

# **FINE TUNING YOUR BUSINESS**

**A Guide to Risk Management for the Motor Trade**



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# Introduction

*The motor trade business is a diverse trade and has many challenges and risks which are difficult to predict and plan for. However, there is a range of far more definite business risks that you can identify and plan to either avoid or mitigate – and undertaking a risk management process is increasingly accepted as intrinsic to sound business management. AXA has developed this risk management guide exclusively for the motor trade. The guide will highlight many of the key issues facing your business and identify solutions.*

Consider these risks:

- Fire – It can devastate premises in a matter of minutes and leave you unable to trade
- Crime – Motor trade workshops are a major target for thieves who are attracted by vehicles, contents and stock
- Health & Safety – Every year there are around 2000 accidents in garages, motor vehicle repair workshops and body shops<sup>1</sup>
- On the road – It has been estimated that up to one third of all road traffic accidents involve somebody who is at work at the time<sup>2</sup>. This accounts for over 20 fatalities and 250 serious injuries every week.

This AXA guide will support you with a risk management process and minimise the chances of suffering an incident.

1 – Health & Safety Executive

2 – Work-Related Road Safety Task Group – 2000

## Section 1 – Physical Risks

*The physical risks – fire, flooding, theft – facing your business can have the most dramatic and disruptive effect, but they are often the easiest to guard against.*

*Despite this, many businesses affected by this kind of incident find themselves ill equipped to deal with its consequences – and some never fully recover. Following the simple risk management steps outlined below will help you to ensure that your business does not become a member of this unfortunate majority.*

### **Fire**

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Fire causes billions of pounds worth of damage to businesses large and small every year. Motor trade is one of the main types of businesses to suffer the effects of fire.

The scale of this problem is in part due to the sheer array of possible causes of fire, from arson to smokers' materials but is exacerbated by the inadequate management of fire risks. Primary risks include:

- Inadequate precautions taken during welding or other hot work activities
- Lack of controls over the use and storage of highly flammable liquids, including petrol, paints and thinners
- A lack of proprietary spray painting enclosures/extraction or maintenance deficiencies of existing equipment
- External combustible storage, including waste tyres and waste oils increasing the potential for arson
- Unsuitable heating equipment used within the premises

Beyond these primary risks, a number of other factors could heighten the risk of a motor trader being struck by fire:

- Lack of a competent person on site
- Faulty and untested electrical installations and appliances
- Poor housekeeping and congestion within and around the premises.

### **Key Fire Risks**

Clearly, there are myriad ways in which a fire can start and take hold, so it is very difficult to ensure that any business is completely protected. It is possible, to significantly reduce the risk of fire – by ensuring that you take all the appropriate steps to protect your business in these areas.

The key fire risks are:

- Arson
- Electrical
- Welding operations
- Paint Spraying
- Smoking
- Petrol
- Handling and storage of explosives for airbags and seat belt pre-tensioners
- LPG motor vehicles
- Heating

### **Arson**

Sadly, over half of all fires affecting businesses are started deliberately, often following burglaries or vandalism and mainly at the hands of children and teenagers.

The following checklist highlights the good practice, vigilance, attention to detail and common sense that can go a long way to preventing arson from wrecking your business.

### **Management**

- Think of the worst-case scenario and plan your site security and safety accordingly
- Think about how and where intruders or arsonists could enter your premises. Take steps to prevent such entry.

### **Fire protection**

- Ensure extinguishers, hose-reels, alarms, detectors and sprinkler systems are maintained in full working order and protected against damage by vandals.

### **Buildings**

- Keep externally stored combustible stock or waste material well away from buildings and perimeter walls and fences, waste bins and containers, which should be metal lidded and padlocked outside business hours.

- Ensure doors and windows are in good repair, and keep them locked when not in use
- Use British Standards approved locks and padlocks
- Avoid gaps under doors
- Fit metal containers on the inside of letterboxes

### **Employees**

- Train staff to be security-conscious at all times and to be aware of the contribution they can make to preventing arson
- Encourage staff to challenge visitors and to report suspicious activities immediately
- Vet new employees carefully.

### **End of the day**

- Make it your responsibility to secure the premises at the end of each day
- Check that doors and windows are secure
- Check that no combustible material is left lying around
- Check that all persons have left the premises
- Check that alarms and outside illuminations are switched on.

### **Recycling Waste Disposal**

Business has become more aware of recycling. However, this in itself can result in problems with a build up of waste within premises rather than early disposal.

The following is good practice when managing waste materials:

- Provide suitable containers for different types of materials
- Combustible materials (cardboard etc) should only be in waste containers manufactured from non-combustible materials
- Keep combustible waste well away from ignition sources i.e. welding operation, electrical distribution boards
- Ensure staff know where and how waste materials should be stored
- Ensure that waste containers inside buildings are regularly emptied
- Provide suitable containers outside for items awaiting collection
- Recycle materials where possible
- Ensure that escape routes are not obstructed
- Ensure that fire brigade access routes are not blocked.

## **Electrical**

Electrical fires are the second most likely cause of damage in the UK. All electrical equipment must be properly designed and suitably protected for the working environment in which it will operate.

- Fixed electrical installation should be inspected and tested by competent contractors such as NECTA (National Electrical Certification and Training Alliance Ltd) or by other NICEIC or ECA registered contractor (or SELECT in Scotland). The inspecting engineer stipulates the period between each inspection which should not exceed 5 years
- Ensure that every appliance has its own 13 Amp wall socket outlet
- Do not use multi-point electrical adaptors as they increase the likelihood of fire considerably
- Portable electrical appliances must be checked in accordance with the Electricity at Work Regulations [1989] by electricians who are members of the NICEIC or ECS (or additionally, SELECT in Scotland)
- Electrical apparatus should be excluded or protected to a higher standard where flammable liquids are present as there is potential for explosive/flammable atmospheres forming.
- Flammable atmospheres need to be classified into zones which determine the protections required, in accordance with The Dangerous Substances and Explosive Atmosphere Regulations 2002. This can include preparation areas, in and around paint spraying booth/enclosures and paint/thinner storage areas where explosion proofing will be required
- In workshops all parts of the fixed electrical installation need to be located at least 1 metre above the floor level to reduce the risk of igniting any spilt petrol or other flammable liquids
- Insulated hand lamps offer no protection against the risk of igniting petrol or other flammable vapours and must not be used where such vapours may accumulate especially in vehicle inspection pits and paint spraying areas.

## **Welding Operations**

Welding and 'hot work' generate an ignition source which can create a lethal mix with fuels and has been the source of numerous serious fires, explosions, injuries and loss of life. A few simple steps can control this risk.

- Ensure all personnel are fully trained in the use of welding equipment and how to maintain equipment in good condition
- Safety inspections should be carried out before using equipment to check condition of hoses and valves, and ensure the presence of flashback arrestors
- Ventilate spaces where flammable vapours could accumulate such as inspection pits
- Remove items which could be combustible or provide flammable vapour. This includes fuel tanks, seats, carpeting, trim and tyres
- Body cavities often have foamed plastic insulation. This will need to be removed or shielded if hot work is required in these areas
- Check for leaks using specialist leak detecting spray or solution suitable for use with oxy/fuel systems
- Always keep cylinders upright on proprietary stands or trolleys. Store all spare cylinders in external compounds or cages
- Ensure suitable fire extinguishing appliances are readily available in the vicinity of the welding. Ensure staff are trained in the selection and use of extinguishers
- Maintain a fire watch for 1 hour after the welding has been carried out.

## **Paint Spraying**

Whilst there is a European Directive to move towards water based paints, there remains widespread use of highly flammable paints/thinners for paint spraying. The vapours from these products can travel a sizeable distance and cause fire or explosion when met with ignition sources. Often these vapours are heavier than air and collect at ground level. Therefore correct use and storage of these highly flammable liquids is critical.

- Paint mixing rooms and vehicle finishing units to be on non combustible construction providing at least 30 minutes fire resistance with self closing 30 minute fire resisting doors
- Floors of mixing rooms to be sloped or sills formed across the door opening to ensure any leaks or spillages are retained. Only non combustible materials should be used to absorb any spillages

- No more than 50 litres of highly flammable liquids should be stored in a suitably marked safety locker or bin, within the process area
- All areas of highly flammable liquid storage and paint spraying should be provided with ventilation to remove vapours to the open air
- For paint spraying and mixing areas, there needs to be mechanical extraction of the vapours. Exhaust ducts shouldn't have sharp bends or ledges and be taken to the outside air through an external wall or roof. If the ducts have to pass through other parts of the building, the ducts must have at least 30 minutes fire resistance
- Clean air should replenish air supplies with inlets at high level to create a cross flow of air
- Extraction motors should not be located within the ductwork
- Extraction ducting and filters need to be regularly cleaned to avoid the build up of deposits which are known to cause fires. Non metallic scrapers should only be used. The extraction system needs to be designed to provide easy access with hatches built in
- Extraction fans should run for 5 minutes before and after processes
- Vehicle finishing units should be provided with explosion relief, being at least half of the area of the smaller side of the enclosure and vented to a safe area
- Temperatures within curing ovens should be controlled by thermostats, interlocked within the heating source to prevent the temperature rising above the design level
- Combustion units should be fitted with flame failure devices and fire safety valve to shut off fuel supplies in the event of a fire

### **Smoking**

The smoking ban has now been fully introduced into the whole of the UK. Failure to comply can result in a fine of up to £2,500.

The ban applies to virtually all public places and workplaces. This includes premises of the motor trade and applies equally for employees and customers within areas of the premises that are enclosed or substantially enclosed.

To ensure risks are minimised, the following actions should be taken:

- Smoking restrictions must be clearly defined, incorporating no-smoking signs that meet the requirements of the Smoke Free (Signs) Regulations
- Where external smoking is permitted, it must be restricted to a designated external area, well away from workshop risks
- Procedures should be instigated to clear smoking matter at the end of the day.

## **Petrol**

Petrol fires in garages are frequent and severe. There are about 20 such fires each year, which cause serious burns (and very occasionally deaths), and major damage to premises, equipment, stock and customer vehicles.

- Before removal of sender units, tanks must be emptied into suitable containers. Spills occur when fuel lines are damaged or when fuel systems are being checked.
- Petrol vapour is invisible and heavier than air and will disperse over considerable areas, collecting in pits, sumps and drains and is easily ignited
- Petrol vapour is easily ignited (very often some distance from the spillage) by different sources of ignition including, matches, cigarettes or heaters with naked flames or electric elements, welding gear or electrical equipment
- Vapour may also be contained within clothing onto which petrol has been spilled; an attempt to dry clothing using heaters with naked flames or glowing electric elements may ignite vapour in and around the clothes
- Never attempt hot work on a petrol tank – always send it to a specialist who deals in this particular area.

## **Handling and storage of explosives for airbags and seat belt pre-tensioners**

The following precautions should be exercised during handling and storage of explosives using in airbags and seat belt pre-tensioners.

- Use approved cabinets for the storage of the products, which comply to Mode B registration.
- The cabinet should be located away from oils, paints and other flammable liquids, hot work operations and electrical equipment
- The cabinet should be secured to the wall or floor and kept dry
- Don't try and repair or modify an airbag module
- Don't expose the module to excessive heat (over 90° C), impact, electrical current (including static electricity) or radio transmitters
- Seek advice of supplier for disposal of deployed airbags. It is illegal to dispose of explosives as normal waste.

**LPG motor vehicles**

Whilst there are specialist centres for the installation and maintenance of Liquefied Petroleum Gas (LPG) vehicles, motor vehicle repair garages may occasionally deal with vehicles running on LPG. As such, business owners and employees should make themselves familiar with this fuel type and hazards that are present.

- LPG is stored within tanks at an elevated pressure. LPG vaporises more readily than petrol so any leaks will vaporise and disperse quicker than petrol leaks
- The vapour is highly flammable and will readily ignite and explode
- The conversion into vapour creates rapid expansion and cooling of the gas and therefore anyone exposed to the vapour or in contact with metal surfaces may receive cold burns
- Specialist training should be undertaken for employees who may work on LPG fuelled vehicles including emergency procedures
- Locations for parking and working on LPG vehicles should be away from openings in the ground such as drains and pits, and any sources of ignition
- Clearly identify any LPG vehicle to all employees, especially if any 'hot work' is to be undertaken
- Don't take LPG fuelled vehicles into workshops if there is a known leaking LPG system. Dangerous amounts of vapour could accumulate
- Any work that may involve the LPG system, you may need to isolate, protect, remove or empty and gas-free the system
- Always consult the manufacturer or conversion company before placing the LPG fuelled vehicle in a paint drying/curing oven.

## Heating

Heating in workshops is always an issue since access doors/shutters regularly remain open. Portable space heaters are an unacceptable form of heating since they often incorporate a naked flame into potentially explosive atmospheres and introduce further supplies of highly flammable substances.

Suitable heating types would include:

- Fixed heating via ducted warm air or supplying hot water or steam to pipes and radiators. The system should include a heat exchanger to prevent flammable vapours from coming into contact with an ignition source
- Electrical heaters of the low temperature flameproof type, certified for the use. The temperature of the external surface of such heaters should not exceed 120°C.

## Risk Reduction

### Housekeeping

There are a wide range of best practice measures that apply across the business, rather than to specific issues. This general housekeeping includes:

- Combustible waste must regularly be removed to metal waste bins with lockable lids
- Local authority issued plastic 'wheelie bins' should be located at least five metres from the external building wall – avoid storing under the eaves of single or two storey buildings as this can assist in the rapid spread of fire within the roof structure/void
- Cupboards containing electrical distribution boards, heating boilers and the like must not be used for storing combustible materials
- It is essential that designated means of escape are maintained clear of obstruction at all times.

## **Fire Protection Systems**

A number of different fire protection systems are available which may either control a fire or give early warning of fire. These systems include:

### **Portable Fire Extinguishers**

It is essential that portable fire extinguishers are suitable for the risk exposure within their immediate vicinity. For instance, specific extinguishers are designed to tackle fires involving flammable liquids.

Training should be provided – this can be arranged with the company which services the extinguishers or your local fire brigade, or fire safety department.

### **Fire Alarms**

An automatic fire alarm system should be installed throughout the premises in accordance with BS: 5839: Part 1: 1988. This standard has recently been redrafted and all new installations should comply with BS5839: Part 1: 2002 and incorporate the following:

- Remote monitored fire alarm systems will provide detection of fire to a 24 hour alarm receiving centre to call keyholders and the Fire & Rescue Service.
- Installations and maintenance of systems should be carried out by contractors listed to LPS 1014 by the Loss Prevention Certification Board or British Approvals for Fire Equipment (BAFE) listed contractors on the Fire Detection & Alarm System Modular Scheme SP203.

You should also be conscious of the number of false alarms your system generates and take early action to rectify such problems. Policies being introduced by the Fire & Rescue Service could see a withdrawal of their response if you suffer repeated false alarms.

Installations should be also tested weekly with a written record of each test recorded and retained for inspection.

## Sprinklers

Sprinkler systems represent an excellent form of fire protection which can contain or extinguish a fire, saving serious injury and saving the business from a devastating loss. Where sprinkler systems are present the following points should be incorporated:

- Sprinklers must be maintained under contract with a LPS 1041 Registered or Certified contractor
- It is recommended that any sprinkler installation be extended to incorporate remote alarm signalling
- Sprinkler systems should be tested weekly by the building occupier. The results of each test should be recorded on a sprinkler test record card, which is issued annually by the building insurer
- Care should be taken to ensure sprinkler heads are allowed a clear space of at least 1 metre to ensure they operate correctly
- Sprinkler heads must never be painted over or covered by any overspray as this will seriously inhibit their effectiveness.

### **REGULATORY REFORM (FIRE SAFETY) ORDER 2005**

From 1 October 2006, new fire legislation was brought in, called the Regulatory Reform (Fire Safety) Order 2005 for England and Wales. Similar changes have been made in Scotland via the Fire (Scotland) Act 2005 and the Fire & Rescue Services (Northern Ireland) Order 2006. These Regulations apply to virtually all premises and importantly also applies if self employed personnel are on the premises. To comply with them you must:

- Assess fire risks in the workplace and reduce risks to the lowest level practical
- Check that a fire can be detected in a reasonable time and that people can be warned
- Check that people who may be in the building can get out safely
- Provide reasonable fire fighting equipment
- Check that those in the building know what to do if there is a fire
- Check and maintain your fire safety equipment via competent persons/contractors.

#### **Fire Risk Assessment**

A fire risk assessment needs to be recorded if there are 5 or more employees. This should be conducted in a systematic and thorough manner and follows a logical pattern. There are five steps you need to take to ensure your fire risk assessment complies:

##### **1. Identify potential fire hazards in the workplace**

Consider potential ignition sources and how fire could spread. Think of your work processes, equipment and substances used/stored and how these can be minimised.

##### **2. Decide who might be in danger**

Always consider employees and visitors and make adequate provision for any disabled individuals or those with special needs.

##### **3. Evaluate the risks and decide if existing fire precautions are adequate**

Consider the likelihood of fire and the potential of that fire to cause harm to your employees. Take into account how the alarm is raised, any possible fire fighting measures and the means of escape.

Having produced a risk assessment, you then need to consider what measures might be available to address the risk in question – this could be to remove it altogether, change working practices or introduce controls so that the risk can be reduced and managed at a tolerable level.

##### **4. Record findings and produce an action plan**

Prepare a written emergency plan, appoint a person to implement the plan and ensure that this person is properly trained and provided with adequate fire fighting equipment.

##### **5. Keep the assessment and action plan under review**

Having completed the risk assessment and control process, it is essential that you keep it up to date through a system of regular review. The Regulations recommend a daily checklist as a minimum. You should pay attention to any changing circumstances that could impact on your risk assessment i.e. building alterations, new equipment or processes. Ongoing reviews should be carried out at least every six months.

## Crime

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Break-ins, theft and malicious damage pose a significant threat to the success of any motor trade businesses – for instance through damage to or theft of critical equipment. Of course, it is very difficult to stop a determined criminal. However, thieves rarely enter premises without weighing the risk to themselves against the potential reward. A few simple precautions can greatly reduce the chances of the premises being targeted:

### Physical Security

- Provide substantial, solid or solid core doors to openings and secure by means of quality locks (i.e. 5 lever deadlocks to BS3621) and padlocks to CEN Grade 5
- Padlocks should have a closed hardened steel shackle to resist bolt croppers and reduce the chances of being wrenched apart
- Use British Standard emergency exit devices for any designated fire exits
- Consider steel facing any vulnerable doors and fitting hinge bolts (a must for outward opening doors)
- If possible, windows should be screwed or bolted permanently shut (providing they form no part of a fire escape). Alternatively, bars or grilles should be considered for opening windows
- Doors to staff areas/offices/store rooms and the like should be fitted with digital locks to prevent unauthorised persons gaining access throughout the premises
- Ensure that perimeter walls and fences are maintained in good condition and that gates and barriers are well secured out of business hours
- Attractive stock such as portable tools, diagnostic equipment, in-car entertainment systems etc should be located within secure internal rooms
- Manually operated roller shutters should be secured by pin tumbler locks at each side. Electric shutters should have a key operated isolation switch.

### Security Cages

- High value security cages can provide increased protection of portable hand and/or power tools, and in car audio equipment.
- Security cages should be formed from steel sections with welded mesh directly attached, and be secured with security padlocks approved to at least CEN Grade 5.

### **Security Posts**

Ram Raids (where criminals use motor vehicles to crash through building windows & doors) continue to be a problem, with premises containing high value equipment and vehicles.

- Security bollards, particularly fixed bollards, are a cost effective security measure
- There is a large variance in security standards across the various types and specifications. Your insurance company should be consulted prior to entering into any contract to purchase security bollards
- In areas where vehicular access is not required by you, permanent features such as large plant containers or decorative but heavy stones/rocks can prevent ram raids.

### **Intruder Alarms**

Given time and expertise, determined criminals can breach most physical defences. The important thing then is to ensure that criminals entering your premises have very little time to damage or remove your property. An intruder alarm backs up good physical security and should signal the presence of intruders in an area monitored by its detection devices:

- Consider the installation of an intruder alarm system if the premises are vulnerable or isolated, have suffered previous entries or attempted entries, or contain goods attractive to thieves
- Ensure that the system is installed by a UKAS (United Kingdom Accreditation Service) to EN 45011 or EN 45012 and that it is accredited and operates a Quality Management System in accordance with EN ISO 9000 and that an annual maintenance contract is entered into
- Provide personal attack buttons beneath counters where necessary. Train staff on the appropriate use of such equipment
- A remote signalling transmission system to a 24 hour manned alarm-receiving centre
- Take special care to ensure that false alarms are not generated, as the police will not respond to alarm systems which cause an unacceptable number of false calls

- It is essential that intruder alarm installations are designed, maintained and operated correctly. Prior to installing an intruder alarm your insurance company should be contacted who can provide guidance on the requirements of the intruder alarm coverage
- Once installed all employees required to set/unset the alarm should be trained by the alarm engineer.

### **Police False Alarm Call Policy**

#### **Immediate Response**

After 3 false alarms in a rolling 12-month period, this reduces to:

**Keyholder response only i.e. Police will NOT attend.**

Following withdrawal of police response, a period of 3 months free of false alarms must be recorded together with the intruder alarm being upgraded to provide confirmation alarm signals.

Your local crime prevention officer should be consulted to confirm variations applicable to your premises and/or area.

### **CCTV**

Close Circuit Television Systems can be used as part of an integrated security system and for compound or forecourt security.

The following guidance should be considered prior to CCTV installation being installed:

- Use only NSI – NACOSS Gold registered companies approved for CCTV installations. The system should also comply to BS7958: 2005 Management and Operation and code of practice for CCTV systems. Consider the ongoing costs of the system and not only the installation costs. No contract should be signed until specification is agreed with your insurance company
- The recording image of any system is critical if it is intended that it be used later for identification purposes. Remote monitoring of systems is now possible and more appropriate for vehicle compounds and forecourts
- Digital recording is better than traditional video tapes – digital recording provides higher definition images
- Consider what areas of premises/external environs need to be covered

- Ensure that adequate lighting will be provided for both day and night operation
- Design the system to incorporate existing security protection
- Ensure the system has capacity for future expansion
- Arrange adequate maintenance contract for installation
- Ensure the system cannot be misused or sabotaged by employees
- All CCTV systems must be Data Protection Act compliant – this can be achieved on-line at [www.dataprotection.gov.uk](http://www.dataprotection.gov.uk), or you can call 01625 545700 to request an application form.

### **Compound/Forecourt Security**

Sale vehicles may often be held in compounds away from the main site, or held externally on the site forecourt. To minimise the risks of theft:

- Ensure minimal quantities of fuel are held within vehicles
- Removal of any attractive items from the vehicles such as in car entertainment/navigation systems
- Immobilise vehicles by removing key components
- Place the higher value/theft attractive vehicles on inner rows so that several cars would have to be moved to get to them
- Protect compounds with palisade fencing to a height of 2.4 metres and gates to be secured by close shackle padlocks that are tested and approved to **CEN Grade 5 or above**
- Use telescopic bollards over the entrance to the compound
- Fixed bollards are suitable for forecourt security, spaced at regular intervals, sufficiently close together to prevent a car passing between. Remember, your insurance company should be consulted prior to entering into any contract to purchase security bollards
- Compound fencing to be regularly inspected for damage or attempts at entry which allows for early repair
- Thieves like to work under the cover of darkness and therefore compounds and forecourts should be well lit
- Ensure personnel have procedures to lock compounds when not in use, including daytime.

## Security Safes

Appropriate consideration should be given to selecting an appropriate security safe for your premises. Key considerations should include:

- Selecting a safe with a cash rating appropriate for the maximum amount of cash to ever be held on the premises. Your insurance company should be contacted to provide you with a cash rating
- Any safe to be professionally installed, and installation certificates should be provided for this
- If the safe is a free-standing type, this should be anchored to a concrete floor. In the case of underfloor safes, these should be installed to a depth of at least 100mm
- Time-delay safes – secure and only possible to open after a pre-set time, these safes will keep any cash not in the till, or not yet banked, safe from all but the most determined robbers
- Use of chute facilities will alleviate the need for staff to hold safe keys.

## Banking Procedures

- If large amounts of cash need to be banked or collected on a regular basis, then the safest method is to employ a recognised cash carrying company
- If you do undertake your own banking, be especially careful and choose the right staff for the job
- Be alert. Look out for suspicious people or vehicles
- Always use a secure container for carrying cash, but don't draw attention to it
- Don't be predictable. Vary the times and routes taken. Try and use the busiest roads and walk in the centre of the pavement, towards oncoming traffic
- Never use public transport
- If you use a car, try not to use the same one each time. If possible, use a decoy vehicle as well
- Make sure all vehicles are well maintained. Keep all doors locked and don't make unnecessary stops or leave the vehicle before you reach your destination
- If you are attacked – surrender the cash.

**Key theft risks**

Motor trade garages are often targeted for theft of specific items of equipment and/or vehicles. Some of the common items targeted are noted below, with methods of providing added security.

**Portable Hand Tools**

Portable hand tools are highly theft attractive and must be protected against theft by suitable levels of security. Garage owners and mechanics will recognise the problems theft of portable hand tools will cause to the business however it is important to understand the thieves are regularly removing specialist items such as spray equipment, body-pullers, diagnostic engine tuners and gas analysers.

Tool boxes and specialist equipment should be placed in a secure locked internal room outside of business hours, or chained to substantial structural building feature utilising a close shackle padlock which is approved to no less than CEN Grade 5 security grading.

**Vehicle Keys**

Vehicle keys should be retained within a proprietary key cabinet or safe, particularly outside business hours.

Where keys are left within the vehicle, intruders regularly utilise vehicles to remove plant and equipment or alternatively, it is not uncommon for a vehicle within the building to be utilised like a 'battering-ram' to force open workshop doors which may be protected with high security locks &/or padlocks.

Garage owners often retain keys within the vehicles to assist the fire brigade with removal of vehicles in the event of fire. It is likely that should fire occur, the fire would be well developed and no attempt would be made to remove vehicles. Additionally, fire fighters would commonly release the handbrake and push the vehicle to safety.

## Customer Vehicle Keys

Customer vehicle keys should be held within a closed and locked key box at all times – where an open keyboard is utilised, the area where the board is located must be attended at all times and be positioned in such a way as to prevent persons gaining unhindered access to the board.

## Sale Vehicle Key Boxes

A number of dealerships use small metal boxes that slide over the opened side-window glass, which is then closed, holding them in place. The vehicle key is placed inside the box that is locked with keys to gain access to the boxes held by sales staff.

It should be recognised that the use of these boxes requires special consideration and you should refer to your Insurance company before installing such equipment.

## Deception

Theft by deception is well known within the motor trade and is a common occurrence. One of the most common ways of achieving deception is by arranging a test drive of a vehicle and on completion, handing the salesman a false key which, apart from its' profile, is identical in appearance to the correct vehicle key. The thieves then return to the forecourt within a short period of time (often less than one hour after the test drive) and drive off with the vehicle.

## Kiosks

The presence of kiosks at fuel filling stations introduces added risks with the introduction of cash handling, stock of cigarettes/tobacco and the possible presence of ATM machines.

## Money

Clearly, money is the primary motivation behind the majority of break-ins, either through the removal of valuable equipment and stock, or through the theft of cash. Most thieves would prefer to steal cash, so this is the first area you should look at securing if you regularly handle cash such as in forecourt shops etc. Commonly used measures include:

- Plastic till-guards – offer a cheap but effective way to prevent till snatches
- Till alarms to remind staff to minimise the amount of cash within tills and transfer monies to the safe
- Smoke and Dye money pack systems. Designed to emit coloured smoke and spoil stolen cash

- Pneumatic cash transfer system – an air-powered tube system to convey cash to a secure area or safe could be considered where large amounts of cash are being handled
- External access safes – where cash collection companies can supply or take away cash without the need to enter premises
- Counter Cache(s) – lockable metal containers, which can be kept close to the till, they are intended for the temporary holding of bank notes before transfer to the safe or bank
- Clearly the best way to remove the risks are to minimise the amount of cash handling. Encourage customers to pay via credit/debit cards and introduce ‘chip and pin’ which is seen as secure by customers.

### **Cigarettes and Tobacco**

This type of stock is highly vulnerable to theft and robbery being very easy to sell on. A few simple precautions can minimise the likelihood of being attacked.

- Always minimise the amount of stock held on shelving
- Don't replenish stock last thing at night. Best to leave until the morning
- Use of roller shutter cabinets offer some increased physical security to the display stock
- Always keep overflow stock in a secure locked room, preferably without external windows or doors
- Ensure access behind counters is not provided and always ensure adequate staffing levels
- High quality CCTV systems may provide an added deterrent to opportunist thieves.

## ATM's

The presence of Automated Teller Machines (ATM's) at fuel filling stations represents a significant theft risk. Machines can either be held within the wall of the filling station shop or inside the shop area. Extreme measures have been taken by thieves to attempt to steal these machines or their contents. Some of the protection measures are as follows

- The ATM machine should be fixed to the floor through its security container by a minimum of four-resin anchor bolts (minimum 12mm diameter to a minimum depth of 150mm) into a substantial concrete base
- The machine should be sited well away from glazed areas of the shop, preferably directly against a strongly built internal or perimeter wall which does not have vehicular access to it. Where there is a large expanse of glass in the building, this should be protected by externally fitted roller shutters
- Any ATM fitted to an external wall to be protected via anti ram bollards, subject to local authority permission
- External ATM's should only be present on premises open 24 hours a day
- Good quality high definition CCTV systems should cover all access points to the building
- A banknote degradation system which dyes/degrades currency notes when activated should be fitted to each ATM cassette contained in the ATM, to provide a deterrent to theft of or from the ATM. The banknote degradation system should be designed to activate immediately the ATM is moved or attacked by any means. If required, the system may incorporate a chemical identifying system such as Smart Water, although such identification systems should not be used in isolation
- High quality intruder alarm protection should be included to the premises with monitored remote signalling to an alarm receiving centre. Your insurance company will provide specific details on the type of protection required
- All cash should be removed from the ATM at the end of the trading day to a safe of adequate security quality, sited within the premises. This needs to be carried out with the premises locked and customers excluded. For internally sited ATM's, the door to the ATM should be left in the open position when the premises are closed
- Refilling of the ATM should then be carried out, prior to the commencement of trading again with the premises locked and customers excluded
- Refilling must not be carried out when the premises are open for business
- Notices should be placed in prominent positions stating that the ATM holds no cash when the premises are closed.

### **Lottery Scratch Cards & Power Cards**

Kiosks may also sell scratch cards and power cards i.e. for electricity meters. Activated cards should be kept to a minimum. Meter cards should be contained within the security safe and only the required amount for each shift taken out and held in the till.

### **Business Interruption**

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It's a sad fact that 80% of businesses affected by a serious incident, such as fire or flooding, either never recover or close within 18 months. This is largely because they fail to recognise the potential long-term effects of even relatively minor incidents<sup>1</sup>

There are several areas to pay attention to:

#### **Computer Data**

- Computer data for stock control and accountancy records should be backed up and removed from premises at intervals not exceeding 7 days
- If back up records are kept within the premises, keep them in an approved Data Safe which is tested and approved to VDMA test standard S120 DIS
- Back up procedures should be tested at intervals not exceeding 6 months
- Extra consideration to be given at premises with new car sales whereby computer systems are linked to manufacturers for production. Loss of this link could affect sales or reputation. Ensure the main data server is retained in a secure area of the premises. Procedures should be set up to understand how to re-connect, the likely timescales involved and interim measures that should be taken.

#### **Loss of Equipment**

- The loss of mechanics tools and specialist equipment would affect one of the core areas of the business, namely service and repair. Ensure replacement equipment is easily and quickly available and consider interim measures that would allow work to continue in the meantime.

#### **Loss of Key Customers**

- If you have customers that provide you with regular and large amounts of business (i.e. a contract for servicing a companies fleet of vehicles), consider interim measures that enables you to maintain this contract if you are unable to trade from your existing premises. Options could include the use of temporary premises and use of mobile equipment to maintain some of their work in the short term.

<sup>1</sup> – British Chamber of Commerce – 2003

## **Continuity Planning (Disaster Planning)**

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It is recommended that a business continuity plan (disaster plan) be established for the business. Spending time developing a Business Continuity Plan will not only increase the likelihood of your survival from a crisis or business interruption, but will also ensure the safety and protection of your biggest asset, your people.

The main objective of the plan is to recover all business critical processes and minimise the impact for your employees, customers and your reputation. Implementing a plan is essential to every business, but many don't know where to start.

AXA has produced a guide 'Business 4 Tomorrow' which is available free of charge via [www.axa4business.co.uk](http://www.axa4business.co.uk). The guide will give you an understanding of what you should consider for the plan and how to write a business continuity plan.

## **Water Damage**

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Flooding, and the impact it can have on businesses, can be disastrous.

For motor traders, potential disruption through water damage is not limited to flooding. Burst pipes and storm damage can cause damage to stock, equipment and vehicles.

Measures to eliminate these business risks include:

### **Roofs**

- Annual inspection of building roofs by competent contractors and any repairs corrected promptly
- Where possible, flat roof structures should be avoided – this type of structure increases susceptibility to water penetration and reduces the overall security of the premises.

### **Gutters**

- Roof edge guttering and valley gutters should be inspected and cleared of blockage at 6 monthly intervals. You may need to do this more frequently where premises are surrounded by trees and vegetation.

### **Drains**

- It is essential that drains are maintained free from obstruction and are free flowing. Where blockages occur, professional drain cleaning contractors must be instructed to inspect and clear blockages immediately. Drain interceptors may be required in some instances.

## **Flood**

Many areas of the UK are now threatened by the risk of flood. If your business is located in one of these areas, there are a number of measures to consider.

- Obtain the Environment Agency Floodline pack, the advice in which should form the basis of a formal flood action plan. By registering with the Agency, you may be able to benefit from their Automated Voice Messaging service, which provides advanced flood warnings by telephone, fax or pager.

Your action plan should also incorporate proposed arrangements for temporary storage of furniture/equipment pre flooding, where practicable.

The Floodline information pack can be obtained by telephoning 0845 988 1188.

- Flood boards could also be fitted to reduce the risk of flood water entering the premises via external doors. The flood boards could either be hinged sheet steel construction or of the removable type with the board/metal sheet slotting into guide channels stretching the full width of the door and being at least 18, preferably 24 inches in height. Substantial rubber seals should be fitted to guide channels and the bottom of the flood board to reduce the risk of water.

## **Falling Trees and Branches**

- Regular inspection of trees and branches should allow risks of damage to be minimised. Consider felling trees around compounds or forecourts if the risk of damage is considered high.

## **Other Risks**

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### **Malicious Damage**

Where vehicles are sited externally, there is the ever present threat of malicious damage. Minimise the risks with the following measures:

- Use of monitored CCTV systems to identify potential trespassers on the site before any damage takes place
- High level lighting systems makes the culprits more identifiable and increases the visibility of the site
- Perimeter security to prevent access to the site (gates, fencing etc)
- Be aware of local and national events that could increase the chances of malicious damage to vehicles
- Consider increased security at these times, i.e. professional security guarding outside of normal business hours.

## Impact Damage

By the nature of the business, vehicles are often being driven on the around the site from parking areas into workshops or for test drives, where the risk of impact damage to buildings and vehicles is increased.

- Where feasible, it is a good idea to create a route or one-way system to prevent accidents and damage around the site
- Have experienced drivers only operate around the site and moving vehicles. Sales personnel should bring courtesy cars and test drive vehicles to a clear area and park them afterwards
- Be aware of potential hazards around the site i.e. low level bollards, planters etc.

## Section 2 – Health & Safety

*According to the HSE (Health & Safety Executive) from 2001 - 2003 there were 5,500 injuries reported to the HSE and Local Authorities where the main business activity was Motor Vehicle Repair.*

*The effective management of health and safety is a key focus in preventing accidents and ill health at work. This section considers the main causes of injuries in motor trade premises and provides guidance to minimise these risks.*

### **Lifting Equipment**

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The failure of lifting equipment is a common cause of accidents in motor trade workshops. The following provides guidance on how to protect against such incidents:

#### **Hoists**

- Most accidents with vehicle hoists occur when vehicles fall off them because of failures to maintain and use hoists properly. Four post hoists should have an effective 'dead man control', toe protectors and automatic vehicle chocks
- Raised hoists should never be used as a working platform unless they are purposely designed for such activities and have proper handrails, mid rails and kick plates fitted.

#### **Two Post Hoists**

- When using two-post hoists pay attention to the manufacturer's instructions and recommendations. Always check that vehicle jacking points and chassis legs are in good condition before using. Also the support arm pads must be set to the correct height, before any vehicle is raised on two-post hoist
- It is most important that the weight distribution of the vehicle being lifted and the corresponding effect of the removal of any components do not cause the vehicle to become unbalanced.

#### **Axle Stands Trolley and Bottle Jacks**

- Only use lifting jacks on a level surface and ensure that it is capable of lifting the weight of the vehicle
- Ensure jacks used are in a good condition and free from any hydraulic leaks etc that could affect the safe lifting capacity
- Jacks must only be used as a means of lifting a vehicle and never relied upon as a support for carrying out work underneath. Axle stands must be used at all times, these should be in good condition with the correct support pins being placed in position on the height adjustable arms.

### **Examination of Lifting Equipment**

All lifting equipment is subject to statutory examination, testing and certification by law.

- All new equipment, chains, ropes, slings, any lifting tackle and lifting accessories must have Certificates of Test and Examination specifying the safe working loads. The manufacturer normally provides test and examination certificates
- All lifting equipment including hoists and should be thoroughly examined every 6 months by a competent person normally a lifting equipment engineer (usually in the employment of an insurance company or specialist lifting equipment contractor). AXA Insurance can provide details of their associate company H S B Haughton who can offer this service
- Cranes and lifting equipment, winches and retaining straps fitted to or used in any road recovery operations also fall into this category.

**Lifting Equipment Summary Schedule of Thorough Examination and Inspection**

<b>Work Equipment</b>	<b>LOLER reg.9 Thorough examination'</b>	<b>PUWER reg.6 'Inspection'</b>
Axle stands		12 months
Body aligning jigs	12 months	12 months
Chain blocks	12 months	
Cab/body tilt mechanism		12 months
Cranes: Lorry mounted Mobile crane	12 months 12 months	
Engine hoist	12 months	
Engine stands		12 months
Engine lifting brackets – if accessory for lifting	6 months	
Eye bolts	6 months	
Fork lift truck (FLT) – Fork extensions – Working platform for FLT	6 or 12 months 6 months 6 months	
Gearbox lifting table	12 months	
Hydraulic press		12 months
Jacks: Bottle jacks Trolley jacks Vehicle equipment	12 months 12 months Not normally	Not normally
Lifting slings: chain/webbing	6 months	
Pallets		No
Ramps		12 months
Recovery truck: A-Frame crane Jib crane Spectacle lift Towing dollies	12 months 12 months 12 months	12 months
Rolling road brake tester		12 months
Skips	No	No
Stillages	No	No
Tail lifts	6 months	
Tipper rams		12 months
Tow ropes		6 months
Towing bars		6 months
Vehicle hoists/lifts	6 months	
Wheel lifters	12 months	
Winch		12 months

## Electrical Safety

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Poorly maintained electrical systems cause many serious injuries each year in garages.

### Fixed Electrical Installations

All electrical equipment must be properly designed for the working environment in which it will operate and be suitably protected; this means taking into consideration wet conditions or conditions where petroleum spirit or fumes may be present.

- Mains switchgear should be located where it cannot be damaged but is accessible and unobstructed so that it can be easily accessed for repair and maintenance etc.
- All switches and circuit breakers should be clearly labelled as to what their function or circuit identity is
- All wiring should be in steel trunking or conduit
- A suitable number of electrical outlets should be positioned around the walls in order to reduce the need for excessive trailing leads etc
- In mechanical repair areas lighting should be of pendant type lighting with tungsten filament or fluorescent lamps. In order to reduce the stroboscopic effect that can make rotating parts seem stationary and that can induce epileptic fits phase displacement between twin fluorescent tubes is advisable
- Vehicle wash bays should be fitted with waterproof lighting units.

### Hand Lamps

Unsuitable and badly maintained hand lamps cause many electric shocks. Hand lamps should fall into one of the categories below:

- All insulated or double insulated type with the bulb protected by a robust cage of insulating material or a transparent insulating enclosure
- Be supplied by using a reduced voltage such as 110 volts (centre tapped to earth) or Low Voltage which does not exceed 50 volts ac.
- All lamps must be isolated from supplies before changing bulbs
- Ensure that electrical supply cables for hand lamps are regularly maintained and are inspected by a competent electrician to ensure that they are safe to use.

### Portable electrical equipment

Portable 240 volt tools and hand lamps and their plugs, sockets and flexible leads are frequently sources of electric shock and burn accidents, some of which are fatal.

- Use industrial type plugs and sockets to BS 4343. These are robust, and available as drip and weather proof types and are colour coded. This may help prevent low voltage appliances being plugged into higher voltage sockets
- Extension leads should be flexible. Never use semi-rigid cable of the type used for domestic wiring. Extension leads with 13 amp fittings should always have an earth wire
- Electric portable tools should preferably be operated by 110 volts supplied from socket outlets suitably located and fed from a transformer with the 100 volt secondary output winding centre-tapped to earth so that the maximum possible shock voltage to earth is 55 volts
- Double insulated or all insulated tools are a valuable precaution against electric shock where a 240-volt supply to portable tools has to be used. These however are not suitable for wet environments.

### Compressed Air Equipment

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Compressed air equipment is used to power tools and other equipment and also to apply materials such as grease, oil and paint to vehicles

- Compressed air equipment, including air receivers need to be examined regularly by a competent person (often employed by an insurance company) who will advise on the frequency and type of examination required
- If compressed air is used as a source of air for breathing apparatus, ensure it meets the necessary requirements and fit suitable filters that remove any oil and water contamination
- Injuries, occasionally fatal, can be caused by accidental or deliberate injection of material and/or compressed air, either through the skin or into a body orifice. Internal organs rupture at low pressures
- Ordinary working clothes do not significantly restrict the penetration of compressed air into the body. High-pressure paint guns may inject paint at 3000 to 7000 psi (pounds per square inch) and cause serious injuries. Employees should always be made aware of the hazards
- Care should be taken to avoid accidental injections when using compressed air equipment, particularly in awkward or confined situations such as inside or beneath vehicles, and when clearing or cleaning guns
- Medical advice should always be sought after compressed air penetration occurs or is suspected.

### **Vehicle Inspection Pits**

- Flammable vapour from petrol, paints and solvents are heavier than air and can collect in pits. Vapour is highly ignitable and explosive, so any electrical equipment used in pits should be suitable for use in explosive atmospheres.
- The requirements of the DSEAR Regulations (The Dangerous Atmospheres and Explosive Atmospheres Regulations 2002) apply to all existing work places where flammable or explosive mediums are generated
- Lighting above one metre from the pit floor should be by sealed lights glazed with toughened plastic such as poly-carbonate, wire armoured, laminated or toughened glass fitted flush with pit walls to minimise damage from falling objects
- If hand lamps are used within pits they should be of an explosion protected type capable of surviving being dropped two metres. Low voltage hand lamps give no protection against the risk of igniting flammable vapour
- Portable tools used in pits should be air powered or explosion protected. Motors and controls for pumps test and service facilities should be away from pits or explosion protected
- Fence or board pits when not in use to minimize the risk of fall. Keep the time they are left uncovered with no vehicle over them to a minimum and use pit lighting and mark pit edges to indicate the hazard.

### **Brake and Clutch Linings**

Even today some vehicle parts still contain asbestos and working with them can create dust which, if inhaled can be harmful. There are now a number of cases of asbestos-related cancer reported in garage workers. Asbestos dust particles are very small and cannot be seen by the naked eye, and the diseases it causes can take years to develop.

**The dangerous jobs are:**

- Cleaning brake assemblies
- Cleaning clutch housings
- Grinding brake linings
- Sweeping floors
- Brake and clutch linings and disc pads may contain asbestos. If in any doubt always assume that they do.

**Always work safely:**

- Never blow dust out of brake drums or clutch housings with an airline
- Always use properly designed brake drum cleaning equipment that prevents dust escaping
- Use clean wet rags to clean out drums or housings always dispose of any used rags in a plastic waste bag while still wet
- Never grind or drill brake linings unless the machine has exhaust ventilation fitted or there is a ventilated booth to do the work in
- Do not use brushes to sweep up dust – always use a special (Type H) vacuum cleaner to remove dust
- Always wet dust thoroughly and scrape it up if you haven't got a vacuum, seal it in a plastic bag
- Always wear the protective clothing, such as overalls, provided by your employer. Never take the protective clothing home it should always be cleaned by your employer
- Do not use equipment if it is not properly maintained and checked; always ask to see the test reports for ventilation systems.

**Safety during tyre inflation and replacement**

The following procedures should be carried out during removal and fitting of car tyres:

- Check that the vehicle handbrake is on before the vehicle is jacked and that wheels in contact with the ground have been chocked to prevent roll back
- A jack should only be used to raise the vehicle. Axle stands should be used to support the vehicle
- Prior to starting work on a tyre change or repair to a wheel the valve core should be removed to fully deflate the tyre

- Tyre bead lubricants should be used when removing and fitting a tyre to a wheel rim; the wheels and tyres should be examined before fitting and any that are visibly damaged discarded
- All wheels and associated parts, tyre and tube should be checked to ensure that they are the correct size and type before fitting
- A thorough examination of tyres and wheels at roadside breakdowns is particularly important
- Tyres should be inflated slowly to no more than 15 psi and checked to ensure that the whole assembly is fitting correctly. If not, then the tyre should be deflated and the procedure started again
- Increased air pressure should never be applied to force a fit
- The recommended tyre pressure for the size and ply rating of the tyre should not be exceeded, and **no car tyre should be inflated above 40 psi.**

### **Segregation of Vehicles and Pedestrians**

The separation of vehicles and motor repair operations needs to be considered when assessing the risks to the public and employees. At no time should the general repair workshop be accessible to the general public at large.

### **Attending roadside breakdowns**

Some companies attend breakdowns where work is carried out on vehicles at the roadside or on the hard shoulder of motorways. This can be a particularly hazardous operation if basic safety precautions are ignored.

Where possible the vehicle should be taken to a depot, or at least moved to a place of relative safety before attempting any repair work.

### **Service vehicles**

Service vehicles should be clearly visible and easily distinguishable by both day and night. The use of reflective markings will be beneficial and they should also be fitted with either revolving amber roof lights or high-level flashing hazard lights.

In addition to its repair equipment, each service vehicle should be equipped with:

- Protective clothing including high visibility reflective coats and trousers approved for work on the roads

- A first-aid kit
- An adequate number of traffic cones
- Additional lighting for illuminating the working area in the hours of darkness
- A proper vehicle jack
- Axle stands or timbers
- A portable tyre safety cage.

Only staff that have specific training on how to undertake roadside breakdowns should carry out this work.

- They should wear clean reflective clothing throughout the operation and particular care should be taken when working on the offside of the vehicle
- The service vehicle should be placed between the operative and the oncoming traffic at least 20 to 25 ft away
- It should, if possible, be parked at an angle with its nose into the near-side of the road with the steering wheel turned to the left on full lock. Where possible, advance warning signs and cones should be used
- **On motorways and trunk roads, where the vehicle is in a dangerous position, or when a dangerous load is being carried, the police should be informed before work starts.**

## Noise

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Excessive noise is a serious health hazard as it accelerates normal hearing loss. Some of the less obvious side effects are increased pulse rate, blood pressure and breathing rate all of which indicate that noise (and vibration) cause stress.

Noise levels are usually measured in decibels – dB(A). At 3 dB(A) increases, this doubles the noise exposure and the damage it can cause. Hearing damage may be caused if noise levels are not reduced, controlled or ear protection provided for workers not worn. The following are examples of noise levels for equipment you may use:

- Removing and repairing body panels using air saws and chisels up to 107 dB(A)
- Air grinders and orbital sanders up to 97 dB(A)
- Sheet metal work from panel beating etc is often around 93 dB(A)
- Paint spraying has been measured at up to 93 dB(A).

Therefore, body work will expose operators and others to more than 80 dB(A). Where exposure remains at or above this level throughout the day for any one person, a noise assessment should be carried out by a competent person and hearing protection provided. Where daily personal noise exposure exceeds 87 dB(A) take further action to reduce noise, mark ear protection zones, and ensure that all exposed people wear ear protectors.

At this noise exposure level employees have a duty to wear the protection provided.

The 80 dB(A) and 87 dB(A) action levels are likely to be exceeded where bodywork is a regular daily activity and where pneumatic tools are used even for short periods.

## Vibration

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Vibrating tools used in body repair can damage bones and joints. A condition known as 'vibration white finger' is caused by impaired blood supply to the fingers.

Vibration can be reduced by proper installation, maintenance and use of equipment, and fitting hand tools with vibration-absorbing handles. A full solution to a vibration problem often requires expert help.

Educating employees helps to raise awareness about the problem, in particular about alternating working patterns and keeping hands warm on colder days.

### **Dermatitis**

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Dermatitis is caused by exposure to chemicals, abrasives, ultraviolet radiation and heat all common in motor vehicle repair. Many oils, greases and solvents such as paraffin, trichloroethylene and white spirit are irritants and their hardeners may cause skin allergy.

Do not underestimate the extent of the harm caused by dermatitis.

- Limit contact with known skin irritants and allergens by using safe working practices or by changing processes
- Use gloves that are impermeable to the materials concerned and avoid contaminating the insides of gloves
- Wash gloves and other protective items especially before removal to prevent the spread of contamination
- Wash the skin when contamination does occur
- Use reconditioning creams (and sometimes also barrier creams). Seek medical advice if the skin becomes red and flaky or begins to blister or crack; rashes may be easily controlled with treatment
- Dermatitis often starts at the site of a minor cut or graze so employers should provide prompt and effective first aid treatment for these injuries.

### **Occupational Asthma**

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Exposure from isocyanate found in 2-pack paints has been linked to asthma and once sensitised to isocyanate an attack can be triggered from very low exposures. Isocyanate is found mainly in primers and lacquers but also in some water based paints as well.

- Only spray inside the booth or room
- Also ensure sprayers are wearing the breathing apparatus (BA) appropriate for the job which is fully maintained
- Know how long the booth/room takes to clear of the mist before you can safely enter without BA – this can be carried out using a smoke/fog generator
- Carry out health surveillance for those working in the environment which includes lung function testing and skin checks
- Ensure the booth/room runs at a slight negative pressure as this will prevent fine mists leaking out during spraying.

### **Control of Substances Hazardous to Health (COSHH)**

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The COSHH Regulations were amended in 2002 and as a consequence the main control principles have altered slightly. The main changes are enshrined in the Principles of Good Practice outlined below.

- Design and operate processes to minimise emission release and spread of any contaminants.
- Take into account all relevant routes of exposure, inhalation, skin absorption and ingestion, especially when developing control measures.
- Control exposure by means directly proportionate to the health risk.
- Choose the most effective and reliable control options which minimise escape and spread of contaminant from sources.
- Where adequate control is not reasonably practicable by other means provide suitable Personal Protective Equipment (PPE) in combination with other measures.
- Check and review regularly all elements of control measures for continuing effectiveness.
- Inform and train all employees on hazards and risks arising from substances and the use of developed control measures.
- Ensure that the introduction of control measures do not increase the overall risk to employee's health or well being.

### **Personal Protective Equipment. (PPE)**

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The use of PPE does not absolve the employer from the need to carry out a COSHH Assessment and implement any findings and controls. The broad principles regarding the use of PPE are outlined below.

- PPE needs to be suitable and sufficient as well as being adequate for the task in hand.
- PPE should be comfortable for the wearer and should not increase the risk of injury or of ill health. It also needs to be compatible with other PPE that may need to be worn.
- PPE needs to be kept in good working order and must be kept in a clean condition free from any potential contaminants.
- PPE wearers must be trained in the correct use and maintenance of PPE that they use.
- All PPE issued to employees needs to be recorded as to issue date on an individually signed receipt basis.
- Any renewal of components such as filters etc also need to be separately recorded and records maintained on individual personnel files.

### **Hygiene and welfare**

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The cleanliness and facilities provided within the premises are vitally important for health and safety. The following list provides the main areas to consider:

- Separate toilets for each sex (subject to certain exemptions) marked appropriately, which are clean, ventilated, in full working order and easily accessible
- Wash basins with hot and cold (or warm) running water
- Soap and towels (or electric hand dryer) – nail brush where required
- Barrier cream, skin cleansers and skin conditioning cream provided where necessary
- Waste bins (regularly emptied)
- Adequate provision for workers away from base
- Drying space for wet clothes and lockers or hanging space for work/home clothing
- Clean drinking water supply – clearly marked plus adequate facilities for taking food and drink, with wash-up
- sink and means of heating water.

### **Cleanliness**

- Premises, plant and equipment kept clean, with safety information clearly marked
- Good housekeeping to clear trade waste, dirt and refuse regularly
- Rubbish and food waste covered and regularly removed to keep premises clear of pests
- Regular cleaning up of spillages with floors and steps washed or swept regularly
- Internal walls and ceilings washed or painted regularly
- Floors, gangways and ramps kept clean, dry and not slippery with ramps with non skid-surfaces
- Good drainage in wet processes, particularly vehicle washing
- Areas with suitable footwear or working platforms provided where necessary
- Gangways and roadways well marked and kept clear
- Level, even surfaces without holes or broken boards
- Floor load capacities posted in lofts, and spares storage areas etc
- Salting/sanding and sweeping of outdoor routes during icy or frosty conditions
- Steps, corners and fixed obstacles clearly marked, e.g. by black and yellow diagonal stripes.

**A safe place to work**

- Adequate space for easy movement and access to vehicles
- No tripping hazards such as trailing wires etc
- Handholds or guardrails where people might fall from floor edges
- No glass, except 'safety glass' in spring doors and on busy gangways
- Neat and tidy storage of tools and equipment
- Furniture placed so that sharp corners don't present a hazard to passers-by
- Lighting – good general illumination with no glare
- Regular cleaning and maintenance of lights and windows
- Local lighting for dangerous processes and to reduce eye strain and fatigue
- No flickering from fluorescent tubes (it can be dangerous with rotating engine parts which may appear stationary when they are not)
- Adequate emergency lighting
- Specially constructed fittings for wet, flammable or explosive atmospheres during paint mixing and spraying, underseal application, or vehicle washing
- Outside areas satisfactorily lit for work and access during hours of darkness – for security as well as safety
- Light coloured wall finishes to improve brightness, or darker colours to reduce arc welding flash, for example.

**Comfort**

- Comfortable working temperature
- Suitable clothing for the job, adequate where necessary for work outdoors and in the wet such as vehicle washing or rescue services
- Good ventilation while avoiding draughts plus mechanical ventilation where fresh air supply is insufficient
- An easily read thermometer in the workroom
- Heating systems which do not give off fumes into the workplace
- Noise levels controlled to reduce nuisance as well as damage to health
- Heat stress reduced by controlling radiant heat (especially near head level) and local 'hot spots', arising, for example, from paint drying lamps.

## Section 3 – Vehicle Repair & Finishing

*A number of distinct health and safety hazards apply when involved in mechanical and bodywork repair and finishing. This can usually be controlled using set procedures such as those that follow.*

### **Flame Cutting and Welding Operations**

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The main hazards arise from:

- The misuse of welding gear and the use of the wrong equipment for the job
- Electromagnetic radiation
- Fires caused by the ignition of flammable material on or near cars such as trim, carpets and upholstery and petrol in tanks, fuel lines and nearby containers often started by sparks or drips of molten metal
- Harmful fumes and gases generated during welding including those from primer and paint layers, other surface coatings such as underseal, and from lead in car bodies
- Many of these hazards may be particularly difficult to avoid or prevent when working inside or underneath vehicles.

### **Arc welding**

Severe and sometimes fatal electric shocks often happen at electric welding apparatus which is designed to operate from mains supply at either 415 volts 3-phase, 415 volts single-phase or 240 volts single phase.

### **Fixed electrical installations (Welding)**

- These should be provided with fuse protection and mechanically interlock the switch fuse or isolator with the socket outlet so that the plug cannot be inserted or withdrawn with the switch in the 'on' position
- Ensure that these and the work piece are earthed to protect the operator. A robust flexible cable terminating in a clamp connected to the workpiece with its other end attached to the metalwork or earth terminal of the power source, is an efficient means of securing earthing
- During MIG (metal inert gas) welding, prevent contact between the electrode wire and any earthed metalwork to avoid heavy welding current flowing through the earth continuity conductor and destroying it

- Use a safe design such as an insulated spool in an insulated chamber in the power source with the wire being fed through insulated rollers and a tube inside the welding cable, to the torch
- Maintain the electrode holder welding current return cables, clamps and safety earth leads in good condition.

### **Ultra Violet Radiation**

Prevent exposure to direct and reflected ultraviolet light and infrared rays by wearing protective clothing, using welding screens, and wearing eye protection to prevent 'arc eye'.

### **Control of fumes and gases**

Always used local exhaust ventilation in confined locations. Mobile extraction units with flexible exhaust hoods and trunking can remove fumes and gases from most locations, however if using in a confined space ensure that a confined space risk assessment has been carried out.

Be aware of where lead may be used for part of the car body, for example around the tailgates of estate car models, on the headlamp surrounds of older models and as general filler on expensive cars. Use local exhaust ventilation when welding in these areas and where necessary supplement local exhaust ventilation with respiratory protective equipment.

### **Body filling and preparation**

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- Adopt the strategy outlined in the COSHH Regulations for the assessment and control of the hazards involved in body filling and preparation. Where reasonably practicable, use less harmful materials, exhaust ventilation to control exposure
- Most fillers are reinforced with glass fibre or metal and consist of thermosetting unsaturated polyester in a solvent (usually styrene) which is hardened by a catalyst. Mixing, applying and finishing such fillers generates toxic fume and dust; the catalyst is often a corrosive irritant and some catalysts are strong skin sensitisers causing dermatitis
- Lead is also used in some body preparation operations, and finishing by powered discing and sanding releases high concentrations of fine dust which is a serious health hazard

- To minimise the number of people exposed to dust and fume, separate the body filling and preparation area away from other work, preferably in a mechanically ventilated booth fitted with dust-tight lighting
- Keep dust to a minimum. Large excesses of filler should be removed using coarse hand files. Use powered discing and sanding machines for the final finish only; use tools with built in extraction or local exhaust ventilation
- Wear protective clothing, including appropriate respiratory protection
- When working with lead do not smoke, drink or eat in the workroom. Have separate changing areas for clean and contaminated clothing.

## Section 4 – Occupational Road Risks

*Driving as an occupation or part of an occupation presents certain risks to both the employer and the employee. It has been estimated that up to one third of all road traffic accidents involve somebody who is at work at the time.*

*This accounts for over 20 fatalities and 250 serious injuries every week. Some employers believe, incorrectly, that provided they comply with certain road traffic law requirements, e.g. vehicles have a valid MOT certificate, and that drivers hold a valid licence, this is enough to ensure the safety of their employees, and others, when they are on the road. However, health and safety law applies to on-the-road work activities as to all work activities, and the risks should be effectively managed within a health and safety management system.*

There are legal obligations in addition to the Road Traffic Act. The Health & Safety at Work etc Act 1974 requires you to ensure, *as far as reasonably practicable, the health and safety of all employees whilst at work* and that others are not put at risk by your work-related driving activities.

In addition to complying with the law, the benefits of managing work related road safety include:

- reduced number of accidents
- fewer days lost due to injury
- reduced risk of work-related ill health
- reduced stress and improved morale
- less need for investigation and paperwork
- less lost time due to work rescheduling
- fewer vehicles off the road for repair.

### **Methods of Managing Occupational Road Risk**

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A number of systems should be put into place to manage these risks. This includes:

- Integrating occupational road risks into your existing health and safety arrangements
- Have top-level commitment to work-related road safety in your organisation
- Systems to control the safety of vehicles used, such as ensuring vehicles are serviced and inspected regularly
- Monitoring of the policy to ensure it remains effective and encourages employees to report all incidents
- Driver competency i.e. previous experience and whether individuals are suitable to use certain types of vehicles
- Regular inspection of driving licences
- Driver training including issues such as routine vehicle maintenance and awareness of dangers of fatigue.

AXA have produced a separate guide – Motor Fleet – A guide to Risk Management, which is available to download on [www.axa4business.co.uk](http://www.axa4business.co.uk). This provides more in-depth guidance on occupational road risks.

## Section 5 – Control of Waste

*The control of waste is now high profile due to the problems associated with environmental issues and pollution. The damage, associated costs and poor publicity from such events can threaten even well established companies.*

### Oil

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Waste oil and oil filters must be stored in appropriate locations and must be suitably contained to prevent accidental leakage.

- Oil filters should be drained into a waste oil receptacle and the used filter stored in a liquid proof box or storage bin
- Waste engine oil must be stored in a suitable waste oil tank that is either double skinned or suitably bunded to prevent serious spills and leaks
- Only dispose of waste oil via a properly licensed waste oil carrier in possession of a waste carrier's license from the Environment Agency/Scottish Environmental Protection Agency
- Oily waste and granules used to soak up spilled oil, fuel etc or otherwise contaminated must also be treated as a contaminated waste.

### Batteries

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Batteries should regularly be disposed of and only a licensed waste carrier should be used. There are many specialist disposal companies in this area but ensure all documentation and licenses are valid and authentic.

- Make sure batteries are not stock piled to the extent that it becomes an issue to arrange disposal
- Make sure that they are stored on a pallet where they can be moved by mechanical means rather than creating a further manual handling. If necessary store the batteries on a pallet that has purposely designed containment arrangements.

### **Waste Thinners and Paints**

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Most solvent based waste thinners and paints can be recycled and reused by specialist companies. Some due diligence is required when dealing with organisations that specialise in this area and the following guidance is suggested.

- Check out that the organisation has all necessary documentation and licensing for storage and carriage
- Check that the local authority in your area has a working knowledge of the organisation in question
- Ensure that you organise uplift of waste paint and thinners in a timely manner to avoid storing large quantities of waste paints and solvents on the premises. In the summer months regular uplifts may be more necessary as thinners of certain types become more volatile in warmer air.

## Section 6 – Help from AXA

*Insurance companies hold a wealth of risk management expertise that could help business better protect themselves from the unexpected. AXA is dedicated to making that expertise readily available to its customers – to help them do business on firm foundations and manage their insurance premiums.*

A wide range of help and advice is available via AXA's small business website – [www.axa4business.co.uk](http://www.axa4business.co.uk). This includes:

- Detailed guides to identifying, assessing and managing workplace risk
- Advise on where to go for help with risk management
- Small business news and views.

Register on [www.axa4business.co.uk](http://www.axa4business.co.uk) to gain access to these free resources.

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