



THE INSTITUTE OF THE MOTOR INDUSTRY



## **TOOLBOX TALKS FOR MOTOR VEHICLE REPAIR**

**(INTRODUCTION TO HEALTH & SAFETY IN THE MOTOR VEHICLE  
REPAIR ENVIRONMENT)**

# **TRAINER GUIDE**

## INTRODUCTION

This course is targeted at the 14 to 16 year old age group and specifically for learners in the induction stages of a Young Apprenticeship in Motor Vehicle Repair. It's content and materials have been produced by the Institute for the Motor Industry and the Health & Safety Executive, working together in consultation with major stakeholders in the Motor Industry.

The main objective is to raise the level of awareness of hazards and risk in the minds of the young persons and give them a sound introduction enabling them to behave and work safely before they are moved into any kind of workshop environment. In so doing this should ultimately reduce the number of accidents occurring in the sector where young persons are involved. It is intended that there be a balance between conveyance of understanding of what is the most serious and important of subjects as well as not being overly alarming and presenting an off-putting image of work in the sector. A young person needs to be educated in order to be safe and not pose a risk to those around them in the workplace – but at the same time they must be encouraged to participate and should enjoy their learning.

The course is pitched at Level 2 although the English content of the learner materials is no greater than Level 1. It is not the specific intention of this course to embed functional skills – it is a short induction programme.

This course is ideally given as part of an induction to a Vehicle Maintenance and Repair qualifications awarded by IMI Awards Ltd. Much of the requirements of the G Unit standards will be touched upon in this course.

It is intended that this course be delivered over two sessions of approximately four hours each but the actual arrangements for delivery can be flexible. It is also intended that the location of delivery can be flexible – it need not be in the Motor Vehicle Repair environment but can be delivered in a classroom.

The trainer should familiarise themselves with this pack as well as all of the course contents before delivery is arranged. It is further assumed that the trainer will be of sufficient competence in the respect of:

- a) Teaching competence either in Secondary Education or Lifelong Learning Sector
- b) Working knowledge and understanding of Health & Safety Legislation
- c) Working knowledge of safe working practice in the Motor Vehicle Repair environment

Learner reference material given as part of the training resources are not intended to be exhaustive and the trainer should be in a position to be able to offer a thorough response to questions posed by the learners and naturally by employers who might also be party to or involved in the course delivery.

This Trainer Guide offers detailed explanations of what must be covered in each section of the course and otherwise summarises each of the two stages of the course in a Lesson Plan designed to be a useful ongoing reference.

For further information on the subject matter please utilise the following web links:

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

[www.hse.gov.uk/mvr/index.html](http://www.hse.gov.uk/mvr/index.html)

[www.hse.gov.uk/mvr/information.html](http://www.hse.gov.uk/mvr/information.html)

### **Successful Delivery**

Successful delivery of this course requires the trainer to be able to generate a rapport with the young people in their audience. Furthermore the most successful deliveries of this sort of subject tend to be from those who are believable and the trainer will be able to generate their own credibility with their audience by drawing on their own experiences of hard industry work and work around risks.

They will be mentally stimulated by somebody from hard industry – preferably the MVR sector itself – who can tell them workplace stories and introduce their own experience. In any case, prior to delivery you should familiarise yourself with case studies of accidents and safety/health issues which have arisen within the MVR sector and others. Pilot studies have shown that young learners can become very engaged where stories are hard hitting (i.e. – involve reference to serious injury) and/or where they bring in an element of humour, provided that the humour is appropriate.

Be very careful not to use myths – ensure that case studies used are taken from reliable sources. The HSE website offers several case studies and reliable information on the likely consequences of failure to control certain risks.

### **Breaks**

There should be a break during this course – four hours is too long to expect anybody to maintain concentration. It is down to the trainer's professional judgement as to when a break is appropriate to call and this may be further dictated by the normal academic day (e.g. set break times/lunch etc). Timings provided on lesson plans are indicative but can be used in order to plan a breakdown of the sessions to include breaks and lunch.

## CREDITS

This course and all supporting materials have been produced by the Institute of the Motor Industry for use within the Automotive Sector. The IMI would like to thank:

For consultation and technical support

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## INTRODUCTION TO HEALTH & SAFETY IN THE MOTOR VEHICLE REPAIR INDUSTRY

## SCHEME OF WORK

SESSION	AIMS	OBJECTIVES	LEARNING ACTIVITIES	ASSESSMENT ACTIVITIES
One – 4 Hrs	To introduce Health & Safety at Work in the Motor Vehicle Repair Industry and start to establish awareness and positive attitudes toward the subject	Describe what H&S is all about Define Hazard and Risk Identify the different ways in which Risks can be controlled Describe general hazards applicable to most workplaces Match control measures to their respective risks and hazards	Realities of harm and accidents in the MVR industry What is a Hazard – by use of example What is a Risk – by use of example How harm can be caused by: <ul style="list-style-type: none"> <li>• Fire</li> <li>• Electricity</li> <li>• Manual Handling</li> <li>• Vehicles</li> <li>• Noise</li> </ul> Risk Control Measures and prohibitions	Question and Answer  Hazard Spotting examples  Card matching exercise – matching control measures to their respective risks/hazards  Peer discussion
Two – 4 Hrs	To continue to build awareness of hazard and risk in the Motor Vehicle Repair Industry and explore in more detail the risks which are specific to the industry	Identify the different hazards which are more specific to the Motor Vehicle Repair Industry Define activities which under 16's should not be undertaking in the workplace Define the learner's primary responsibilities for H&S Spot the hazards in given scenarios Explain the risks deriving from hazards in given scenarios	How harm can be caused by: <ul style="list-style-type: none"> <li>• Compressed Air</li> <li>• Power Tools and Vibration</li> <li>• Lifting Equipment and Pits</li> <li>• Chemicals in MVR including Isocyanates</li> <li>• Welding</li> <li>• Use of PC's</li> </ul> Details of expected prohibitions for young persons Explanations of employee responsibilities Workplace Scenarios	Question and Answer  Peer discussion  Hazard spotting from given scenarios (photographs)  Risks and Control Measures form given scenarios
Three – 1 Hr	To assess understanding of Health & Safety in the Motor Vehicle Repair Industry			Multiple Choice Assessment

## LESSON PLAN ONE – TOOLBOX TALKS FOR THE MOTOR VEHICLE REPAIR INDUSTRY

<b>Topic</b>	General introduction to Health & Safety at Work
<b>Subject</b>	Health, Safety, Hazards and Risks

<b>Aim</b>	The general aim of this lesson is to
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1) Describe the purpose of Health &amp; Safety at Work</li> <li>2) Recognise the importance of safe working methods</li> <li>3) Define a hazard and a risk</li> <li>4) Identify ways in which risks can be controlled</li> <li>5) Understand general hazards found in most workplaces</li> <li>6) Identify control measures appropriate to particular risks</li> </ol>
<b>Assessment Methods</b>	<ol style="list-style-type: none"> <li>1) Question and Answer</li> <li>2) Observation of group discussion</li> <li>3) Card matching exercise</li> </ol>

<b>Content</b>	<b>Tutor Activity</b>	<b>Learner Activity</b>	<b>Aids</b>
<b>Introduction</b> Aim and objectives. 20 mins	Introduction to what the course objectives are and reference to recent industry fatalities	Listen and respond.	Handout Trainer resource pack
<b>Development</b> 20 mins	Introduce the concept of Hazard by use of workplace examples	Group activity identifying and discussing hazards	Handout Trainer resource pack
15 mins	Build understanding of Risk using examples of:  Fire – the fire triangle and ways in which fire can occur	Group discussion, listen and respond	Power Point Presentation Trainer resource pack
15 mins	Electricity – its sources in the workshop	Group discussion, listen and respond	Power Point Presentation Trainer resource pack
30 mins	Manual Handling – through practical demonstration and volunteer (basic handling techniques and unstable loads)	Volunteer participation, group discussion, listen and respond	Handout, box and tins Trainer resource pack
15 mins	Noise – its sources and common effects on humans	Group discussion, listen and respond	Power Point Presentation Trainer resource pack

<b>Topic</b>	General introduction to Health & Safety at Work (continued)
<b>Subject</b>	Health, Safety, Hazards and Risks

<b>Content</b>	<b>Tutor Activity</b>	<b>Learner Activity</b>	<b>Aids</b>
30 mins	Vehicles – How a variety of risks can derive from one hazard	Group discussion, listen and respond	Power Point Presentation Trainer resource pack
20 mins	Communication Exercise	Timed discussions in pairs	
	Introduce and build understanding of Risk Controls in terms of:		
10 mins	Signage		
10 mins	Prohibitions	Listen and respond	Power Point Presentation Trainer Resource Pack
10 mins	PPE		
15 mins	Safety and Emergency Equipment		
<b>Consolidation</b>			
5 mins	Introduce card matching exercise (Risk cards and Control measure cards)	In pairs match Risk cards to the correct Control measure cards	Risk and Control Measure cards
15 mins	Observe Learner Activity	Read answer sheets and ask questions	Risk and Control Measure cards
10 mins	Issue answer sheets and offer answers to learner questions	Question and Answer	Answer sheets

Total – 4 hrs

# SLIDE ONE

Starting slide.

No technical content.

Bring group in to listen to dialogue.

Introduce self and move into course material.



The slide features a black background with white and yellow text. At the top left is the IMI logo, which consists of the lowercase letters 'imi' in a bold, sans-serif font, with the full name 'THE INSTITUTE OF THE MOTOR INDUSTRY' in smaller white capital letters below it. At the top right is the HSE logo, a red shield with a white upward-pointing arrow and the letters 'HSE' in white below it. In the center, the text 'TOOLBOX TALKS FOR MOTOR VEHICLE REPAIR' is written in white capital letters. Below this, the slogan 'Stay Safe.....Stay Healthy.....' is written in a large, bold, yellow font. At the bottom of the slide, there is a decorative horizontal band with a repeating pattern of overlapping, semi-transparent blue spheres.



## SLIDE TWO

Statistics accurate as at November 2009.

Be prepared to dispel myths over “all of Health & Safety being just Common Sense”. This is largely true, but the Management of Health & Safety requires technical knowledge and ability to apply it. The statement is often used as an excuse not to comply with regulations.....

If there were no need for Health & Safety legislation and enforcement, why are there still accidents and fatalities taking place in the UK workplace?

# Introduction



IN THE LAST FIVE YEARS IN THE MOTOR VEHICLE REPAIR INDUSTRY THERE HAVE BEEN....

- TWENTY FOUR people killed
- EIGHT THOUSAND people injured – sometimes disfigured.....

These are dangerous working environments

But by THINKING about the risks.....and exercising COMMON SENSE around them.....

YOU STAY SAFE.....YOU STAY HEALTHY

## SLIDE THREE

### Case Study One

Try to impress upon the learners the long term effect of this sort of injury. This person will never be able to lead a normal life.

Explain that the course will cover Isocyanates in more detail in the second session.

Stress the point that sometimes hazards are not visible. You can see paint mist, but you cannot see the isocyanate mist which is left usually for around two minutes after spraying.

## Recent Cases

### CASE STUDY ONE

An MVR paint sprayer worked for 10 years painting commercial vehicle bodies. He worked in a spray space and wore air-fed breathing apparatus. However, after spraying he would routinely flip up his visor to check on paint coverage, quality etc allowing no time for the fine (invisible) overspray mist to clear. The first indications that something was wrong were tight chests at night. Neither the sprayer nor his GP made the connection between his asthma and exposure to isocyanates at work. He soldered on until he could work no longer. By this time, he was unable to walk more than 20 yards before resting and was unemployed.

Source : Health & Safety Executive

# SLIDE FOUR

## Case Study Two

This case study is an example of another key point and theme throughout this course. One of the best ways in which the learner can avoid coming to harm is to listen to instruction.

This is a good time to hold a discussion about how an employee might miss the Management Procedures:

1. Not reading them
2. Not listening to instruction
3. Listening to I-Pods or Mobile Phones instead of concentrating on what they are doing

It might also be worth holding a discussion here about compensation claims and liabilities.

This incident would most likely be seen as the employer's fault in the eyes of the law because the inspection pit should have been guarded. However, the point to get across is that the learners can do a great deal to avoid injury to themselves by listening carefully to instruction and training.

## Recent Cases

### CASE STUDY TWO

An employee was assisting a driver position a vehicle over an inspection pit. He was walking backwards when he fell about 1.5m into the pit sustaining three broken ribs and a broken left wrist.

The employer has a responsibility to guard inspection pits and should have done more to protect the people involved. However, both the driver and the other employee had ignored management's safety procedures published in the company's induction pack which warned of the danger of reversing in this way.

Whilst this is the employer's fault, the person who was injured could have prevented this from happening to themselves just by behaving a bit more sensibly.

Source : Health & Safety Executive

## SLIDE FIVE

### Session objectives

Whilst it is good teaching practice to go through the Objectives of the course, this slide is not likely to command the attention of young persons for long.

Explain that this outlines what the learners will be able to do by the end of the session and then move on.

# Objectives of this Course

Over the next two sessions you will:

- Be able to explain the cardinal rules for staying safe at work
- Understand the importance of safe working methods
- Be able to identify hazards
- Be able to identify risks and understand how they can be controlled
- Know what your responsibilities are
- Know what you should and should not be doing

## SLIDE SIX

### First Scenario

Introduce the learners to the concept of this sort of activity. They are not at school any more and are needed to have an input into the session.

Ask the learners to look at the photographs and come up with a list of items in the picture which could hurt somebody.

The correct answer in summary is essentially everything! So therefore all learner answers, provided sensible, are correct and positive feedback can be given.

The objective of this part of the activity is to get the learners to participate.

Learners can work in pairs if they wish.

Do not spend more than five minutes allowing learners to list items.

## Workplace Scenario



## SLIDE SEVEN

Introduce the concept of Hazard – anything which has the potential to cause harm.

This point doesn't need to be overemphasised, but the objective now is to get the learners to realise that a great many hazards cannot actually be seen. Risks to health & safety are not always obvious.

In the first part of the activity, the learners will almost definitely have come up with lists of physical items which could pose safety risks.

Your objective now is to get them to think again about the hazards which they cannot see but which they will know are there.

# SPOTTING HAZARDS

- A Hazard is anything which might harm a person
  - Some are not obvious
  - Some cannot even be seen
- ALSO CONSIDER – the number ONE cause of accidents in any UK workplace is:
  - SLIPS, TRIPS AND FALLS

## SLIDE EIGHT

Now repeat the exercise from Slide Six. Don't ask the learners to return to their lists though – this part of the activity is better delivered as part of a general feedback session, nominating questions to any individual not already participating.

The learners are expected to come up with hazards which they cannot see – examples might be:

1. Fire hazards – things which could ignite
2. Electricity
3. Noise from the engine or other sources
4. Vehicle exhaust fumes

These are the main examples but learners may come up with others and provided that they are sensible and not alarmist, this should be encouraged and rewarded with positive feedback.

# Workplace Scenario



# SLIDE NINE

Introduction to the concept of risk.

Try to use an example of this to demonstrate why it is important to recognise likelihood and severity.

Electric shock from a toaster!

The severity could be quite high from UK mains electricity – anything from a very uncomfortable sensation up to and including death.

However, the likelihood is very low and therefore the risk overall is not as serious as say.....

Back injury from lifting and carrying boxes all day!

The severity could be quite high including a permanent back injury.

The likelihood is also proven to be fairly likely. An organisation with staff regularly lifting and carrying without mechanical assistance is likely to have a history of complaints and occasional injuries.

The risk is higher from the latter example.

## RISKS

NOW THAT WE HAVE SPOTTED HAZARDS

We will look at the Risks to Health and Safety which the hazards pose

A RISK IS.....

THE LIKELIHOOD OF HARM OCCURRING

AND

THE SEVERITY OF THE HARM WERE IT TO OCCUR



## SLIDE TEN

Explain simply that a Risk Control is just something (anything) which reduces either the likelihood of a hazard causing harm or the severity of the harm if it happened – therefore reducing the risk.

Ask the learners to consider the trailing wire (typical workplace hazard) and to briefly discuss the best way of controlling the risk.

This is where the concept of the Hierarchy of Risk Control comes in, although this course is not expected to cover this in full.

Basically the learners ideas should be taken on board and then feedback should show preference to the control measure which eliminates the risk (ie – re-route the wire altogether), rather than the one which reduces it (ie – putting a cable cover over it or marking it with hazard tape).

Wait until the learners have produced a few examples before you explain the answer.

### NOW APPRAISE YOUR GROUP

By this time you should have captured some interest and the learners should be encouraged by their “correct” participation.

# RISKS AND RISK CONTROLS

SO.....

HAZARD

A wire trailing in a walkway

RISK

Risk of tripping and falling

RISK CONTROL

WHAT IS THE BEST WAY OF CONTROLLING THIS SORT OF RISK?

## SLIDE ELEVEN

The objective of this short exercise is to lead seamlessly into the bulk of the session which is to explore different risks.

This hazard has a variety of different risks and the learners could come up with all sorts. You should take care when giving feedback to dispel thoughts which are alarmist and focus on the main risks which are:

1. Petrol being flammable and potentially explosive – risk of explosion and fires
2. Risk of injury to the back or upper body through handling this canister which will have a significant weight and which will be unstable.

Do NOT focus on:

1. Risks from contact with petrol which could result in cancer – okay, Benzene is in petrol and it is a carcinogen, but the chances of developing cancer from a bit of contact with petrol are highly unlikely.

The fire/explosive risks are far greater because firstly they might be fatal and secondly they don't just affect the learner.

# CONSIDER THIS HAZARD



PETROL CAN – CONTAINING EIGHT LITRES OF PETROL

WHY IS THIS A HAZARD?

DISCUSS IN PAIRS AND PRODUCE A LIST OF REASONS HOW THIS HAZARD CAN CAUSE HARM.....

## SLIDE TWELVE

There is a temptation to find common ground with the young learners on this subject by referring to fire drills at school. However, you should be quick to point out that a fire in the MVR environment can be far more serious, far more quickly than is likely in a school.

The key point for people to recognise from this and the subsequent slides is that if a fire occurs the learners must evacuate as quickly as possible.

# Fire



- There is always a risk of fire
- In the MVR workplace there are lots of flammable substances and risks from explosions
- Know how to prevent fire
- Know what to do if a fire happens

NEVER UNDERESTIMATE HOW QUICKLY A FIRE CAN SPREAD

GET OUT . STAY OUT . STAY SAFE . STAY HEALTHY

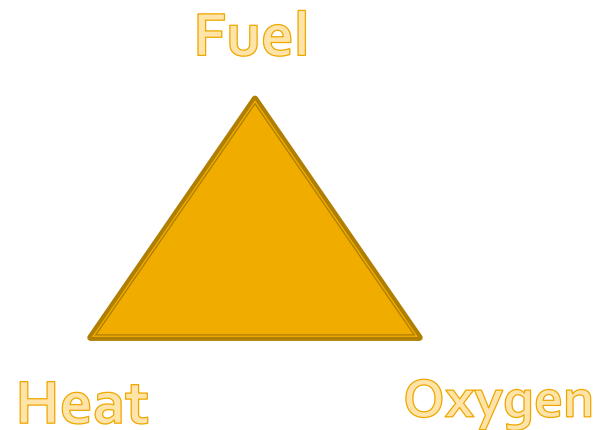
## SLIDE THIRTEEN

The Fire Triangle – sometimes called the Chemistry of Combustion. The latter phrase can add credibility to young people given that it is the phrase used by the Fire and Rescue Service.

Humour can be found here in asking the learners to identify whether all three elements are present in their current training environment.

The key point is to ensure that the learners understand that by preventing fuels from coming into contact with ignition sources, a fire is in turn prevented.

# Fire Prevention



To prevent fire.....

STOP heat and ignition sources from coming into contact with Fuels

## SLIDE FOURTEEN

### Fire Safety

All the young people need to worry about in the event that a fire starts, really, is:

- a) Raise the alarm
- b) Get out

A fire in the MVR environment can become life threatening and potentially catastrophic in a matter of seconds.

Learners should be aware that when they go on site for the first time their employer should be making them aware of things such as Fire Evacuation Procedures or Fire Action Notices.

However, the learner also has a responsibility to take reasonable care of their own safety – therefore this needs to be emphasised.

Don't wait to be asked to read a notice – read it anyway!!

# Fire Safety



- Ask for the Fire Evacuation Procedure

GO AND SEE

- Your fire evacuation routes
- Your fire escapes
- Your fire assembly area

GO AND MEET

- Your Fire Marshall

## SLIDE FIFTEEN

### Electricity

The presence of electricity is quite often taken for granted so emphasise this section – but avoid being unnecessarily alarmist.

Many people have had electric shocks from mains electricity and come away relatively unharmed. It can be lethal but often only when the voltage is higher than standard UK mains or when circumstances are more dangerous (e.g. the victim is wet).

The learner should understand that of the three means of power in the MVR environment, electrical power is the most risky.

Ask the learners if there is any way in which electricity might harm them besides actually shocking them?

The answer is by igniting fuels – causing fires and explosions.

# ELECTRICITY



Equipment in MVR will be powered by:

- ELECTRICITY
- COMPRESSED AIR / PNEUMATIC
- HYDRAULIC

In some circumstances Electricity can kill. It can also cause severe injuries.

How can you stay safe from Electricity?

## SLIDE SIXTEEN

### Electricity

The objective here is really just to ensure that the learner understands some of the ways in which the employer will reduce the risks from electricity.

The most important thing is that the learner – once again – recognises the importance of listening to instructions.

# STAYING SAFE – Around Electricity



- Only use equipment which you are permitted to use
- Only use equipment for what it is designed
- Look after all tools and equipment
- Listen carefully to your employer's instructions



“Look for the Label”

Your employer will have tested all power tools for electrical safety.

## SLIDE SEVENTEEN

### Prohibitions

This is the first point at which the learner will be confronted with the term PROHIBITION. It is important to get this section right since what you are basically putting in front of the learner here is their being told that they cannot do something which they might consider themselves perfectly capable of doing.

The main things to point out:

- a) The learner will be allowed to use some power tools – but it is up to the employer to decide what they are comfortable with the learners using
- b) Some tools are more dangerous than others and if there are any which the learner cannot use it will be for a very good reason – it is simply to protect them
- c) There are many pneumatically powered tools in the MVR environment which the learner will be able to learn to use

# ELECTRICITY - PROHIBITIONS

YOU WILL be allowed to use  
battery operated and pneumatic tools  
under supervision.

LISTEN TO INSTRUCTIONS CAREFULLY

YOU WILL NOT be allowed to  
use all Electrically powered tools.

It should also be pointed out to the learners at this time that most MVR workplaces will require a high level of discipline in the workplace – turning out well presented, being professional and having respect for those in charge. Respect – and the right to learn new skills and take on responsibility – is earned. It is not a given. TAKE CARE. Some young people will find this hard to swallow and you should not over-emphasise this aspect.



# SLIDE EIGHTEEN

Most of the learners will know very well that Manual Handling is all about lifting and carrying things.

However, they will generally not be aware that the term also covers pushing, pulling and supporting – in other words – any activity which involves exerting physical strength upon an object or person.

Use the diagram on the slide just to point out that this is a heavily regulated area with lots of guidance – why might this be (ask the learners)?

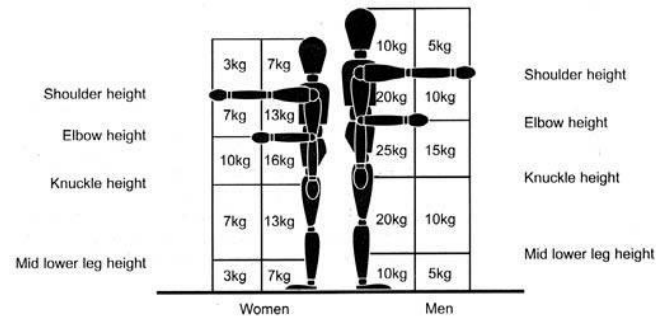
The answer is because there are so many accidents happening due to manual handling. It is the number one cause of reportable injury in the UK workplace. 90% of injuries are back injuries and 10% are permanent. Ask the learners how they would feel about walking with a stick or a frame for the rest of their lives.

## MANUAL HANDLING



MANUAL HANDLING IS.....

- LIFTING
- CARRYING
- PUSHING
- PULLING
- SUPPORTING



## SLIDE NINETEEN

Emphasise the five points on this slide – bearing in mind that this will move on to a practical exercise later.

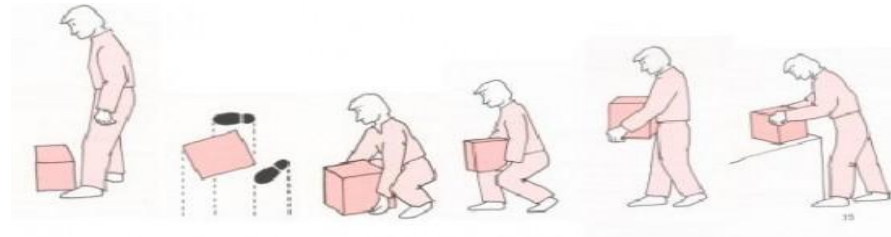
The most important part of this at this stage is to ensure that the learners will think about what they are doing before they do it.

Make sure that the learners understand that their strongest muscles are in their thighs and buttocks.

Whether or not you choose to mention the latter depends on the nature of the group – however, occasionally dropping in a relatively harmless item such as this which the group may find humorous can often be a good way of breaking up the flow of the course and generating rapport.

Often, frank talk will command respect because you are treating the young people as adults.

# MANUAL HANDLING



### MANUAL HANDLING GOLDEN RULES

1. CONSIDER WHAT YOU ARE DOING BEFORE YOU DO IT
2. DO NOT STRUGGLE – IF YOU CANNOT MANAGE IT WITHOUT STRAINING ASK FOR HELP
3. BEFORE YOU LIFT – CHECK THE LOAD AND CHECK YOUR WAY IS CLEAR
4. LIFT SAFELY – USING THE STRONGER MUSCLES IN YOUR LEGS
5. STAY UPRIGHT WHILST CARRYING OBJECTS AND DON'T TWIST YOUR SPINE.

## SLIDE TWENTY

This is one of the most important slides on the course but there is nothing more to add than is already on it.

Ask the learners to put themselves in the position of a time served MVR worker.....

# MANUAL HANDLING

AS AN APPRENTICE IT IS ONLY NATURAL  
TO WANT TO IMPRESS THE PEOPLE YOU  
WORK WITH

YOU WILL NOT IMPRESS THEM BY  
HURTING YOURSELF

YOU WILL IMPRESS THEM BY WORKING  
SENSIBLY AND ASKING FOR HELP WHEN  
YOU NEED IT

## SLIDE TWENTY-ONE

### MANUAL HANDLING DEMONSTRATION

Use a light and safe object to demonstrate.

Ask a volunteer to demonstrate safe handling of an item picked from the floor and carried over to a table.

Give POSITIVE feedback first on what the learner did right, then ask the group for constructive criticisms.

Whoever is the most vocal – ask them to now come and demonstrate again....

Repeat.

Now demonstrate yourself talking through the actions with the learners as you go.

1. Check the area and the task
2. Check route is clear
3. Check the load
4. When happy, position feet around object facing direction of travel
5. Obtain firm grip
6. Raise chin
7. Lift keeping arms straight and using legs
8. Stand upright with object close to body

# MANUAL HANDLING

## PRACTICAL EXERCISE

### DO YOU KNOW HOW TO HANDLE OBJECTS SAFELY?

9. Move in a straight line keeping head raised to the destination.
10. Repeat the lift in reverse lowering the object onto the table.
11. Adjust the position of the item after lowering – not whilst still under strain.

Point out that the area of the spine under the greatest threat is the lumbar region, the base of the spine. This is the part which should be protected by keeping the back straight and upright when lifting.

Ensure that the learners know NOT to twist the spine or adjust the load during handling.

This demonstration assumes that the trainer is well versed in Safe Handling Techniques and should not be attempted by those who are not.

## SLIDE TWENTY-TWO

This slide is an introduction to NOISE AT WORK.

This is a chisel powered by compressed air.

The learners are likely to start by looking at the more obvious risks such as those detailed on the next slide – the physical hazards.

There are also risks from compressed air and ejection of materials too.

However, noise levels generated from the use of this tool are likely to be high.

Try to prompt the learners to come up with Noise themselves. Avoid giving the answer yourself.

Now move on to the next slide....

# OTHER RISKS YOU CANNOT SEE



HOW MIGHT THIS CAUSE HARM?

IS THERE ANYTHING YOU CAN'T SEE?

## SLIDE TWENTY-THREE

This slide makes it clear that risks from the use of this machine include physical risks.

Point out also that depending on what is being chiselled, there are dangers posed from ejection of materials too.

# MACHINE RISKS



## PHYSICAL RISKS

- Cuts and abrasions
- Use of compressed air

## SLIDE TWENTY-FOUR

Noise at work will not be a stimulating subject to young people – however, their attention can most commonly be grasped by describing long term debilitating effects of noise exposure.

The key aim of this section is for the learners to realise that noise at work can cause them harm and that it is very important that they wear hearing protection where they are required to.

Explain the effects of tinnitus (constant ringing or thrumming in the ears) and also of loss of hearing in frequency ranges (best described by suddenly becoming deaf to parts of people's speech – making it impossible to communicate properly with people).

Ensure that the learners understand that the effects such as Tinnitus tend to be temporary at first – but can become permanent with no warning.

You do not need to move into details covered in the Control of Noise at Work Regulations such as dBA noise exposure limits, upper and lower action points etc.

# NOISE AT WORK



SAFETY SIGNS ARE  
ALWAYS THERE FOR A  
REASON

WEAR PROTECTION YOU  
ARE GIVEN

Loud or repetitive noise can harm your hearing

Damage tend to be gradual but  
PERMANENT

- Tinnitus
- Loss of hearing in certain ranges
- Gradual total loss of hearing

# SLIDE TWENTY-FIVE

Cars, Vans, Trucks etc – wide variety

By now the learners should already be aware that some hazards pose many risks.

Ensure that the learners understand the presence of each one.

Collisions – obvious – bear in mind that vehicles can suddenly start moving unplanned (e.g. left in gear with handbrake off)

Moving parts – belts and fans

Hot parts – scalds from coolant under pressure, or exhaust piping

Vehicle electrics – 12 volts will be transformed and stepped up to higher voltage for ignition

Chemicals – concentrate on petrol and diesel being flammable

Parts under pressure – e.g. compression of fuel/air mix in cylinders.

## VEHICLES



### ONE HAZARD ..... MANY RISKS

- MOVING VEHICLES – COLLISIONS
- MOVING PARTS – TRAPS/TANGLES
- HOT PARTS – BURNS/SCALDS
- ELECTRICAL SYSTEMS – SHOCKS
- CHEMICALS – **VARIOUS RISKS**
- FLAMMABLE SUBSTANCES – FIRE
- PARTS UNDER PRESSURE - EXPLOSION



## SLIDE TWENTY-SIX

Talk to the learners about different types of vehicle – pointing out the fact that the hazards are essentially the same, but risks can be greater or lesser depending, usually, on the size of the vehicle and what powers it.

Exhaust fumes – contain a variety of gases many of which are toxic when in a concentrated or poorly ventilated area. The main risk is from Carbon Monoxide which will bond with Haemoglobin in human red blood cells, preventing bonding with Oxygen. This can cause hypoxia.

Learners should be aware that vehicles should only be left running in well ventilated areas such as open front garages. Where the areas are not well ventilated, local exhaust ventilation is another option (which is pictured). This removes the exhaust fumes.

Some MVR environments will also attach filters to exhausts for when the vehicle must actually be driven indoors. This will remove some of the harmful gases, but is not an ideal solution – use should be kept to a minimum.

# VEHICLES



VEHICLES ALSO GIVE OFF EXHAUST FUMES  
WHEN RUNNING

# COMMUNICATION EXERCISE

This exercise is designed to help the learners to realise that giving effective communication can be difficult – especially when the communication is long winded and it is delivered in a workplace which can be noisy and full of distraction. The “moral” to this is to keep communication short and to the point – easy to understand.

Ask the learners to work in pairs. You will need a stopwatch or at least a watch which will count seconds, to conduct the exercise.

Ask one of each pair to think of an experience relating to MVR. Their task is to talk to their partner about the experience and the partner must listen and try to retain as much information as they can. The partner may not speak until you tell them. Also, tell the learners that they must immediately stop what they are saying and be silent when you tell them to.

Ask the first selected person in each pair to start talking about their experience. Time 30 seconds and then tell the learners to stop. Start talking to them about something completely different for another 30 seconds. Now tell them to carry on with their talks. Time another 30 seconds and then end the exercise.

Now ask the partners to reiterate to their partners what they have established. Ask each pair to comment on whether the information was reiterated accurately!

FIRST 30 SECONDS

Learner ONE talks to Learner TWO. Learner TWO is silent.

SECOND 30 SECONDS

Learners are silent. You talk about something different.

THIRD 30 SECONDS

Learner ONE carries on talking to Learner TWO. Learner TWO is silent.

SESSION END

Learner TWO repeats what Learner ONE has been talking about. Learner ONE is silent.

Now ask the pairs to talk about this experience.

## SLIDE TWENTY-SEVEN

### This is a summary slide

Use this to remind the learners of the main objectives of the course – to help them to work safely.

The key point, as is the usual theme, is the importance of listening to and complying with instructions.

Staff who will be instructing learners will probably have learned from their mistakes. The idea is that the learners will learn from them, rather than making the same (often painful) mistakes themselves.

# STAY SAFE....STAY HEALTHY



Don't work on any part of a vehicle unless....

- 1 – You have been asked to do so
- 2 – You fully understand how to do it

- STAY ALERT

- LOOK AND LISTEN WHEN MOVING AROUND THE WORKPLACE

- LISTEN FOR INSTRUCTIONS

- LISTEN TO THE EXPERIENCED STAFF YOU ARE WORKING WITH

TRY TO LEARN FROM OTHER'S MISTAKES RATHER THAN MAKING THE SAME ONES YOURSELF!!

## SLIDE TWENTY-EIGHT

Ask the learners to re-iterate in their own words again:

What is a hazard?

What is a risk?

What does a risk control do?

This section of the course starts to round off the first session. The objective now is to enable the learner to recognise the simplicity of many of the actions and items which will be in place in their work placements which are designed to eliminate and reduce risk.

Make reference to the fact that this course is in itself a Risk Control.

A Safe System of Work is basically any process or procedure provided by a workplace, usually in written, diagrammatic and pictorial format, which is designed to make people work safely around a risk.

Prohibition comes up again here. Observation of learner response from slide 17 will dictate how best to handle this.

# RISK CONTROLS

ANYTHING WHICH REDUCES THE CHANCE OF A HAZARD CAUSING HARM IS A RISK CONTROL

THERE ARE LOTS OF COMMON WAYS OF CONTROLLING RISKS – NO MATTER WHAT THE RISKS ACTUALLY ARE:

- TRAINING
- SAFETY SIGNS
- PROHIBITIONS
- SAFE SYSTEMS OF WORK

## SLIDE TWENTY-NINE

Ask the learners about safety signs which they may have seen.

Gather individual examples of what signs have been seen, where they were and what the learner was doing at the time.

This slide has no other purpose than provoking discussion and is designed to keep the group interactive.

# SAFETY SIGNS



## SLIDE THIRTY

The session should have some pace at this stage.

Explain in summary the four different colours which are used in safety signage and what they broadly mean.

RED – Prohibition

AMBER – Hazard

BLUE – Mandatory

GREEN – Safe Condition

# SAFETY SIGNS



You must not



Warning –  
Take care



You must



Safe Condition

# SLIDE THIRTY-ONE

Explain that the common colour coding for signage also applies to the colour coding in this training course.

Red means an activity which the learner should not be doing.

Amber is an activity which the learner should be undertaking but only under supervision and whilst being trained. These activities could become unsupervised once the learner has achieved a good level of competence.

Green means an activity which the learner should be okay to do unsupervised from the start. However, it does not necessarily mean that the activity is entirely safe!

## PROHIBITIONS



You must not  
do this



You can do this if you  
are supervised

The colour coding is always the same.

Red = NO

Amber = MAYBE – ASK

Green = YES



You can do this

## SLIDE THIRTY-TWO

This slide may require more or less emphasis depending on how well the subject of prohibition has been grasped so far by the group.

The key here is to point out that at the beginning the learner is assumed to have little to no knowledge and experience of working within the MVR Industry. Therefore the colour coding for prohibition is there as a starting point.

Later down the line when the learner has gained experience and competence, supervised activities may become activities which the learner can do under “general supervision” – which means that there are people around, but not closely observing.

# WHY PROHIBIT?



Although you'll have to follow a safe system of work and wear protective gear, your supervisor can protect you fairly easily when you are mixing paint.



One mistake can cause permanent injury when welding. Also, the protective gear isn't designed to fit everybody. It's a lot more difficult for a supervisor to make this safe for you to do.



## SLIDE THIRTY-THREE

The subject of PPE is usually easier for young people to take on board than it is for longer serving and older workers.

This is simply because the young person doesn't know any different at this stage.

You must get across the points that:

- a) PPE must be worn. Instructions to wear PPE are just as important as any other instruction given in the workplace.
- b) After a short period of time a learner is likely to be expected to take responsibility for wearing their own PPE and looking after it.
- c) The learner must respect their PPE as much as they respect their own bodies.

Some young people might be concerned that PPE might be uncomfortable or not look very good. It is fairly straightforward to point out that everyone else in the workplace will be wearing PPE and therefore "looking good" doesn't really come into the equation.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)



YOU WILL CERTAINLY BE REQUIRED TO WEAR SOME PPE WHEN YOU ARE IN THE WORKPLACE

What PPE you are asked to wear will depend on what you are doing

ALWAYS MAKE SURE:

- You have been told why you are wearing the PPE
- You understand how to wear it safely
- It fits you!

# SLIDE THIRTY-FOUR

This is another interactive section.

Ask the learners if they can identify what is on each picture here.

Now ask them which items they think they should be using and which they oughtn't to be.

## FIRST AID AND SAFETY EQUIPMENT

WHAT SHOULD YOU BE USING AND WHEN/WHY?



## SLIDE THIRTY-FIVE

### First Aid

Make sure that the learners understand that they should:

- a) Know where the first aid kits are
- b) Know where the eye wash stations are
- c) Know who their first aider's are and where they will be

Some learners will ask why they cannot go to a first aid kit in order to clean up their own minor injuries (scrapes, cuts etc). The answer is that they can, but that a first aider must always be made aware so that they can determine why the "minor" accident occurred and most importantly whether it could actually have been major, in which case risk assessment may need to be reviewed.

# FIRST AID KIT AND EYE WASH



**NO**

Unless you are a qualified first aider you should not be administering first aid

If you hurt yourself or see anyone get hurt you must report it to your supervisor

SEE IT.....REPORT IT



**YES**

If you get something in your eye the eye wash station is there to help you. Use it if you need to – but report to your supervisor afterwards

## SLIDE THIRTY-SIX

Fire Fighting is NOT something which learners should be undertaking!

Learners need to realise just how quickly a fire can become very serious in the MVR environment. If it catches highly flammable substances it is likely to be explosive and potentially fatal to anyone in the vicinity.

Fire Extinguishers are only there for trained users – and for anybody who absolutely has to use them in order to escape. However, otherwise they are not for use and learners need to focus instead on getting themselves out of a building if a fire occurs.

It is also well worth pointing out the sheer recklessness of using extinguishers for “recreational” purposes. IE – discharging them for fun.

As the learners to put themselves in a position of someone trapped in a fire, trying to use an extinguisher to clear a path, only to find that it is empty or depleted because somebody has been messing about with it.

In respect of consequences – always focus more on permanent injury and disfigurement rather than death – the latter is far more difficult for a young person to comprehend.

# FIRE EXTINGUISHER

NO

You should only use a fire extinguisher if you are trapped in a fire and have no other choice.

If there is a fire your responsibility is to:

GET OUT

MOVE TO THE FIRE ASSEMBLY POINT

REPORT TO YOUR SUPERVISOR

STAY OUT UNTIL YOU ARE TOLD IT IS SAFE TO RETURN



## SLIDE THIRTY-SEVEN

Learners will generally be asked to use a spill kit – and shown how to use it.

It is worth pointing out here the importance of recognising that the learner's behaviour around risk can have an impact on other people's safety.

For example – they slip on some oil – do not fall, laugh and move on.

The next person who comes by is not so lucky, falls and breaks their arm.

Reporting the spillage and then using a spill kit to clear it, could have saved the person from injury.

# SPILL KIT



## POSSIBLY

You should only use a spill kit if you are asked to do so.

It is possible that you may be shown how to use a spill kit in order to clear up a spillage – usually oil or paint.

Make sure that you are following your instructions

# SLIDE THIRTY-EIGHT

## ACTIVITY

This slide introduces the Risk and Risk Control activity.

See – handouts and flash cards

## ACTIVITY

IN GROUPS OF FOUR OR FIVE

You will be given a set of RISK cards

You will be given a set of RISK CONTROL cards

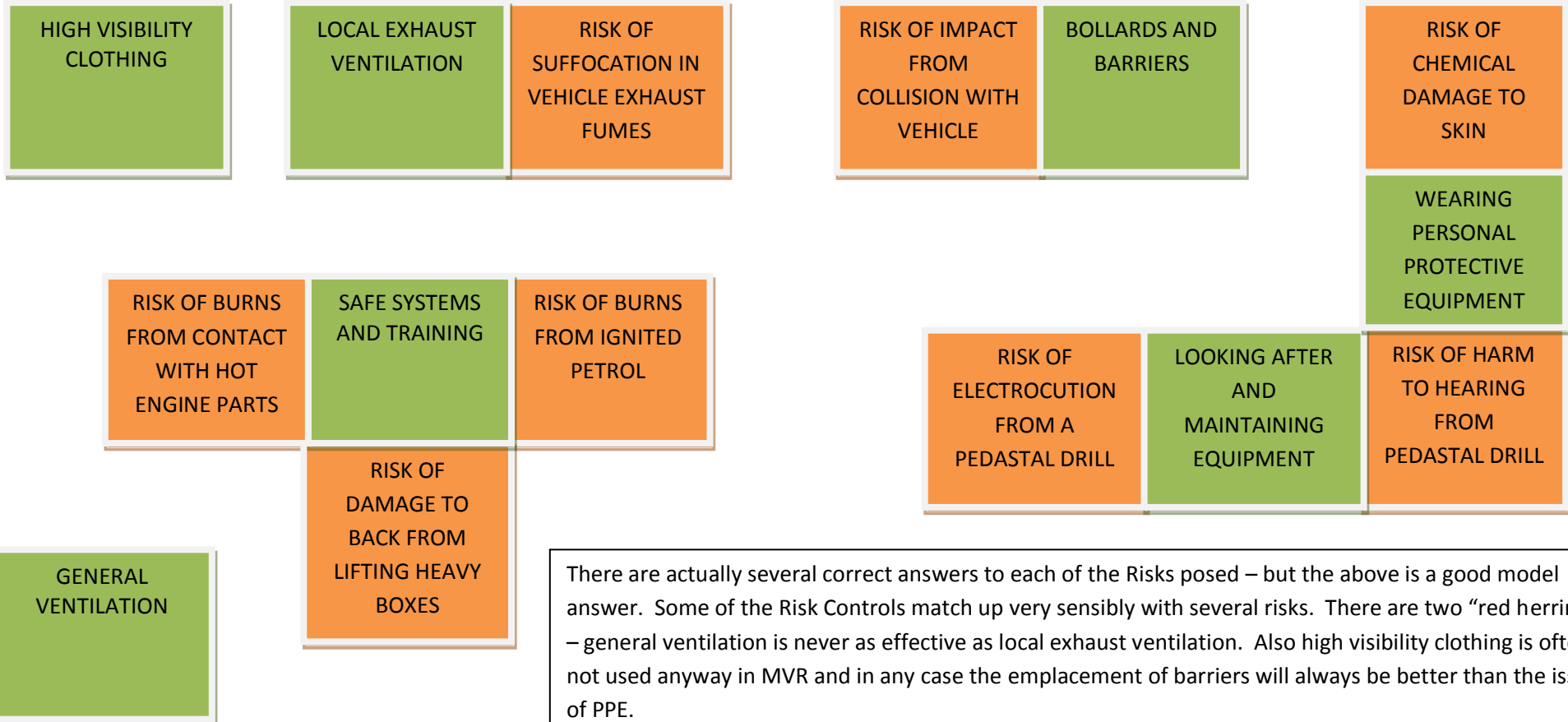
Match them up!

Beware – some RISK CONTROLS will work for more than one of the risks

Also – some RISK CONTROLS might apply to the same risk but might not be as effective as others

## CARD MATCHING ACTIVITY

There are eight RISK cards and only five RISK CONTROL cards. The objective of this exercise is for the learners to work in groups and match the Risks to the most appropriate Risk Controls – that is to say the Risk Controls which would be the most effective.



There are actually several correct answers to each of the Risks posed – but the above is a good model answer. Some of the Risk Controls match up very sensibly with several risks. There are two “red herrings” – general ventilation is never as effective as local exhaust ventilation. Also high visibility clothing is often not used anyway in MVR and in any case the emplacement of barriers will always be better than the issue of PPE.

The purpose of the exercise is to generate discussion amongst the learners and to get them talking about risks and the best ways in which to behave safely around them.

The Trainer should be positive and encouraging throughout this exercise. Most learners will find this fairly straightforward.

# SLIDE THIRTY NINE

## END OF SESSION ONE

Running both sessions one and two concurrently on the same day is inadvisable as there is too much material here to be absorbed in one go. It is therefore recommended that the group break up at this point and that Session Two is resumed the following day or on a later day.

It is not recommended that Session Two be undertaken any more than one week after Session One concludes.

## OBJECTIVES

SO FAR WE HAVE TALKED ABOUT GENERAL HAZARDS AND RISKS

NOW WE NEED TO LOOK IN MORE DETAIL AT THINGS WHICH TEND TO BE FOUND ONLY IN MOTOR VEHICLE REPAIR

IN THE NEXT SESSION YOU WILL LEARN A LOT MORE ABOUT HOW ACTIVITIES BEING CARRIED OUT IN THE MVR WORKPLACE CAN CAUSE HARM.....

.....AND HOW YOU CAN HELP TO STAY SAFE AND HEALTHY