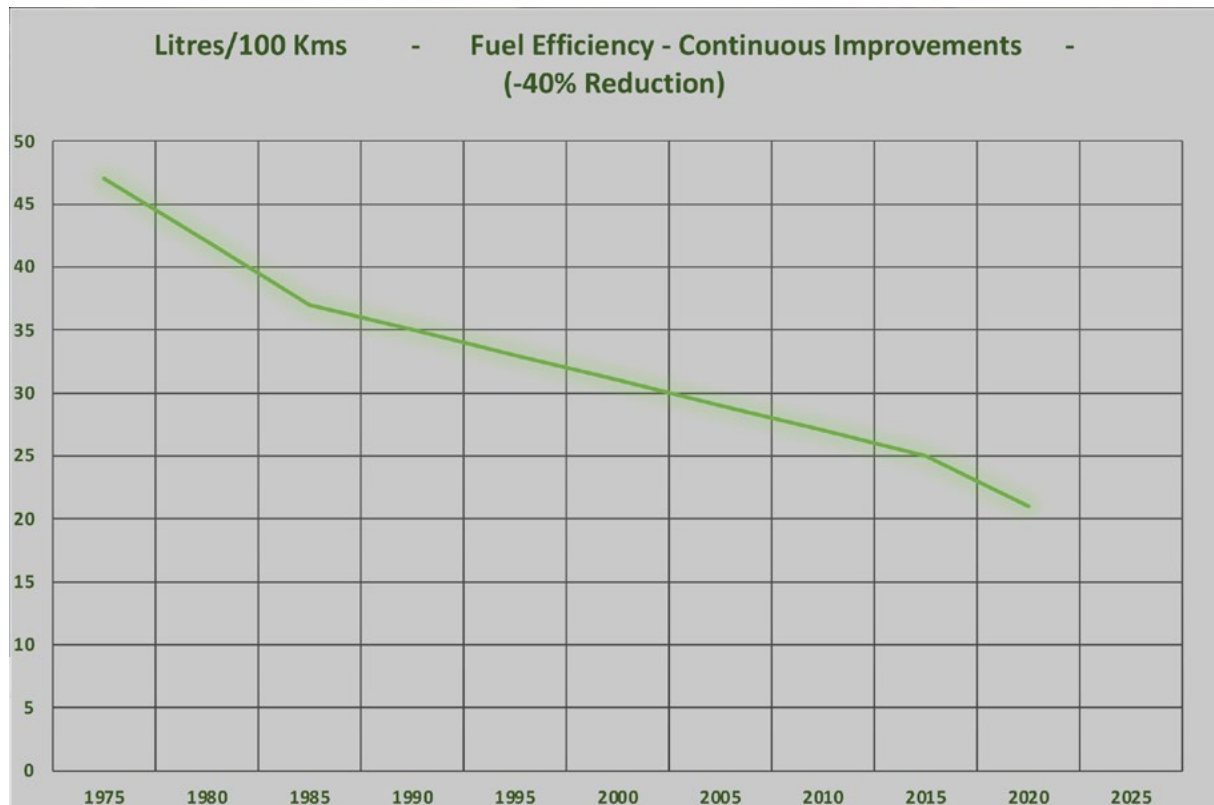
The EU strategy aims for a 90% cut in emissions by 2050, delivered by a smart, competitive, safe, accessible and affordable transport system.



Example of refuelling LNG.

| | Euro 0 | Euro I | Euro II | Euro III | Euro IV | Euro V | Euro VI |
|-------------------------------------|--------|--------|---------|----------|---------|--------|---------|
| NOx Nitro-nitrogen oxides | -20% | -55% | -61% | -72% | -81% | -89% | -98% |
| HC Hydrocarbon | -31% | -69% | -71% | -81% | -87% | | -95% |
| CO Carbon monoxide | -20% | -68% | -71% | -85% | -89% | | -89% |
| Particulate matter | | | -58% | -72% | -94% | | -97% |

Table showing evolution of emissions reductions.



In Ireland, the national roads network is c. 5,300 km in length, of which almost 1,000 km are motorways, from a total road network of approximately 100,000 km (the remaining being regional and local roads).

AdBlue

AdBlue is a product developed to minimise the harmful effects of exhaust gases.

It is a solution of urea and distilled water that is generally not harmful, not dangerous or flammable.

However, AdBlue may corrode some metals including copper and therefore should be kept away from contact with electrical components and connections.

As AdBlue may contaminate water courses, measures should be taken to prevent it entering drains and any spills should be quickly absorbed and cleaned up.

On the vehicle AdBlue is held in a separate tank or reservoir usually located near the diesel tank but can be located anywhere on the vehicle.

The AdBlue tank would normally be closed with a bright blue coloured cap and the filler neck has a much smaller opening (19 mm) than the diesel tank.

The reason for this is to ensure diesel is not mistakenly pumped into the AdBlue tank.

IMPORTANT; Any cross contamination of the vehicle's AdBlue reserves can do serious and irreparable damage to the sensitive dosing system.

Similar damage can also be caused by poor quality AdBlue.

The vehicles diesel fuel system can also suffer irreparable and costly damage if contaminated with AdBlue.

Tyres

Your tyres are your vehicles only contact with the road, and they must be able to cope safely with all the various types of road, weather, and traffic conditions you encounter.

Tyre grip depends on the weight and speed of the vehicle, the condition of the tyre tread and the tyre pressure.

It also depends on whether the road surface is smooth, anti-skid, dry, wet, icy, muddy, oily, loose and whether the vehicle is braking, accelerating or steering sharply.

Abnormal heat can melt the tar on the road surface and this can lead to reduced tyre grip.

Certain countries may impose restrictions on the use of roads due to higher road surface temperatures.

You should ensure that your tyres have a minimum tread depth of at least 1.6 mm across the tread area.

The recommended safer minimum tread depth is 3mm.

Ensure also that they are inflated to the recommended pressures, and that there are no cracks, rips, bulges, visible cord, or unusual tread wear on them which would warrant attention or replacement.

Many modern vehicles are fitted with a TPMS system (Tyre Pressure Monitoring System) to warn of tyre pressure problems, but tyres should be checked regularly with a reliable tyre pressure gauge.

If a tyre has been removed and/or replaced, it may be necessary to have the TPMS recalibrated.

The wheel balance should also be checked and corrected.

Tyre pressures should only be checked when the tyres are cold.

The tyre valves should be fitted with a good quality cap in order to prevent dirt or grit from entering the valve.

An under-inflated tyre can overheat and result in a blowout.

If your tyre pressures are incorrect, you may experience some of the following;

- Longer braking distances, especially on wet roads
- Less resistance to aquaplaning
- Oversteering and understeering
- Less precise steering, making it more difficult to negotiate bends, and to park

- Faster and irregular wear
- Reduced grip, due to a smaller contact area with the road surface
- Less driving comfort
- More tyre noise
- Extra wear on the suspension system
- Increased wear along the tyre's central tread
- Higher possibility of tyre damage from potholes and kerbs

Worn tread at the edges of the tread area suggests that they may be under-inflated.

Worn tread in the centre of the tread area suggests that they may be over-inflated.

Worn tread at one edge suggests that the steering tracking may be mis-aligned.

If your vehicle has dual wheels, check for rocks or other material that may become wedged between them.

Any such material can cause damage to the tyres concerned, and can also be launched backwards at high speed into following traffic.

It is not recommended to mix tyres with different tread patterns on the same axle-set.

Drive wheel tyres should not be fitted to the front steering axles, and vice versa.

Some tyres may have a chip fitted which will enable the tyre location, air pressure and tread wear to be tracked by means of a RFID. (Radio Frequency Identification Disc).

Tyres should have an 'e' or an 'E' mark to show they have been manufactured to EU standards. They should also have markings to show their



Examples of tyre wear

type, size, maximum speed rating, and maximum permitted weight.

Care should always be exercised when drawing into or away from the nearside kerb and when cornering or negotiating islands and roundabouts, as any scraping of the tyre wall may require replacement. 'Dead steering' (turning the steering wheel while stationary) should be avoided.

Tyre valves and wheel nut covers can also be damaged where high kerbs are encountered

Only tyres which have the correct technical specifications should be fitted to the vehicle.

In some continental countries the fitting of snow tyres is compulsory in winter.

Following a tyre replacement, the wheel nuts should be retorqued for tightness after driving approximately 100 km.

Wheel nuts should be regularly inspected as part of your daily walkaround checks.

Look for any loose or broken studs, or for any signs of corrosion, or any problems with the wheel rim such as cracks, distortion, scoring, or corrosion.

Any indications of a problem should be corrected before proceeding on a journey.

Tyre Failure

Tyre failure on one of the drive wheels or trailer wheels will not usually cause a crash.

However, failure of one of the front tyres could cause a loss of steering control.

To avoid tyre failure, check your tyres regularly during a trip.

There are some important things that drivers can do to handle a tyre failure safely.

- Know the signs that a tyre has failed
- Grip the steering wheel firmly with both hands
- Stay off the brakes.
- Recognise tyre failure signs. If you know that you have a tyre failure, you can do the right thing and do it quickly. The main sign of tyre failure is the sound. Although many tyre failures cannot be heard, the loud bang of a blow-out is an easily recognised sign. Many bus and truck breakdowns involve tyre failures or blow-outs. Not only are these dangerous in themselves by causing loss of control, but the resulting debris also presents a hazard to other road users.
- Vibration. If the vehicle thumps or vibrates heavily it may be a sign that one of the tyres has

gone flat. With a rear tyre, this may be the only sign you get.

- Feel. If the vehicle pulls to one side it could be a sign that one of the front tyres has failed.

Any of these signs should be a warning of a possible tyre failure.

If your vehicle suffers a front tyre burst or blowout you may hear a loud bang, and the stability of the vehicle will be severely affected. The failed tyre can twist around the tyre rim and could snatch the steering wheel out of your hands. Even with PAS (Power Assisted Steering) the vehicle will begin to pull strongly to one side. You should hold the steering wheel firmly to counteract the pull and maintain directional control of the vehicle. Do not apply the brakes unless it is necessary to avoid a collision, and reduce speed gradually to stop in a safe place.

Once the vehicle has stopped safely, check all the tyres.

A rear tyre blowout can cause the vehicle to weave about on the road, especially at higher speeds. Try to slow down gradually with gentle pressure on the brakes if there is safe space in front. With a trailer or semi-trailer, you may not notice a rear tyre blowout until you conduct a visual inspection at a stop. However, braking and cornering will be adversely affected.

Adjacent tyres may take the additional weight for a short period but they will be severely overloaded and will begin to overheat.

This may cause them to burst in turn.

You will need to call out your emergency tyre repair team.





Aquaplaning.

Aquaplaning occurs when travelling at speed and a layer of water builds up between your tyres and the road surface. Your tyres lose their grip and you can no longer steer or brake effectively.

You should ease off the accelerator and slow down gently until your tyres regain their grip.

Windscreen and windows

Weather conditions can have an adverse effect on visibility through both the windscreen and side windows.

Frost, snow, rain, mud, fog, low sun and condensation can all reduce visibility.

Before starting any journey, you should ensure that the windows are clean and clear both on the inside and on the outside, and that the wipers are operating efficiently.

It is good practice to regularly clean the inside of the windscreen and side windows as well as the outside, as an oily film can build up on them over time.

This can create particular difficulties with glare from oncoming headlights, or from bright sunshine.

In wet weather vehicles travelling in front can throw an oily spray back on to the windscreen which can distort the view through it.

Bugs and birds can smear the windscreen, and make it difficult for the wipers to clean it properly.

When cleaning the windscreen, the wiper blades should also be cleaned.

Where mirror cams are fitted, the lenses should be carefully cleaned and checked for correct alignment

The wiper blades should wipe cleanly and not leave streaks on the glass.

The windscreen washer reservoir should be topped up with the correct mix of windscreen washer fluid, and the washer lines should be unobstructed to allow free flow of the liquid onto the windscreen.

In icy conditions, the washer fluid can freeze at the nozzles.

Regular household washing-up liquid should not be used as it can leave streaks on the glass when it dries.

The demister system/air conditioner should be capable of keeping the windscreen and side windows clear of condensation once the heater has reached operating temperature.

The air vents should be correctly focussed to ensure the air flow is directed to where it is needed. The fan and the temperature gauge should be set to the correct settings for the requirements.

All obstructions such as cloths, papers, notebooks, waybills, delivery dockets etc., have the potential to cause blind spots or to block air vents and should be removed and stowed away safely.

SELF-ASSESSMENT OF KNOWLEDGE

Please complete the following questions to assess your understanding of the module so far.

Q.1 What speed should you always drive at?

Your Response

Q.2 Should you always rely on your sat-nav for directions?

Your Response

Q.3 What road features should you consider when planning a route?

Your Response

Q.4 What is 'hazard recognition'?

Your Response

Q.5 How can economical driving be achieved?

Your Response

Q.6 What does the Climate Action and Low Carbon Act 2021 commit Ireland to?

Your Response

Q.7 Name three types of alternative fuels to diesel.

Your Response

Q.8 What does AdBlue do?

Your Response

Q.9 What is the recommended minimum tyre tread depth?

Your Response

Q.10 What is recommended good practice regarding windows and windscreens?

Your Response

SECTION E – DRIVER WELLBEING

A drivers general health and wellbeing are critical safety considerations in the ongoing effort to reduce deaths and injuries on the roads.

A driver who is not fully fit to be in charge of a large vehicle may be a danger to themselves and to other road users.

Issues such as diet, exercise, drugs, alcohol, sleep deprivation, sleep apnoea, smoking, obesity, high blood pressure, diabetes, etc., can arise from time to time, and adversely affect their wellbeing and the onus is on drivers to recognise and deal with them in the most effective manner, even if that means attending their doctor.


Any medicines or programme which may be prescribed should be taken and adhered to.

These issues are dealt with in more detail in Driver CPC Module 3. (Health and Safety for the Professional Driver).

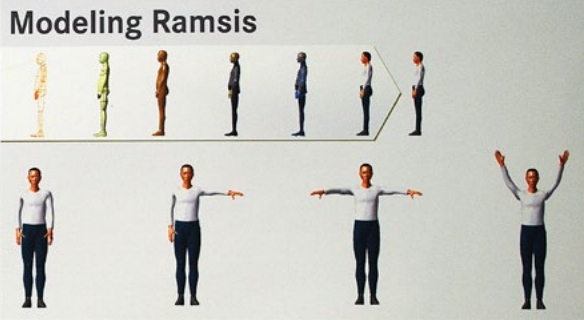
Ramsis

The Ramsis Family

- 3 major groups: body height, proportion and corpulence
- 12 Ramsis types as representatives
- Acceleration for the year 2015

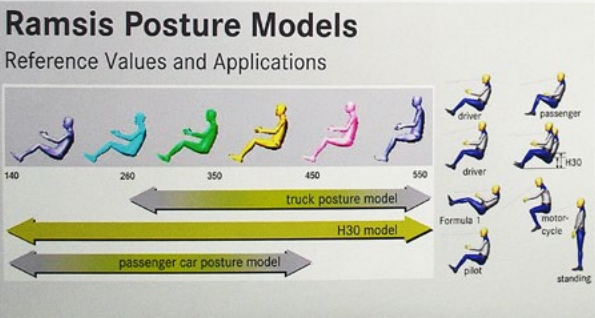


Modeling Ramsis



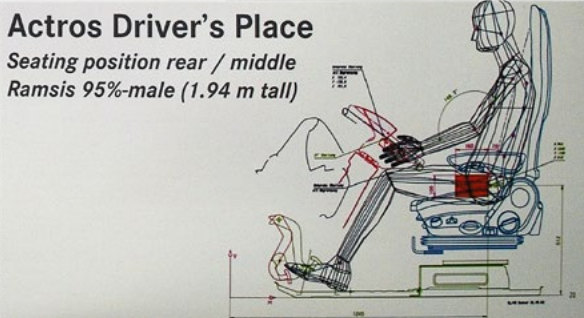
Ramsis Posture Models

Reference Values and Applications



Actros Driver's Place

Seating position rear / middle
Ramsis 95%-male (1.94 m tall)



Motor manufacturers are constantly striving to develop safe and comfortable vehicles for drivers and must take account of many different body types as illustrated in the Ramsis chart above. **As drivers come in different heights and sizes, you should always take the time to correctly adjust the seat, seatbelt, mirrors and steering wheel to suit your own body type and size before moving off.**

Driver distraction

Modern commercial vehicles are required to be fitted with a number of devices which aim to improve the driver's field of vision around the truck or bus. These devices can include up to seven individual mirrors and may also include a number of screens, monitors and see through door panels.

Some lobby groups and campaigners feel the solution to improving safety around trucks and buses is to add even more mirrors and devices. However, many drivers feel they are already at saturation point and the number of devices they have to work with can just as equally create distractions. This is especially true of retrofitted safety systems and screens which are often poorly positioned and may obscure the driver's view. This may arise where the driver is not consulted about the best placement for a system and positioning is left to the company selling the product, who will generally locate a device where it is easiest for them to install it.

While everyone must do all in their power to improve road safety, if you feel any particular additional system or equipment which has been added to a vehicle in anyway diminishes your field of vision or does not improve either road safety or your work as a driver, you should discuss your concerns with the transport manager or a person in authority to try to resolve the issue.

Driver distraction occurs when the drivers attention, which is critical for safe driving, is diverted toward another competing activity.

Distractions can often occur simultaneously – at times resulting in a complete loss of control. Distraction can be visual, manual and cognitive.

Based on international evidence it is estimated that driver distraction could play a role in 20-30% of all road collisions in this country.

This means that driver distraction could be a contributory factor in over 1,400 fatal and injury collisions annually.

Distractions from electronic devices such as the radio, mobile phone, sat-nav, air-con, on-board computer systems, instrument panel, eating or drinking on the move, preparing cash or cards for the Motorway toll booths, etc., can divert your attention away from the road and traffic conditions in which you are travelling.

Vehicle technology such as touch-screens, scrolling, swiping, media players, etc., can distract drivers attention from the job in hand.

As a professional driver you must not use a personal entertainment system through earphones

or headset, including blue-tooth type telephone equipment when driving. If you do use an in-vehicle system, play it at a volume that does not distract or prevent you from hearing emergency sirens or vehicle horns.

Adjusting the seat, mirrors, heater controls, volume or channel controls, cruise control, speed limiter etc. while on the move can temporarily divert your attention from the road and lead to a potentially dangerous situation.

While they are important, instrument panel messages such as tyre pressures, air gauges, fuel levels, speed limits, tachograph limits, lane departure warnings, etc. can all make demands on your time and cause you to lose concentration momentarily.

A driver should not take prolonged looks at them resulting in the loss of concentration or forward observation, and they should never take precedence over road safety.

When travelling at 90 km/h a vehicle is travelling at 25 metres per second.

This is equal to the length of three articulated trucks being covered in 2 seconds.

Even a one second distraction can cause a delay in getting your foot to the brake pedal with all the consequences that can ensue.

You should not eat snacks or attempt to drink anything while driving.

Mobile phones

Evidence shows that driver distraction is one of the major risk factors in causing road traffic collisions.

Mobile phones are reckoned to be the single biggest distraction for drivers.

You must not drive a vehicle while using a hand-held mobile phone.

The use of mobile phones while driving is illegal, and even holding a phone in the hand is illegal.

Making a call while driving will make you four times more likely to crash.

It is an offence, for which you may receive a fixed charge and up to 5 penalty points on conviction.

You must not send a text message or email or read a text message or email from a mobile phone while driving.

Reading text messages, and especially composing text messages, makes drivers take their eyes and minds off the road, and can create serious risks.

It is an offence for which a person will face a compulsory court appearance and a fine to be determined by the judge.

There is also the possibility of a prison term of up to 3 months to be imposed in cases of multiple offences in a 12-month period.

There is no option to take the lesser penalty of penalty points for this offence.

Texting while driving will make you twenty-three times more likely to crash.

It is estimated that it can take more than 4 seconds to read a typical text message.

When travelling at a speed of 90 km/h a vehicle will cover 100 metres in 4 seconds – the length of 4 articulated vehicles.

You may only use your mobile phone when you are driving if you are phoning 999 or 112, or you are responding to another type of genuine emergency.

The Road Traffic Act 2006 (Restriction on Use of Mobile Phones) Regulations 2014 make it an offence to send or read a text message from a mobile phone while driving a mechanically propelled vehicle.

These regulations apply to mobile phones which are not being held, i.e. to hands-free devices.

‘Text message’ in these regulations includes an SMS or MMS message, or an email.

‘MMS’ means a Multimedia Messaging Service

which sends messages that include multimedia content between mobile or fixed numbers.

‘SMS’ means a Short Message Service text message, capable of being sent between mobile or fixed numbers.

The Regulations do not make it an offence to speak via a hands-free device, nor do they make it an offence to touch a button on a hands-free device in order to answer a phone call.

Where cases come to court and, on conviction, the penalty can be:

- €1,000 maximum fine for a first offence
- €2,000 maximum fine for a second or subsequent offence
- €2,000 maximum fine and/or up to three months in prison for a third or subsequent offence within a twelve month period.

All fines and convictions are kept under constant review.

You should not use a mobile phone close to a vehicle carrying inflammable loads or in a fuel filling station in case of a spark caused by static electricity.

Drivers should be aware of all potential distractions, including social media, and not only those prohibited by law.

Ultimately, careful driving is the responsibility of each individual when they are in charge of a vehicle.



Use of a mobile phone is prohibited while driving.

Personal entertainment systems

As a road user, you should avoid using personal entertainment systems through earphones.

These systems – for example, personal radios and MP3 players – can distract you, and may prove dangerous when driving or crossing the road.

If you do use a personal or in-vehicle system, play it at a volume that does not distract or prevent you from hearing emergency sirens or car horns.

Bus or coach driver speaking while the vehicle is in motion

A bus or coach driver should not hold a microphone or any attachment when the vehicle is moving except where it is essential to speak in an emergency, or to deal with safety issues.

When operating a service for hire or reward at separate fares (not an excursion or tour or a sightseeing service) a driver may announce the location of the vehicle by means of occasional short statements so long as this can be done without distraction from the driving of the vehicle

A driver should only communicate with a 'relevant person' on an operational matter so long as this can be done without distraction from the driving of the vehicle.

A 'relevant person' includes an employee of the operator, a partner in an operations firm, an individual who is the operator, or the director of a company which is the operator.

EU Mobility Package

The EU Mobility Package was introduced in July 2020 with the aim of standardising three main issues in relation to Road Transport Operations within the EU

- Posting of Workers
- Cabotage
- Driver Hours including Rest Periods.

From 2nd February 2022, the following rules apply.

Posting of workers - Directive (EU) 2018/957

While working in another member state, the driver must be paid at least the minimum wage applicable to the state in which they are working, and not, as was the case previously, the minimum wage of their home country or where the vehicle is registered.

This rule applies when a worker is required to be

stationed in another member state for a period of time while performing their duties, such as long-haul international road transport.

Operators will have to report via the IMI system (Internal Market Information) where, when and for how long a worker is expected to operate in another member state.

The Internal Market Information (IMI) system is a multi-lingual platform which assists National, Regional and Local competent authorities involved in EU law enforcement to collaborate and share information.

Information which must be provided includes

- The identity of the operator
- The contact details of the Transport Manager or other contact person
- The drivers name, address and driving licence details
- The start date of the drivers contract of employment
- The projected start and end dates of the drivers posting
- The registration number of the vehicle involved
- The transport services performed – carriage of goods or passengers, international carriage, or Cabotage

During the posting the driver must carry

- The posting declaration in paper or electronic form
- Evidence of the transport operations taking place in the host Member State such as an e-CMR
- All tachograph records

After the posting, the operator must, when requested, send the following information to the host Member State via the IMI within eight weeks

- The drivers tachograph records for the period of the posting
- Copies of all CMR notes
- Details of the drivers remuneration during the posting
- Details of the drivers employment contract
- Time sheets relating to the drivers work
- Proof of payment of the drivers remuneration

Cabotage. (Directive (EU) 1072/2009).

Cabotage is the movement (including loading and unloading) of goods for hire or reward between two locations within a Member State by a vehicle which is registered in another Member State.

Where a haulier has delivered an international load to an EU country and holds an EU Community Licence, a maximum of three cabotage movements may be carried out in that host state within a seven-day period.

At the end of the seven-day period the vehicle must depart the host state for a minimum of four days.

Operators are not allowed to extend the 7-day period of operation by changing vehicles, as the driver (recorded via IMI) must also depart.

Cabotage operations are subject to the Posting of Workers rules outlined above.

Bilateral transport operations.

Bilateral transport operations are not subject to the Posting rules.

An example is where a driver enters France for multiple drops in France.

The driver reloads in Paris for the return journey to Rosslare.

The loading and unloading operations are not subject to the cabotage rules.

A CMR note must be available for each delivery.

Driver hours including rest periods. (Regulation 2020/1054, amending regulation 561/2006 and Regulation 165/2014).

Exceeding the daily and/or weekly driving times is allowed exclusively to enable the vehicle to reach a suitable stopping place and to the extent necessary to ensure the safety of persons, of the vehicles or its load, or in exceptional circumstances in cases where a driver needs to reach his/her place of residence or the employer's operational centre in order to take a weekly rest period, or a regular weekly rest period.

These two new derogations may be used when, due to unforeseen circumstances independent from the driver's or operator's will (weather conditions, congestion, delays at loading/unloading points, etc.), a driver is not able to reach one of the places indicated above for a weekly rest without breaching rules on daily or weekly rests.

For instance, a driver from a peripheral country engaged in long international journeys who, due to unforeseen circumstances which delayed the journey, is not able to reach his place of residence, would, relying on this provision, not need to spend 45 hours of a regular weekly rest in another place which is not far from his/her place of residence.

As indicated in the new paragraph 4 of Article 12 of the Regulation, the driver is required to indicate the reason for departure from the driving time

limits manually on the printout or record sheet or duty roster. This statement makes the driver accountable for the inserted information.

The extension of the driving times under the exceptional circumstances mentioned above must not result in shortening the rest period following this extension. As stated in the new paragraph 5 of Article 12 of the Regulation, any period of extension under this Article must be compensated by an equivalent period of rest taken en bloc with any rest period, by the end of the third week following the week during which the derogation has been applied.

For instance, a driver who has driven 56 hours in a given week (week 1) may drive two additional hours after having taken a break of 30 minutes in order to reach his or her home to take a regular weekly rest. In the subsequent week (week 2), the driver will have to ensure that s/he does not drive more than 32 hours. This extension of two hours will have to be compensated by an equivalent period of rest taken en bloc before the end of the third week following week 1.

Articles 34(6) point (f) and (7) of Regulation (EU) 165/2014 provide that drivers shall manually record the symbol of the country that they enter after having crossed a border of a Member State.

The obligation applies from 20 August 2020 in respect of vehicles equipped with an analogue tachograph and from 2 February 2022 in respect of vehicles equipped with a digital tachograph. The driver must stop at the nearest possible stopping place at or after the border.

Where the crossing of the border of a Member State takes place on a ferry or train, the driver must enter the symbol of the country at the port or station of arrival.

It is also important to note that, since 20 August 2020, drivers of vehicles fitted with an analogue tachograph are required to record the symbol of the countries in which the daily working period started and finished, as was already the case for vehicles fitted with a digital tachograph.

For more information see www.rsa.ie or transport.ec.europa.eu/transport-modes/road/mobility-package-i/market-rules-cabotage

**If you feel tired whilst driving,
don't ignore the signs**

Driver Fatigue

Fatigue is defined as a feeling of weariness, tiredness, lethargy, apathy, and lack of energy. It is different from drowsiness, which is a feeling of the need to sleep, whereas fatigue is characterised by a lack of energy and motivation. A feeling of indifference or not caring about what happens can also be symptoms of fatigue. While fatigue can be a normal and important response to physical exertion, emotional stress, boredom, or lack of sleep, it can also be a non-specific sign of a more serious psychological or physical disorder. Because fatigue is a common complaint, sometimes a potentially serious cause of it may be overlooked.

Fatigue is an ever - present danger for the professional driver, especially when driving late at night or in the early morning.

You should ensure that you get an adequate amount of good quality sleep and never exceed the tachograph driving limitations.

Fatigue is the decline in mental and/or physical performance that results from prolonged exertion, lack of quality sleep or disruption to the bodies circadian or clock rhythms.

It is a feeling of tiredness or exhaustion and being unable to think or work effectively.

A fatigued driver will be less alert and perceptive, less able to process information and will have slower reaction times than someone who is not fatigued.

A driver who is fatigued may nod off momentarily while driving with potentially very serious consequences which can lead to errors and collisions.

Fatigue results from an imbalance between work and life demands, as well as 'rest' and 'recovery' periods.

The human body's natural sleep/wake cycle means that most people feel sleepy twice a day - at night and in the afternoon. Drivers are therefore more likely to fall asleep when operating vehicles during those times.

Crashes caused by tired drivers are most likely to occur on long journeys on monotonous roads, between 2am and 6am, and 2pm and 4pm.

Changing the timing of activities to the night hours means being subject to reduced functional capability due to a lowered metabolic rate, and, during the subsequent (daytime) sleep, being exposed to the high metabolic rates that disturb sleep.

Chronic fatigue built up over a period of time can be associated with serious illness.

It is a major contributory cause of fatal and serious vehicle collisions and incidents and many vehicle incidents and collisions are caused annually by tired drivers.

These are usually severe because a driver who has nodded off momentarily cannot brake or take avoidance action while driving at speed.

Drivers are most at risk of fatigued driving;

- if you have not had a good night's sleep the night before
- if you have a sleep disorder such as insomnia or sleep apnoea
- if you have had less sleep than normal
- on journeys home after a night shift
- on long journeys
- on journeys after a long working day
- at night time and in the early morning hours
- after taking medicines which cause drowsiness

In order to help avoid feeling sleepy when driving;

- Make sure you are well rested before going into work
- Be aware that the most dangerous driving times are late afternoon, late at night and early morning
- If you have a sleep disorder you should get medical attention
- Lack of adequate rest over a period of time can result in a sleep deficit which could cause you to nod off while driving
- If you are continually tired, you should discuss this with your doctor
- Follow safe or legal limits on maximum driving times, minimum rest periods and the Working Time Directive.
- Aim to stop in a safe, quiet and secure location
- If you are concerned about your working hours, or if you just feel tired when driving, discuss these issues with your manager. You may be able to devise a solution which may ultimately prevent an accident.

Driver stress and road rage

Stress involves to varying degrees, anxiety, fear, anger, confusion and agitation.

Driving is a complex task, requiring full concentration and a calm attitude.

Heightened emotions resulting from stress, anger or feeling upset are a form of distraction that can significantly reduce a drivers' ability to recognise and respond to hazards on the road.

Research has found that drivers who suffer from work-related stress are more likely to speed and take other risks while driving, and are more likely to be involved in serious crashes.

All drivers are exposed to stressful driving situations on a daily basis, even if they do not generally suffer from stress in everyday life.

When a driver gets behind the wheel of a vehicle and starts driving they become involved in situations that raises their stress levels.

Some drivers react angrily to stressful driving situations - this is often referred to as 'road rage', and can be extremely dangerous.

People who drive aggressively often feel they are in a competition with other drivers.

In every situation, they want to win.

If you let them go first, you will not have lost - you are simply refusing to be involved in their behaviour.

Aggressive drivers may be under severe personal pressure or tension, and their responses may be difficult to predict.

Where you experience aggression, try to stay calm and be courteous.

Do not escalate the situation by making provocative statements or gestures, or flash the lights, or sound the horn.

Do not get out of the cab to confront the other driver.

Where you experience verbal abuse, do not take it personally – the more professional you are, the more the abuser will calm down. Research has shown that angry drivers are more likely to take risks such as overtaking dangerously, speeding, rapidly switching lanes, tailgating and jumping red lights.

Driving aggressively can in turn increase stress levels, which then becomes a vicious cycle.

Stress and anger combined at the wheel is a problem for many drivers.

The most common reason for this is the behaviour of other road users, followed by stress about personal issues such as loss or threat of loss, fear and feelings of helplessness.

Family traumas, relationship problems, financial worries, health worries and bereavement are also common causes of stress.

In studies of driver behaviour and driver stress the issues that show up as typical causes of tension include:

- Being stopped in traffic, or start-stop driving associated with congestion.
- Being lost, or caught in traffic flow where there is no opportunity to pull in to get directions.
- Missing or misleading traffic signs and road works.
- Impatient or aggressive driving by other drivers.
- Sudden or unpredictable actions by other road users that result in increased danger to you.
- Believing that other drivers are not concentrating on their driving.
- Lack of or late signalling by other drivers.
- Other road users not complying with traffic lights, road signs or road markings.
- Being subjected to abuse by other road users – gestures, flashing lights, sounding the horn,
- Being pressured to drive faster by vehicles following closely behind.
- Drivers cutting in front

- Drivers neglecting to switch on lights, or headlights incorrectly focussed.
- Being forced to brake hard by the careless behaviour of other road users.
- Unexpected detours.
- Inconsiderate parking by other drivers.
- Having to meet tight delivery deadlines.
- Other drivers not switching off their roof lights or beacons.

To reduce stress while driving, some points to consider include

- Adopt a professional driving attitude.
- Take deep breaths.
- Listen to music played at a low volume.
- Leave extra space in front of your vehicle.
- Allow extra time for your journey.
- Take a short break.
- Switch off the phone.
- Ease any tension in your arms and shoulders.
- Ensure the seat is properly adjusted for your posture.
- Get enough sleep.

All areas of life can cause stress.

Stress also causes changes in hormonal and cardiovascular activity, which affects physical wellbeing.

Increases in cortisone in the blood from a stressful situation raises blood pressure and can contribute to disturbing body sensations such as sweating, dry mouth, breathlessness and thumping heartbeat.

Stress can result in a combination of mental and physical symptoms such as sleeping difficulties leading to fatigue, and decrease or increase in appetite.

If you find yourself experiencing increased incidents of road rage it may mean you should take time out and try to reflect on what are the other issues underlying your anger at other drivers.

It is usually not just about 'other drivers' but about some frustration in your own mind.

You can improve your ability to cope when it does arise by recognising it and being honest with yourself, resting, relaxing, reflecting and adopting new ways of calming yourself and finally recovering from stressful times when it is unavoidable.

If possible, try to avoid those situations that cause you high levels of stress and minimise contact with stressful places, people and events.

It is recommended not to drive at all when in a heightened state of stress.

When you are stressed your usual range of concentration, abilities and skills are diminished.

Stressed people tend to drive faster, with less care and attention and with higher levels of risk-taking behaviour than non-stressed people.

If you are upset, traumatised or angry you should not drive.

Theft

Where a driver is a witness to, or is the victim of theft, it is important that no action is taken which gives rise to further danger or threat.

The driver should not attempt to take any aggressive action during a robbery.

The driver should

- Keep calm and do what is asked.
- Look for details such as appearance, clothing, eyes, build, scars, hair, accent, or other identifiers.
- Preserve the scene until the Gardai arrive, and get witnesses names and addresses if available.

Pandemic hygiene

Recent experience both nationally and internationally has shown that health epidemics can spread very rapidly from country to country and from person to person regardless of their employment or social standing.

Because of the long distances they travel and the large number of people they can encounter in a typical day, commercial vehicle drivers may be exposed to infections and should take all necessary precautions including social distancing, cough etiquette, hand hygiene and mask wearing to reduce or eliminate any risks. Your company procedures should be followed on all occasions.

Symptoms include

- Cough
- Difficulty breathing
- Fever – spread through inhalation or touching contaminated surfaces
- Headache
- Feeling weak
- Aches and pains

The drivers responsibilities include

- Be familiar with the company's pandemic response plans and procedures
- Maintain physical distancing

- Use and dispose properly of PPE (Personal Protective Equipment)
- Wash hands regularly
- Practice proper cough etiquette
- Ensure good hygiene
- Dispose of waste properly
- Comply with travel and movement restrictions
- Declare any contacts
- Comply with new safety systems
- Complete induction training
- Complete the company 'back-to-work' form



SELF-ASSESSMENT OF KNOWLEDGE

Please complete the following questions to assess your understanding of the module so far.

Q.1 Name three health conditions that can adversely affect a driver.

Your Response

Q.2 Name three things that can distract a driver

Your Response

Q.3 When travelling at 90 km/h what distance is covered in one second?

Your Response

Q.4 Are you allowed to hold a mobile phone in your hand while driving?

Your Response

Q.5 What are the warning signs for driver fatigue?

Your Response

Q.6 In what circumstances may the daily or weekly driving times be extended?

Your Response

Q.7 Name three ways you can reduce driver stress.

Your Response

Q.8 Are you allowed to text on a hands-free phone while driving?

Your Response

Q.9 What are three drivers responsibilities regarding the pandemic?

Your Response

Q.10 What should you do if you experience aggression by other road users?

Your Response

SECTION F – ACCIDENT REDUCTION

As a professional driver you should set a good example to other road users. You should always be aware of how other road users see your vehicle and why they might not understand why you take up certain positions on the road to make turns or to manoeuvre. A good attitude will help you through your day, and is safer for yourself and for others around you on the road.

Remember, we all have a responsibility to share the road safely with other road users.

Defensive Driving

As the driver of a large and/or heavy vehicle, you have a special responsibility both to yourself and to all other road users to ensure that you do not create or contribute to a situation on the road which could lead to a collision.

A professional driver should set an example to other drivers by ensuring that the vehicle is driven at all times with the utmost safety, courtesy and consideration.

Defensive Driving

- means looking after yourself, your vehicle, your passengers or your load
- is based on planning well ahead
- requires good observation and concentration
- means being in control, and
- means anticipating events

You can often anticipate or even predict what other road users are going to do.

You should consider and prepare for all possibilities in all situations.

Remember that you cannot brake or swerve like lighter, smaller vehicles can.

You must always drive:

- responsibly,
- carefully,
- considerably,
- courteously,
- in an eco-friendly manner.

You should demonstrate at all times that your standards are high and that you can drive a large vehicle with skill and safety.

It is important to understand that the right of way is not an absolute right of way.

You should proceed with caution, having regard for other road users.

Always give way to emergency vehicles.

By driving defensively, you will show that you care for the safety of all road users, including yourself, your passengers and your load.

When passing the scene of an incident or crash do not be distracted or slow down unnecessarily. This causes traffic congestion and may lead to a collision.

Cockpit drill

When entering the cab, always maintain the three points rule of contact by using the hand grips and steps provided.



Example of entering a cab using the three points of contact.

Adjust the seat, steering, and mirrors, and familiarise yourself with the cab layout and secondary and primary controls

Always wear your seatbelt – it is a legal requirement and is fitted for your safety. Seat-belt reminders are already mandatory on driver seats, and can be extended to all passenger seats. The failure to wear a seatbelt is still a leading cause of death on Europe's roads

Ensure you have a clear view from the driver's seat which enables you to have effective all round observation

Before driving any vehicle the driver's cab and "work station" must be kept free of any article that might interfere with the safe operation of the vehicle.

All notices displayed in the cab must be strictly adhered to and windscreens must be clear & clean at all times.

Ensure that all gauges and dials on the instrument panel are working and are not highlighting a problem.

Before starting your journey, make sure you know and understand the:

- Controls: where they are and how they work. (Including emergency door controls).
- Vehicle width, length, height, and weight
- Handling: the vehicle's characteristics
- Braking system. You should understand what Endurance braking system is fitted to your vehicle and know how to operate it.
- Safety systems fitted to your specific vehicle, e.g., Stability control, fire suppression etc.

When exiting the cab, ensure the handbrake is securely applied, neutral gear is selected and the ignition is switched off. Use the hand grips and steps provided – never jump from the cab to the ground.



Power Lines

Drivers of high vehicles, tipper trucks, excavators and lorry mounted cranes should be particularly careful when working near or under electricity cables, and should strictly adhere to any on-site instructions.

The electricity can arc more than a metre from a high-tension cable.

Transport Infrastructure Ireland (TII) is the state body responsible for Luas.

Transdev Ireland operate the Light Rail Transit System in Dublin called Luas.

The overhead wires contain 750vDC and are up at 6m unless indicated otherwise. (Source; TII FAQ sheet).

Safe Refuelling

- Wear appropriate PPE.
- Turn off engine.
- Do not smoke.
- Do not use your mobile phone - leave it inside the vehicle or turn it off.
- Do not re-enter your vehicle during fuelling.
- Do not overfill.
- Always follow the manufacturers recommendations regarding refuelling.

Unintended acceleration

To avoid unintended acceleration at the end of any driving period, driving shift or if handing the vehicle over to another driver, be professional, always apply the handbrake, select neutral gear and switch off the engine when parked.

Effective Observation

One of the most important skills which should be developed by drivers of large vehicles is the ability to anticipate the actions of other road users and to react correctly to changing road and traffic conditions. As a truck or bus driver, you must have good eyesight in both eyes – this is checked at each Licence renewal. As a professional driver, you must watch the road ahead constantly, to see what is happening and try to work out what might happen next.

You need to know what is happening at the edges of your vision and note what is happening out of the corner of your eye, and act on your observations. Check for

- vehicles about to emerge from junctions

- children running out
- cyclists and motorcycles
- pedestrians stepping out

Just looking is not enough. As a driver of a large and/or heavy vehicle, you will often have a better view of the road from your driving position than most other road users.

Look for clues. If you see a cyclist ahead glance round to the right, they may be intending to turn right into the next road, so be ready for it. Watch the actions of pedestrians as they approach kerbs. Adults and children sometimes change their minds and change direction suddenly, or even turn back after they have started to cross the road.

Before you change direction or speed, you must decide how any change will affect other road users. Cars or motorbikes which try to overtake will normally catch up with you much faster than you are moving.

You must always be aware of vehicles just behind you to either your left or right hand side as they come into your blind spot position. A quick sideways glance is often helpful before changing lanes on a Motorway or dual carriageway, or where traffic joins from the right or left, or when joining the main carriageway from a Motorway or dual carriageway slip road.

Do not take your attention off the road ahead for too long

Because of its size and design, a large and/or heavy vehicle will have more blind spots than smaller vehicles.

In order to observe other road users around you, to know what they are doing or going to do next, and to act correctly on what you see, you must adjust and use the mirrors properly and in good time, both off-side and near-side, before

- Moving off
- On the straight
- Overtaking
- Changing lane
- Turning right
- Turning left
- Slowing
- Stopping

Remember, however, that mirrors themselves can cause blind spots because of their size, location and position, and you must check carefully to ensure there is no other road user hidden in the blind spot.

You must be constantly checking all around and down the sides of the vehicle for any hazards, paying particular attention:

- for overtaking traffic coming up behind, or already alongside
- before signalling
- before changing lanes, overtaking, moving to the right, or turning right
- for cyclists or motorcyclists “filtering” up the nearside
- for traffic on your left when moving in two or more lanes
- to check when you have passed another road user, pedestrian, or parked vehicles before moving back to the left
- before changing lanes, after overtaking, moving closer to the left, leaving roundabouts, or before turning left to see where your wheels are in relation to the kerb or gutter

You must also be aware of pedestrians or cyclists who may be out of sight directly in front of your vehicle, especially at pedestrian crossings and in slow-moving congested traffic. The fitting of cyclops or front view mirrors on trucks is mandatory from 1 October 2012.

When moving off from a stationary position you must always check your blind spots by looking around you as well as using your mirrors, including any ‘cyclops’ mirrors fitted to your vehicle. In some vehicles - particularly those with high sided windows - it can be difficult to see to either side. However, you must ensure that there are no pedestrians, cyclists or other road users hidden in areas out of sight.



Example of cyclops mirrors

Speed

Increasing speed leads to an exponential increase in kinetic energy.

It is a statistical fact that drivers who drive at excessive speed for the circumstances they are in have a greater chance of having an accident.

Many drivers, including experienced drivers, will sometimes not see the potential danger in certain traffic situations and approach at too high a speed.

If a hazard presents itself they then have less time to react.

Road safety campaigns have the central theme that 'Speed Kills', and excessive speed does kill.

Depending on the type of vehicle, a pedestrian or cyclist hit by a moving vehicle at 30km/h will probably survive but if hit by a vehicle at 60km/h will most likely be killed.

Any speed, if inappropriate to the prevailing circumstances can be dangerous.

The objective of any driver training course is to teach the participant to be in the correct position, correct gear and travelling at the speed which is appropriate to the prevailing road and traffic conditions at all times.

Conditions that affect safety at any given speed include other road users, the prevailing road and traffic conditions, the driver, the vehicle, the weather and the road and vehicle speed limits.

Speed Limits

Speed limits are the maximum legally permissible speeds and should not be taken as the speed at which it is safe to drive. As we have already seen, many factors affect the vehicles handling and if any of these conditions are present the driver should always adjust their speed accordingly.

The onus is always on the driver to select the appropriate speed for the conditions. All roads have a maximum speed limit, and all vehicles have a maximum speed limit which may be lower than the maximum permitted road speed.

Remember – a speed limit is not a target.
When assessing what the correct speed is for any circumstance the fundamental rule is that you must at all times be travelling at a speed that enables you to stop the vehicle safely on your side of the road in the distance that you can see to be clear.

With effect from 1st February 2009 new Regulations came into force which have changed the maximum speed limits for buses and coaches when they are travelling on a Motorway or Dual-carriageway.

Speed limiters are fitted to buses/coaches designed to carry seated passengers only restricting their maximum speed to 100km/h.

- Single deck and double deck buses travelling on a Motorway or Dual - Carriageway can now travel at a maximum permitted speed of 100 km/h.
- Where a bus or coach is travelling on a normal road (not Motorway or Dual-carriageway) the maximum permitted speed is 80 km/h.
- A single or double deck bus or coach that is not designed for carrying standing passengers may use the outside lane of a Motorway or Dual Carriageway
- For a single or double deck bus or coach that is designed or adapted to carry standing passengers, the maximum permitted speed remains at 65 km/h on all roads. (Speed Limits SI 546 of 2008).

Speed Limiters are fitted to Large Goods Vehicles restricting their maximum speed to 90km/h.

- HGVs may travel at 90 km/h on a Motorway.
- HGVs (based on having an "ordinary speed limit" of 90 km/h) may not use the outside lane of a Motorway, i. e, the lane nearest the central median, that is, the outside lane (lane 2 or lane 3, depending on the number of lanes).
- HGVs (based on having an "ordinary speed limit" of 80km/h) may use the outside lane of a Dual Carriageway.
- Driving a HGV, subject to an ordinary speed limit of 90 km/h or less on the outside lane of a Motorway can incur a fixed charge of between €80 and €120 and up to 3 Penalty Points on conviction.

Local authorities can apply special speed limits at some locations i.e. schools, on different sides on a dual-carriageway, on selected locations such as a tunnel, where the limit may be lowered if one lane must be closed, where there is a series of bends and at road works.

Note; These speed limits are enforceable by law and under the present regulations breaching them could attract penalty points.

On the M50, variable speed limits have been introduced.

These allow traffic controllers to vary speed limits in response to collisions, roadworks, adverse weather conditions, congestion, and to facilitate emergency vehicles.

Enforcement of the speed limits is the responsibility of the Gardai.

Speed detection cameras

Under automatic speed enforcement systems, where a vehicle is exceeding the speed limit the registration number of the registered owner is captured by a camera and that person subsequently receives a fine through the post. In places where they have been implemented, such systems have

had a considerable impact in terms of a reduction in road deaths.

Speed measuring systems such as ‘average speed’ cameras have been introduced on some Motorways where vehicles are timed at a particular point and are timed again at a later point. If the time taken to travel between the two points suggests that the speed limit was exceeded, a Penalty Points notice may be issued to the registered owner.

Table of speed limits for different vehicles

| Type of Vehicle | Built up Areas | Regional or Local Roads | Ordinary Speed limit on National Roads (Primary or Secondary) | Ordinary Speed limit on a Dual Carriageway | Ordinary Speed limit on a Motorway | Permitted in outside lane of a Dual carriageway | Permitted in outside lane of a Motorway |
|---|----------------|-------------------------|---|--|------------------------------------|---|---|
| Car or Motorcycle | 30/50 km/h | 80 km/h | 100km/h | 100 km/h | 120 km/h | Yes | Yes |
| Bus/coach | 30/50 km/h | 80 km/h | 80 km/h | 100 km/h | 100 km/h | Yes | Yes |
| Bus (designed to carry standing passengers) | 30/50 km/h | 65 km/h | 65 km/h | 65 km/h | 65 km/h | Yes | No |
| Truck | 30/50 km/h | 80 km/h | 80 km/h | 80 km/h | 90 km/h | Yes | No |

This table is provided for information purposes only. Drivers should always refer to the most recent version of the Rules of the Road.



Example of bus designed for standing passengers.

Night Driving

When driving at night, it is important to use your headlights correctly to avoid dazzling other road users.

Make sure your mirrors, lights, indicators, reflectors, number plate lighting, windscreen and side windows are clean and in a serviceable condition.

Drive at a speed that allows you to stop within the distance covered by your lights.

Do not wear tinted or sunglasses at night (or in poor visibility).

Always use lights as appropriate to the conditions prevailing at any time of the day.

Allow time for your eyes to adjust from brightly lit conditions into the darkness and vice-versa, this advice also applies to driving in and out of tunnels.

Always use dipped headlights in built up areas at night as it helps others see you and aids your visibility.

- Ensure your lights are in a serviceable condition, give yourself time to adjust to dark conditions and remember it is more difficult to judge speed and distances at night and in dark conditions.
- If you are dazzled, the advice given in the Rules of the Road is; slow down and stop if necessary. Always watch for pedestrians or cyclists on your side of the road. If the dazzle is from an oncoming vehicle, avoid it by looking towards the verge (edge of your side of the road) until the vehicle has passed.

Stopping Distance

You should never drive at such a speed that you cannot stop safely in the distance you can see is clear ahead

- Whatever the weather
- Regardless of the type of road you are driving on
- Whether you are carrying passengers or goods
- Never drive so fast that you cannot see clearly ahead
- Keep a safe separation distance between you and the vehicle in front
- In good weather conditions use the 2-second time gap. This means that when the vehicle in front passes a fixed point, it should take you at least 2 seconds to pass the same point.

At higher speeds or in larger vehicles make this a 3 second time gap.

On wet roads, you will need to at least double the distance, and allow at least a 4 second gap

When driving in icy or snowy weather, stopping distance can be ten times greater than on dry roads.

Professional drivers should understand that following drivers need ample time to react, and as the temperature drops, tyre grip is reduced.

Do not tailgate. If a vehicle in front brakes heavily you need time to react and move your foot to the brake pedal. Your reaction time and perception time could be as much as 1.25 seconds.

Remember at 80km/h you'll have travelled approximately 28 metres in this time.

When you are waiting at traffic lights, or pedestrian crossings, or any type of crossing, you should stop a metre or two short of the white line, otherwise you may find it difficult to spot any approaching pedestrians who may start to cross as the lights change.

Also, when waiting in traffic queues keep a safe distance back from the vehicle in front.

If you stop in a tunnel, leave at least a 5 metre gap between you and the vehicle in front.

Factors which can affect stopping distance include

- Perception time
- Reaction time
- Vehicles reaction time – weight, suspension
- Vehicles brakes and braking capability
- Tyres – pressures, tread and grip
- Road surface – dry, wet, loose, greasy, mud, leaves, ice, snow,
- Speed

Traffic Lights

Traffic lights can be activated by timers, pressure pads in the road, motion sensors, infra-red beams, and by traffic controllers operating remotely via CCTV.

When Traffic Lights are on Green

You may proceed if the way is safe.

Look well ahead and decide how much traffic is waiting at each side of the junction you are coming to and ask yourself

- How long has green been showing?
- Can I stop safely from this speed if the lights change?

- If I have to brake hard, will the traffic behind be able to stop safely?
- Are there any vehicles ahead waiting to turn left or right?
- How will the weather and road conditions affect my braking?

Watch out also for green filter arrows which allow you to proceed in that direction even though the main lights are red.

When Traffic Lights are on Red.

You must stop at red traffic lights. However, you may be able to time your approach to the lights at such a speed that may enable you to keep your vehicle moving as they change to green. This can be especially important when driving a large or heavy vehicle uphill to traffic lights. You may be able to time your approach to avoid stopping completely and having to move off again from a standing start.

Watch out also for red arrows which prohibit you from going in that direction even though the main lights may be green.

When Traffic Lights are on amber

You must stop, unless you are so close to the stop line or lights that stopping would be dangerous.

Watch out also for flashing amber arrows which permit you to proceed in that direction even though the main lights are red. You must always give way to other traffic before proceeding.

A flashing amber light at a Pelican Crossing means that you must stop and give way to pedestrians

Where Traffic Lights are not working

If you come to traffic lights that are not working, or there is a sign to show they are out of order, treat the junction like an unmarked junction. Give way to traffic coming from the right, and to oncoming traffic if you are turning right, but even then, drive on only with great care.

Ensure that your observation misses nothing and be prepared to stop if others assume priority.

Roundabouts

On the approach to roundabouts drivers should take note of road markings and signs, and get into the appropriate lane for their intended direction when safe to do so. To negotiate roundabouts safely the appropriate position will always have to be adopted. Conditions at roundabouts may vary, exercise caution at all times and pay attention to mirrors while approaching, negotiating, and leaving the roundabout.

Not every roundabout is the same. They are different

shapes and sizes and can have different numbers of exits. Some are controlled by traffic lights.

The purpose of having a roundabout is:

- to reduce delays - traffic flows smoothly compared to the stop and go traffic at normal intersections such as at traffic lights.
- to significantly reduce the risk of collisions.
- to reduce pollution - emissions from vehicles on roundabouts are less than they would be at traffic light junctions.

Golden Rule

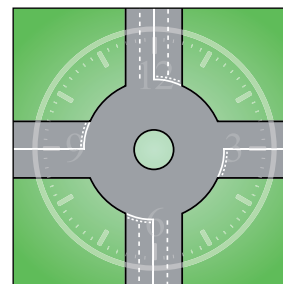
This 'golden rule' should help motorists to drive safely at any roundabout regardless of the number of exits:

Think of the roundabout as a clock.

- If taking any exit from the 6 o'clock to the 12 o'clock position, motorists should generally approach in the left-hand lane.
- If taking any exit between the 12 o'clock to the 6 o'clock positions, motorists should generally approach in the right-hand lane.
- If there are road markings showing you what lane you should be in, follow those directions. Traffic conditions might sometimes mean you have to take a different approach but, in the main, the 'golden rule' will help you to drive safely on almost any roundabout.

Approaching a roundabout

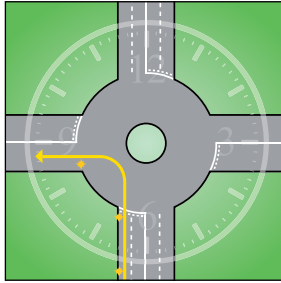
For HGV and bus drivers roundabouts can be more challenging due to the size and weight of the vehicle, blind spots, uncontrolled movements of pedestrians and cyclists - particularly in adverse weather conditions.



- Conditions at roundabouts may vary. When you're coming up to a roundabout, look for directional arrows, road markings or signs which might be indicating which lane you should use for the exit you're taking.
- Move into the correct lane in good time. Use the 12 o'clock 'golden rule' to help you plan a safe course of action unless road signs indicate otherwise.

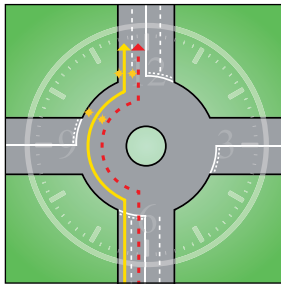
- Treat the roundabout as a junction, yield to traffic coming from the right, but keep moving if the way is clear.

Making a left turn



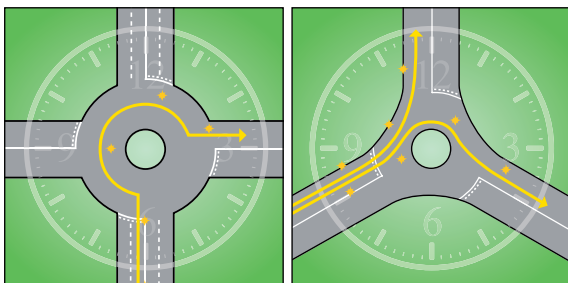
- Approach in the left-hand lane, indicate 'left' as you approach and continue to indicate until you have taken the left exit.

Going straight ahead (or any exit to the left of 12 o'clock)



- Approach in the left-hand lane (unless road markings say otherwise) but do not indicate 'left' until you have passed the exit before the one you intend to take. Where traffic conditions dictate otherwise, for example where there is a long line of traffic in the left lane signalling left or road works in the left lane, you may follow the course shown by the broken red line.

Taking any later exits (those past 12 o'clock - Right)



- Approach in the right-hand lane (unless road markings say otherwise), indicate 'right' on your approach and leave your indicator on until you have passed the exit before the one you intend to take. Then change to the 'left' turn indicator.

Many roundabouts have different road layouts to those shown. It is not possible to cover all possible

layouts in this manual, however the general rules given here are a basic guide for approaching any roundabout.

If a roundabout is controlled by traffic lights, the traffic lights must be obeyed.

Motorists should be aware of other road users such as cyclists, motorcyclists, horse riders, large or long vehicles and so on, who may have to change their position on the road to get around the roundabout safely. It is also important to watch out for pedestrians who may be attempting to cross the road at the roundabout.

Enquiries relating to particular roundabouts may be directed to the Gardaí or to the local authorities.

By law, a driver must enter a roundabout by turning to the left. Failure to do so is an offence. If you are guilty of this offence and you pay the fixed charge, you will get one penalty point on your licence. If you choose not to pay the fixed charge and go to court instead, you will get three penalty points on your licence if you are convicted.



One-Way Streets

Even though all traffic on a one-way street is travelling in the same direction, you should still normally drive on the left-hand side.

You may leave the left-hand side only if you intend to overtake or turn right up ahead.

You may drive on either side of a traffic island, but take note of arrow markings on the road.

You should not reverse into a one-way-street.

Signals

Signals should be given in good time;

- To warn others about what you are going to do – especially if this involves a manoeuvre which is not obvious to other road users
- To help other road users.
- Remember the MSM-PSL (Mirror-Signal-Manoeuvre-Position-Speed-Look) routine.

Examples of the road users you need to consider:

- drivers of oncoming vehicles

- drivers of following vehicles
- motorcyclists
- cyclists
- school crossing supervisors
- Gardaí directing traffic
- pedestrians
- horse riders

Give signals:

- Clearly, correctly and in good time.
- Which are only those in the Rules of the Road

Avoid:

- Giving signals which could confuse – especially when you are going to pull up just after a road on the left when another road user might misunderstand the meaning of the signal.
- Giving unauthorised signals – despite how widely you assume they are understood.

This applies to:

- Headlight flashing, alternating indicator signals and beckoning to other road users.

Remember, any signal which does not appear in the Rules of the Road is not only unauthorised, but could also be misunderstood by another road user.

Always consider the effect your signal will have on all other road users.

Sounding the Horn

There are few instances when you will need to use the horn.

Using the horn does not:

- Give you the right of way
- Relieve you of the right to drive safely

Sound it only if:

- You think another road user may not have seen you.
- You need to warn other road users that you are there – e.g. at blind bends or a hump back bridge.

Never use the horn as a rebuke or simply to attract attention (unless to avoid an accident)

Do not use the horn:

- When stationary.
- At night between 23:30 hrs and 07:00 hrs in a built up area unless there is a traffic emergency.

Avoid any long blasts on the horn which could

alarm pedestrians. If they don't react they may be hard of hearing.

Animals

Be aware that domestic pets may behave unpredictably. Do not swerve or stop in a manner that could endanger other people.

Horses – When you see a horse and rider, slow down, avoid making unnecessary noise and leave plenty of room.

A group of riders may mean a riding school and children learning. Drive slowly and be ready to stop or crawl past. If you see a string of horses near racing stables, look for signals from the first and last riders. Horses being led should be keeping to the same side of the road as vehicular traffic. Horses are easily frightened by noise and by vehicles passing too closely. When passing them a driver should do so slowly and allow plenty of room between the vehicle and the horse.

Drivers should check the nearside mirror to ensure that the manoeuvre has been completed safely. Do not flash the lights as these may startle the horses. Be aware that the release of compressed air near the horses may cause them to bolt.

Other animals– Always reduce speed and be ready to stop. Be patient, even if animals block the road while they are being moved, and respect the signals of the person in charge of them.

Signs about animals – In some areas you will see warning signs about ponies, deer or livestock which may come on to the road. Watch out for them, especially at dawn or dusk and other times when it is difficult to see – in dazzling sunshine, mist and heavy rain.

Motorway driving

Accident records show that, statistically, motorways are the safest roads.

However, motorway accidents often involve several fast-moving vehicles and consequently result in more serious injuries and damage than accidents on other roads. Because of the high numbers of large vehicles using motorways many of these accidents involve trucks and, occasionally, coaches and minibuses.

There's often little room for error when driving at speed on a motorway. The generally higher speeds and the volume of traffic mean that conditions can change much more quickly on motorways than on other roads. Because of this you need to be:

- Totally alert

- Physically fit
- Concentrating fully
- Assessing well ahead.

If you aren't, you may fail to react quickly enough to any sudden change in traffic conditions.

Joining a Motorway

Never use the size or speed of your vehicle to force your way onto the motorway. You must maintain all-round observation to ensure that you correctly assess the speed of any approaching traffic. You should plan your journey and any lane changes in good time, especially when you intend to leave the motorway, as the auxiliary lane can be backed up with waiting traffic.

When entering the motorway, exercise care and attention, and yield to traffic already on the motorway. Use the mirror/signal/manoeuvre/position/speed and look routine. A quick sideways glance might be necessary to verify the position of other vehicles.

You must follow the steps below when joining a motorway.

- Use your mirrors and signal early to other motorists that you intend to merge.
- As you approach on the slip road, check in your mirrors and your blind spots for a safe gap in traffic on the motorway.
- Obey road signs and road markings.
- Do not drive on hatch markings before merging into traffic on the motorway.
- Give way to traffic already on the motorway.
- Adjust your speed as you join the motorway so you match, as near as possible, the general speed of traffic in that lane.
- Treat each lane change as a separate manoeuvre.
- Stay in the left-hand lane long enough to adjust to the speed of traffic before attempting to overtake.

You must not;

- Pull out into the path of traffic in lane 1 if this would cause it to slow down or swerve.
- Drive along the hard shoulder to "filter" into lane 1.
- Stop on a Motorway.
- Use the hard shoulder to stop except in case of emergency.

- Use a red warning triangle on a Motorway.

Using lanes properly

It is very important that you understand the purpose of each lane on a motorway. To help explain how and when to move from one lane to another, each lane is given a number. The diagram on page 62 shows that Lane 1 is the lane nearest the auxiliary lane or hard shoulder. (This is also known as the 'inside lane'). On a two-lane motorway, the lane nearest the central median is Lane 2 (also called the 'outside lane').

Lane 1

The normal 'keep left' rule applies.

Lane 2 or Lane 3

You must not use the lane nearest the central median, that is, the outside lane (Lane 2 or Lane 3, depending on the number of lanes), if you are driving

- a goods vehicle subject to an ordinary speed limit of 90 km/h or less, such as a lorry or heavy goods vehicle
- a vehicle towing a trailer, horsebox or caravan
- a single or double deck bus or coach that is designed for carrying standing passengers.

On a three lane Motorway, a vehicle subject to an ordinary speed limit of 90 km/h or less may use lane 2 (the centre lane) while there is slower moving traffic in lane 1.

It is a fixed-charge offence of up to €120 and 3 penalty points on conviction for a vehicle listed above to drive on the outside lane of a motorway (which may be Lane 2 or Lane 3, depending on the number of lanes).

You may use it, however, in exceptional circumstances when you cannot proceed in the inner lane because of an obstruction ahead.

Slow (or slower) moving traffic does not constitute an obstruction.

A single or double-deck bus or coach that is not designed for carrying standing passengers may travel in the outside lane of a motorway and a driver of such a vehicle will not be guilty of an offence if they do so.

Auxiliary lane



Motorway auxiliary lanes are normally identified by a broken white line to the right of the auxiliary lane, with markings that are shorter, closer and wider than the broken white lines normally seen in lanes 1, 2 or 3. When joining the motorway, you may use this lane to adjust your speed before entering Lane 1, or you may stay in this lane if you intend to exit the motorway at the next exit. If you do not intend to take the next exit off the motorway, you should join the main section of the motorway (Lane 1) to continue your journey. If you are already driving on the motorway (Lane 1) and you do intend to take the next exit off the motorway, you must then enter the auxiliary lane (Lane A). If you are already driving on the main section of motorway (Lane 1, 2 or 3), you should not enter Lane A if your intention is not to leave the motorway at the next exit (unless instructed to do so by the Gardaí or Emergency Service personnel).

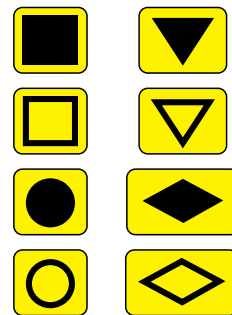
Emergency closure of sections on the Motorway.

The signs shown are widely and successfully used on the motorway network throughout Europe and are strategically placed to inform motorists of an emergency or alternative diversion route for motorways. There are four shapes — square, triangle, circle and diamond — but each can be shown filled or in outline, making eight distinct symbols. Close to motorway junctions, and on roads near to or following the line of a motorway, they are commonly placed on direction signs. If a motorway is closed, e.g., because of a collision, the Gardaí will close the road at the previous junction and compel traffic to leave the motorway. These signs instruct motorists to follow a particular symbol in order to re-join the motorway at the next junction. Diversion routes are carefully chosen to follow roads of a suitable standard and width to carry all motorway traffic, and may make detours to avoid low bridges or other obstructions.

Assigning of Diversion Symbols;

As the diversion route will generally be travelled in both directions a different symbol will be assigned to each direction of the diversion route to reduce the possibility of driver confusion at junctions along the route. Typically the solid symbols will be used in preference to the hollow symbols due to visibility and for use on Variable Message Signs (VMS). However, this will not always be achievable where multiple diversion routes interface at shared locations.

As a professional heavy duty vehicle driver, you must always be aware of your speed and judge the appropriate speed for your vehicle, taking into account the driving conditions, other users of the road, current weather conditions, all possible hazards and speed limits. If you are driving outside the country, different speed limits may apply. You must ensure that you are familiar with the national speed limits for your vehicle type. Be aware that your delivery schedule may be affected by a diversion. However, you should always focus on safe driving.



Example of Motorway diversion signs.

Variable speed limits

Traffic lane control signs with the capability to display variable speed limits can be found on dual carriageways or motorways. The speeds that may be displayed on the signs are 120, 100, 80, 60, 50, 40, 30 km/h. There are two types of variable speeds that may be displayed:

- Regulatory.
- or
- Cautionary (Refer Figure 1 below).



Figure 1 – Cautionary Sign

If the traffic lane control signs are blank, the default speed limit applies.

When the traffic lanes control signs display a reduced speed, the adjacent variable message sign will provide drivers with information on the current road conditions (Refer Figure 2 below).



Figure 2 – Typical Traffic Lane Control Sign Display.

Pictograms








| | | | |
|---|---|---|---|
|  |  |  |  |
| Roadworks Ahead | Slippery Road | Other Hazard | Low Temperature |
|  |  |  | |
| Collision | Crosswind | Queues Likely | |

Table 1 - Typical Pictograms that may be used.



For additional information on Motorway Driving, see the most recent edition of the Rules of the Road.

Bus Lanes

Bus lanes are an important part of the public transport infrastructure. Bus and coach drivers should use them sensibly and not be tempted to speed just because the lane is clear ahead. Where the lane has been obstructed drivers should exercise patience. Drivers should take extra care when driving along the near-side of slow moving or stationary traffic where pedestrians could be tempted to cross the road. They may not be prepared for vehicles moving faster along the bus lane.

Drivers should be particularly careful when using or dealing with:

- With-flow bus and cycle lanes.
- Contra-flow bus lanes.

Always be prepared for the end of the bus lane, the bus must give way to other vehicles as it merges back into normal traffic. In addition to buses and coaches with-flow bus lanes can be used by taxis, cyclists and emergency vehicles.

HGV drivers must not stop to load or unload during the active hours of bus lane operation.



ALWAYS EXPECT A TRAIN!

STOP, LOOK BOTH WAYS, LISTEN
WHEN THE RAILWAY IS CLEAR,
CROSS QUICKLY

SHUT AND FASTEN THE GATES
AFTER YOU – IT'S THE LAW!

REMEMBER
NEVER EVER STOP ON THE RAILWAY
AND ALWAYS EXPECT A TRAIN

Level Crossings.

Types of level crossings include:

- Attended gated crossings,
- Unattended crossings with barriers that extend over the full width of the road.

Road vehicles risk hitting level crossing gates, barriers and trains, so you must approach level crossings with care and be able to come to a stop in front of the gates or barriers.

If your vehicle breaks down or gets stuck on a level crossing:

- Make sure that everybody gets out and gets clear of the railway line,
- Use the phone provided by by Iarnród Iarnróid Éireann or warn of the danger immediately as best you can.

REMEMBER

You **must not** trespass onto a railway line. It is highly dangerous.

A railway level crossing is an intersection where a road or passage crosses a railway track.

Drivers and other users should be aware of the different types of crossing and should know how to cross safely.

You must always approach a level crossing with care.

You must not enter a yellow box area unless you can clear it without stopping.

You must never stop on the railway tracks.

Use the Rail Cross Code: Stop, Look and Listen

Stop – two meters back clear of the railway line

Look - Right and Left, watching for the lights of approaching trains

Listen – for engine noise, a train horn or whistle

Give Way to Trains

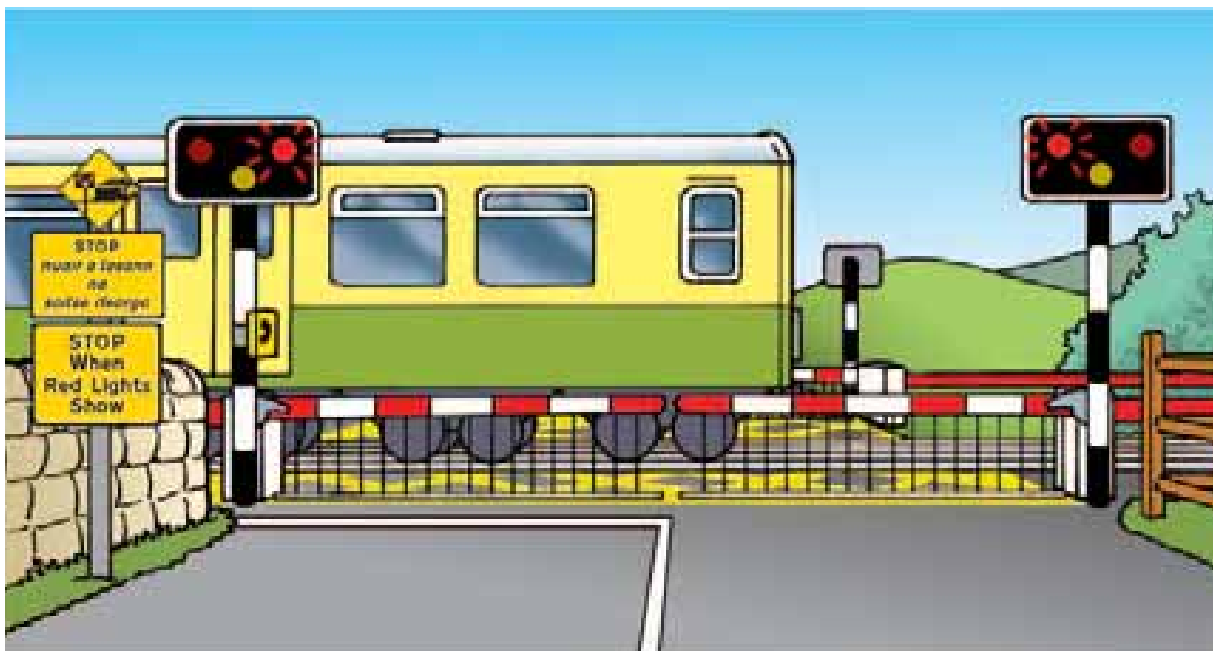
Let the approaching train pass, then look right and left again

When the Railway is clear

Cross quickly.

REMEMBER

Never stop a vehicle on the railway tracks



Emergency actions at level crossings.

If your vehicle stalls on the railway, move everyone well clear of the railway. Leave the vehicle where it is.

Tell the railway controller, using the phone number displayed at the crossing.

State the 'crossing number' shown on the plate at the crossing.

Unusual movements across level crossings

Drivers of very high vehicles should note that at level crossings with overhead electrified lines, such as on the DART network, the safe headroom is 5 metres (16ft 4ins).

You should contact the railway in advance, using the phone number displayed at the level crossing, when arranging special events such as matches, funerals or processions that will involve the use of the level crossing.

At level crossings with iron gates or automatic half-barriers, or on minor roads where protection is by traffic lights only, you should contact the railway, using the phone number displayed at the level crossing, to get permission before crossing with awkward vehicles – for example, long, low, wide, heavy or slow, vehicles, vehicles carrying dangerous goods or exceptional loads, and crowds of people or herds of animal.

Decision Support Systems. (DSS)

User-worked level crossings are those gated crossings where the road user is required to safely operate the gates. It is vital for your own safety and for others using this type of level crossing that you always shut and fasten the gates.

Leaving gates open could result in children, animals or unsuspecting drivers to enter the level crossing and into the path of oncoming trains.

Those crossings are increasingly being equipped with technology which can help to warn level crossing users of the presence of a train and aid them in deciding whether it is safe to cross.

These systems provide warning lights, with a red light indicating that a train is approaching and the user should stop.

An orange light indicates that the road user may proceed with caution.

Trains are quiet, travel fast and are unable to stop quickly.

Remember – always expect a train.



Railway bridge signs

Warning signs

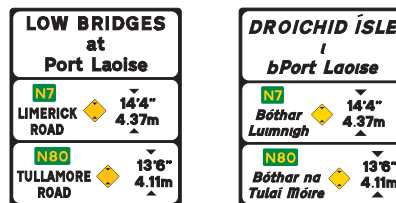
As you approach a bridge, you will see a warning sign, such as the sign below, showing the highest vehicle that will be able to pass under the bridge. The height is called the maximum headroom and is written first in feet and inches and then in metres.



*Low bridge ahead
(height restriction shown)*

If your vehicle, including any load being carried, is higher than the height shown on the warning sign, you will not fit under the bridge ahead. It is very important to know the height of your vehicle and of any load being carried before you start your journey – know your height, know your route.

You may also encounter advance warning signs such as the sign below.



Advance information sign for low clearance

Information signs

You **must** report all incidents of striking any railway structure whether or not damage is obvious. The information signs shown below appear on bridges and give the code for the bridge and a local Iarnród Éireann contact phone number.



Advance information sign for low clearance

SELF-ASSESSMENT OF KNOWLEDGE

Please complete the following questions to assess your understanding of the module so far.

Q.1 What is meant by the term 'Defensive Driving'?

Your Response

Q.2 What three points of contact should be used when exiting a cab?

Your Response

Q.3 What should you ensure when leaving the cab?

Your Response

Q.4 What is the height of the DART cables?

Your Response

Q.5 Is a HGV permitted to travel in the outside lane of a Motorway?

Your Response

Q.6 What should you do if you are dazzled at night by oncoming headlights?

Your Response

Q.7 What factors can affect stopping distance?

Your Response

Q.8 What should you do where traffic lights are not working?.

Your Response

Q.9 Can a HGV stop to load or unload on a bus lane during the active hours?

Your Response

Q.10 What does a flashing amber light at a Pelican Crossing mean?

Your Response

Notes

[illegible]

Notes

[illegible]