Example risk assessment for a motor vehicle repair bodyshop

Important reminder

This example risk assessment shows the kind of approach a small business can take. Use it as a guide to think through the hazards in your business and the steps you need to take to control the risks. Please note that it is not a generic risk assessment that you can just put your company name on and adopt wholesale without any thought! This would not satisfy the law - and would not be effective in protecting people.

Every business is different - you need to think through the hazards and controls required in your business for yourself.

Setting the scene

The garage manager carried out the risk assessment. The business employed two sprayers and three others who assist with body preparation, panel beating etc, which includes one apprentice.

How was the risk assessment done?

The garage manager followed the guidance in "Five Steps to Risk Assessment"(http://www.hse.gov.uk/risk/fivesteps.htm).

1. To identify the hazards, the garage manager:

    a. Read HSE's Motor Vehicle Repair web pages (http://www.hse.gov.uk/mvr/) – particularly the 10 Myths related to isocyanate paint spraying; the Health and safety in motor vehicle repair booklet (http://www.hsebooks.com – HSG67); and the Essentials of health and safety at work publication (http://www.hsebooks.com – ISBN: 0717661792) to make sure he hasn't missed any hazards;

    b. Checked the manufacturers' instructions or data sheets for chemicals and equipment and downloaded the COSHH essential sheets http://www.coshh-essentials.org.uk/ relating to bodyshops ;

    c. Walked around the bodyshop and took a note of things that they thought might pose a risk taking into consideration the information in HSE's guidance;

    d. Talked to staff to find check the preferred working methods , and confirm what training they had been given, and any particular requirements that the two young apprentices may have;

    e. Clarified the arrangements for waste disposal with the licensed disposal contractor on the telephone;

    f. Listened to the employees' own concerns about health and safety; and

    g. Looked in the accident book.

2. The manager then wrote down who could be harmed by the hazards and how.

3. For each hazard identified, the manager recorded what controls, if any, were in place to manage these. He then compared these controls to the good practice guidance laid out in Motor Vehicle Repair web pages, the Health and safety in motor vehicle repair booklet, Essentials of health and safety at work publication

and the COSHH essentials sheets (in conjunction with the manufacturers' instructions or data sheets). Where existing controls did not meet good practice, the manager wrote down what further actions were needed to manage the risk.

4. The Manager put the findings of the risk assessment into practice. He then decided and recorded who was responsible for implementing the further actions and when they should be done. When each action was completed it was ticked off and the date recorded.

5. The findings of the risk assessment were discussed with the sprayers and other staff. The manager decided that a review and update of the risk assessment would be made annually, or sooner if things changed.

Motor Vehicle Repair shop – Mechanical repairs						
What are the hazards?	**Who might be harmed and how?**	**What are you already doing?**	**What further action is necessary?**	**Action by whom**	**Action by when**	**Done**
Hazardous substances 1. Contact with body-fillers reactive glues, paint thinners and paint	Skin contact can lead to dermatitis	• Latex-free gloves supplied and used • Disposable garage overalls supplied and used. • Overalls replaced as required	• Supervisor to keep a check that gloves are being used. • Risks from dermatitis explained to workers.	NB will be filled in later	Ditto	Ditto
2. Inhalation of paint mist containing isocyanate	Anyone breathing in the mist may develop asthma	• All spraying carried out in spraybooth • Only those with air-fed masks allowed into booth • Air-fed masks used by all sprayers and kept in place during 'clearance time' (measured at 1 min 15 sec) • Spray booth checked according to manufacturer's instructions and thorough examination and test carried out every year • Breathing air quality checked every 6 months • Air-inlet for compressor well clear of any contaminants • Sprayguns cleaned in ventilated gun cleaner – spray-to-dry in booth wearing air-fed	• Sprayers shown video clips downloaded from HSE MVR website showing how they can be exposed to invisible paint mist • Supervisor to check each month that air-fed equipment is being maintained and record results. • Supervisor to keep a check that air-fed masks are used correctly and sprayers don't flip up visor until after the clearance time • Booth automatic over-pressure shut down checked every quarter • Biological monitoring (urine tests) arranged annually to check that controls are working properly			
3. Inhalation of dust from sanding and grinding operations	Sanding and grinding produce large quantities of dust that can damage the lungs	• On-tool extraction used for power sanding and grinding • Disposable dust masks available for hand sanding	• Arrange for examination and testing of extraction equipment every year (tie in with booth testing if possible)			
4.Exposure to UV in UV-cured SMART paint system and arc welding	UV can damage unprotected eyes and skin causing 'arc eye', cataracts, sunburn and long-term skin cancer	• Coverall, gloves and supplied face shield used	• Explain to sprayers that same precautions taken against inhalation of paint mist as for isocyanates			

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5. Fumes from welding and flamecutting	Harmful fumes and gases generated during welding including from primer, paint layers, underseal etc	• Mobile extraction unit with flexible trunking used.	• Check with manufacturer whether further precautions required for ultra high strength steels			
6. Car engine running inside workshop, toxic exhaust fumes e.g. carbon monoxide	The fumes may cause employees eye irritation and breathing difficulties.	• Car exhaust attached to extractor system when engine is running. • Extractor system maintained and tested to prevent leaks	• No further action required			
Fire 1. General	Building could be burnt down, workers and visitors could be trapped in burning building.	• Smoking prohibited in all work areas. • Fire alarms maintained and tested by manufacturer. • Extinguishers provided and inspected under contract. • Fire exits in booths kept clear at all times and are clearly marked	• Manager to arrange training on use of extinguishers for all staff. • Annual fire drill to be carried out.			
2. Petrol fires	Workers could suffer severe or fatal burns if petrol gets on them and is ignited	• Fuel tanks reasonably empty (preferably ~ ¼ full) and fuel cap removed before baking	Provide employees with information contained in INDG331 "Safe use of petrol in garages" and Vehicle Finishing Units – Risks from Gross Leakage of Fuels			
3. LPG fires		• LPG fuelled vehicles subcontracted to specialist refinisher				

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4. Paint solvent fires	Paint thinners are highly flammable (as for petrol above) and paint mist can cause fire or explosions	• Less than 50 litres of solvent kept in metal bin inside workshop. Larger quantities kept in the fire-resisting store in the yard. • Paint mixing unit is fire-resistant and well ventilated • All electrical equipment within 1m of mixer is correctly Ex rated. • Metal bin with tight fitting lid used for waste rags. • Only Ex rated equipment allowed in spray booth	• Check arrangements for safe disposal of waste solvent			
Electrical equipment Fixed equipment; range of portable appliances e.g. hand lamps.	All employees could suffer potentially fatal shocks or burns if they use faulty electrical equipment - portable equipment is particularly liable to damage. Faulty equipment could also start a fire.	• Hand lamps etc are low voltage (24volts). • A few 240 volt tools are used, all have industrial plugs and leads. • Testing carried out annually on all portable 240v tools and users trained to carry out visual checks and report defects. • Installed equipment receives regular maintenance.	• Supervisor to assess suitability of replacing 240v tools with air-powered or 110 volt alternatives.			
Mechanical Equipment E.g. grinding equipment	Moving parts can trap parts of the employee's body (e.g. fingers/hand/arm) causing crush injuries. Employees can also cut themselves on sharp edges or burn themselves on hot parts. Particles can be ejected into the eyes.	• All mechanical equipment checked before use and faults reported to supervisor. • Equipment not to be left running unattended • Guarding provided. • Safety goggles provided and worn. • Grinding wheels changed by trained person.	• No further action required			

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Falling objects Car lift failure. Car jack failure.	Failure of a car lift or jack may cause severe crush injuries to an employee if a vehicle fell on an employee - those who work in vehicle repair are particularly at risk.	• Car lifts and jacks serviced by supplier and inspected by insurers. • Axle stands regularly maintained and inspected. • Axle stands used after lifting vehicle with jack. • Safe working loads not exceeded	• No further action required			
Compressed air Explosion of equipment tyres Injection of air in the body	All employees could suffer blast injuries if the air receiver were to explode; staff could suffer damage to internal organs if air is introduced into the body.	• All employees trained in safe working procedures and dangers of horseplay. • Air line has deadman's handle • System inspected and serviced every year by insurers	• No further action required			
Manual handling In the store; movement of components	All employees could suffer from back pain if regularly lifting/carrying heavy or awkward objects.	• Fork-lift truck used to move material into store and take components to work shop. • Manual handling still required.	• Manager to arrange manual handling training for staff • Ensure staff handling tyres are familiar with guidance in document "Collection and delivery of tyres" • More detailed assessment to be carried out using HSEs manual handling assessment chart			
Handling vehicle air bags	Air bags could explode when not fitted, causing injury.	• Units are stored in suitable cabinet of their own. • Workers are trained in correct handling and fitting. • Faulty units are returned to supplier for disposal	• Provide employees with information contained in INDG280 "A guide to handling and storage of airbags and seatbelt pretensioners at garages and motor vehicle repair shops"			

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Work involving air conditioning systems	Workers could suffer: 1. Frostbite – through skin or eye contact with refrigerant liquid or gas 2. Asphyxiation – if sufficient quantities of gas escape into confined space 3. Exposure to harmful gases – through decomposition of refrigerant if exposed to a naked flame	• Workers are trained in correct procedures.	• Provide employees with information contained in contained in INDG349 Safe working with vehicle air-conditioning systems			
Operation of fork-lift truck	Injuries such as fractures can be incurred by 1. the driver crashing fork-lift truck 2. employees and visitors being hit by fork lift truck; 3. employees falling from fork-lift truck; 4. objects falling from forklift truck on to employees and visitors; 5. and the fork lift truck toppling over.	• All operators trained and certified for use of the lift truck. • Truck serviced regularly and examined every six months • Flooring maintained to reasonable standard • Stores laid out to enable truck to load and unload safely and pedestrians to pass safely	• Supervisor to assess suitability of pedestrian operated lift trucks. • Refresher training for operators to be arranged every 3 years.			
Vehicle movements	Injuries such as fractures can occur if vehicles hit employees or visitors.	• Safe parking provided for customers without need for reversing • Marked walked ways for pedestrians • Vehicles driven slowly in/out and around premises.	• Supervisor to monitor speed of cars in/out and around premises.			

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Slips and trips	All employees and visitors may suffer a strain/sprain or even a fracture through slipping on oil/water spillages	• Good housekeeping standards maintained through training and monitoring, • Floors degreased weekly. • Absorbent granules and sawdust put on spills as soon as possible. • Entrances and exits maintained	• Walkways and storage areas designated by yellow lines • Weekly housekeeping check to be started			
Falls from height	Injuries such as fractures may be incurred by employees/visitors if they fall from ladders, the top of vehicles, or raised storage areas.	• Handrails fitted at edges of raised storage areas and access stairway provided • Employees trained to use ladders safely	• Supervisor to monitor use of portable ladders, access equipment when working on vehicles.			
Hygiene and comfort	All employees	• Heated mess room with kitchen area provided. • Toilets and sinks available, cleaned daily. • Locker room for drying and storage of own clothes and work clothing/equipment provided. • Drinking water and cups provided.	• No further action required			
Public access to workshop	Customers could suffer various injuries if they wander into the workshop	• Signs up banning customers from the workshop, viewing window provided in reception.	• Staff to be reminded to challenge anyone entering the workshop without permission.			

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EMF Specific Risk Assessment for Resistance Spot Welders & Induction Heaters Low Frequency direct effects	Workshop staff who operate this type of equipment Hands & body often close to welding clamp to support weight of gun during welding during operation	• None • Severity; Minor • Likelihood; Possible • Risk Evaluation; Low	• Changes to way welding work done, use of balancers to support weight of the gun to enable workers to keep their hands & body away from the welding electrodes. • Operator training on EMF Hazard • Warning signs to indicate EMF to be displayed			
EMF problems as a result of using Induction Heaters	Heating elements of Induction heaters usually held at arm's length	None • Severity; Minor • Likelihood; Possible • Risk Evaluation; Low	• Standard operating procedures for welding work. • Welding signs on welders & Heaters • Operator training on EMF Hazard			
Effects on pregnant staff	Pregnant workers	None • Severity; Minor • Likelihood; Improbable • Risk Evaluation; Low	• Welders/induction heaters not operated by or near pregnant workers See note 1 below			
Low Frequency indirect effects (Interference with active implanted medical devices)	Workers at particular risk	None • Severity; Minor • Likelihood; Improbable • Risk Evaluation; Low	• Welders/induction heaters not to be operated by or near workers with active implanted medical devices. • Staff training on EMF hazard • Warning signs warning of risk from EMF for those workers with AIMD and PIMD See note 2 below			

Note 1

Heating effects which can affect pregnant workers occur at high frequencies above 100Kh; if the work activity does not fall into this range, pregnant workers will not necessarily need to be excluded but an individual Risk assessment should be undertaken.

Note 2

Heating effects which can affect PIMDs occur at low frequencies below 100 KHz.