I-CAR®

Uniform Procedures For Collision Repair UPCR

PS01 Personnel Safety

 v.4.0

1. Description

This procedure describes general requirements for personnel protection and safety in the workplace.

2. Purpose

The purpose of this procedure is to provide industry-accepted requirements for protecting personnel from known workplace hazards during the collision repair process. This procedure is intended for use by professionals who are qualified through training and experience.

3. Referenced Documents

The following documents are considered part of this procedure by reference.

3.1 Procedures

HM01 Hazardous Materials

3.2 Other Information

Material safety data sheets (MSDS)
Posted emergency phone numbers
Posted emergency evacuation routes
Posted first aid guides
Product makers' safety information
Repair equipment safety information
Safety equipment product information
Vehicle makers' safety information
Emergency spillage procedures
Government workplace safety regulations
Government environmental protection regulations

4. Equipment And Material Requirements

4.1 Safety Equipment And Facilities

The following items contribute to the safety of personnel, and most are essential to provide a safe workplace and meet federal and local codes:

- ❏ automatic shutoff on equipment such as compressors, boilers, overhead doors, etc.
- ❏ automatic fire protection such as alarms, fire doors, and sprinkler systems
- ❏ approved fire extinguishers with ABC ratings
- ❏ industrial first aid equipment such as eyewash stations, decontamination showers, first aid kits, emergency oxygen, stretchers, etc.
- ❏ hazardous materials storage and disposal containers
- ❏ readily available files of current MSDS

4.2 Safety Clothing

To prevent injury, personnel should be required to wear any of the following items appropriate to their job function or current task:

- ❏ cotton, rubber, leather, neoprene, or vinyl gloves
- ❏ rubber, leather, or neoprene apron

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4. Equipment And Material Requirements (cont'd)

- ❏ rubber, leather, or neoprene boots
- ❏ coveralls
- ❏ steel-toed shoes
- ❏ eye protection; such as goggles, face shields, etc.
- ❏ proper fitting work clothing with buttoned sleeves, pants without cuffs, ties removed, etc.

4.3 Personal Safety Equipment

To prevent injury, personnel should be required to use any of the following items appropriate to the current workplace conditions and the assigned task:

- ❏ safety glasses or goggles
- ❏ face shield
- ❏ earplugs or sound mufflers
- ❏ back supporter
- ❏ particle respirator
- ❏ HEPA filter respirator
- ❏ vapor respirator
- ❏ air-supplied respirator
- ❏ welding helmet
- ❏ welding jacket/bib
- ❏ welding gloves
- ❏ gloves when removing glass

5. Damage Analysis

Does not apply.

6. Personnel Safety

6.1 Safety Training

Periodic training in all of the following areas should be conducted for all personnel:

- ❏ hazardous material-handling procedures
- ❏ fire safety
- ❏ first aid, including CPR
- ❏ emergency procedures
- ❏ evacuation plan
- ❏ employee safety
- ❏ shop safety
- ❏ spillage cleanup procedures
- ❏ emergency phone numbers
- ❏ equipment operation
- ❏ product use

6.2 Shop Safety

To avoid injury to themselves and others, shop personnel should follow these precautions:

- ❏ Tie back or tuck in long hair.
- ❏ Do not wear jewelry such as chains, rings, and watches.
- ❏ Keep stairs, aisles, and walkways clean and clear.
- ❏ Return tools and products to their proper storage locations.
- ❏ Clean up spills immediately.
- ❏ Make sure the work area has adequate lighting and ventilation.
- ❏ Wear clothing and use personal safety equipment appropriate to the work being performed.
- ❏ Do not use electrical equipment in wet areas.
- ❏ Get help before lifting heavy objects.
- ❏ Use care when climbing to avoid falls.
- ❏ Maintain support under objects being raised.
- ❏ Follow product and equipment makers' safety recommendations.
- ❏ Use care when moving a vehicle, especially when backing.
- ❏ Do not spray refinish materials outside of the spraybooth.
- ❏ Follow posted smoking and eating restrictions.

6.3 Tool Safety

To avoid injury when using hand and power tools, shop personnel should follow these safety precautions:

- ❏ Use the proper tools for the job.
- ❏ Do not use any tool you have not been trained to use.
- ❏ Do not use tools that are not working properly.
- ❏ Do not carry sharp tools in your pockets.

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6. Personnel Safety (cont'd)

- ❏ Make sure safety guards are in place before using power tools.
- ❏ Do not exceed any tool maker's speed, pressure, or power restrictions.
- ❏ Disconnect power tools before clearing, cleaning, adjusting, or oiling.
- ❏ Turn off equipment when it is not in use.
- ❏ Follow equipment makers' safety recommendations.
- ❏ Before servicing any electrical equipment, lock the power circuit in the OFF position and tag the switch to show the equipment or circuit is being worked on (lock out/tag out).

6.4 Fuel Safety

To avoid injury when working around or with fuel, shop personnel should follow these safety precautions:

- ❏ Keep fuel, fuel tanks, and fuel containers away from any sparks or flame.
- ❏ Do not turn the ignition switch ON or crank the engine with a fuel line disconnected.
- ❏ Quickly open doors and windows if there is a leak.
- ❏ Have the proper fire extinguisher available.
- ❏ Always relieve fuel pressure before performing any engine repairs.
- ❏ Store fuel only in approved containers.
- ❏ Do not fill containers completely with liquid fuel. Leave about 25 mm (1") for expansion.
- ❏ If filled containers must be transported, make sure they are secured to prevent tipping.
- ❏ Do not store a partially filled container for long periods of time.
- ❏ Never leave containers open after filling or pouring from the container.
- ❏ Do not prime an engine with fuel while cranking the engine.
- ❏ Never use any type of fuel as a cleaning agent.
- ❏ Before welding, grinding, or cutting on a vehicle fueled with compressed natural gas (CNG) or liquefied petroleum gas (LPG), turn off the gas supply at the tank, run the engine until it stops (to purge the fuel lines), then disconnect the battery.
- ❏ Remove all CNG and LPG tanks before moving the vehicle into a spraybooth. The heat in a spraybooth may cause tank pressures to exceed the rated relief-valve pressures.
- ❏ Do not straighten looped CNG fuel lines.
- ❏ Wear gloves made of fuel-resistant material, such as nitrile rubber, when handling alcohol fuels. If alcohol fuel gets on your skin, wash it off immediately.
- ❏ When servicing a CNG-powered vehicle, do not run space heaters that are suspended from the ceiling. Open any ceiling vents.
- ❏ When fuel is present, work in a well-ventilated area.
- ❏ Identify air-conditioning and fuel-rail access ports before attaching equipment.

6.5 Glass Safety

To avoid injury when handling glass, shop personnel should follow these safety precautions:

- ❏ Wear the appropriate eye and skin protection.
- ❏ Wear gloves.

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- ❏ Inspect the edges for slivers and rough or sharp edges before handling.
- ❏ Never carry glass under your arm or over your head. Hold the glass with palms outward so that it can only fall away from you. Keep your pathway free of obstacles.
- ❏ When carrying glass with vacuum cups, stay on the side with the vacuum cups. Keep vacuum cups clean and dry.

6.6 Engine Safety

To avoid injury when working in the engine compartment, shop personnel should follow these safety precautions:

- ❏ Wear appropriate eye and skin protection.
- ❏ Avoid touching heater and radiator hoses and other hot engine parts.
- ❏ Avoid breathing exhaust fumes. Always vent the fumes outside of the shop.
- ❏ Keep hands away from fans and other moving parts. Electric fans may start at any time.
- ❏ Remove the ignition key to prevent accidental starting of the engine.
- ❏ Engage the parking brake to prevent the vehicle from moving when working underhood or under the vehicle.
- ❏ Use safety props when working under hoods and deck lids.

6.7 Battery Safety

To avoid injury when handling or servicing lead-acid storage batteries, shop personnel should follow these safety precautions:

- ❏ Wear appropriate eye and skin protection.
- ❏ Do not smoke, or allow open flames or sparks near a battery.
- ❏ Use care when adding water to batteries.
- ❏ Do not remove vent caps from maintenance-free batteries.
- ❏ Do not charge or jump-start a frozen battery.
- ❏ Make sure the charger is OFF before connecting or disconnecting it to a battery.
- ❏ Always use the markings on the battery to determine the polarity of the terminals.
- ❏ Follow the equipment maker's recommendations for using the charger.

To avoid injury when removing or installing a battery:

- ❏ Follow the vehicle maker's recommendations.
- ❏ Ensure that all electrical loads are OFF before disconnecting or reconnecting the terminals.
- ❏ Disconnect and isolate the negative (ground) cable first, and reconnect it last.

To avoid injury when jump-starting a vehicle, personnel should follow the procedure in **9.1**.

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6.8 Hazardous Materials

Personnel should know how to protect themselves from corrosive chemicals and chemical vapors. To avoid injury from corrosives:

- ❏ Wear neoprene or rubber gloves, boots, and apron.
- ❏ Wear safety glasses with splash shields.
- ❏ Do not allow material to splash when pouring.
- ❏ Use proper containers for storing and handling.
- ❏ Keep containers closed at all times.
- ❏ Clean up spills immediately.

To avoid injury from chemical vapors:

- ❏ Wear a vapor respirator.
- ❏ Properly vent the vapors.
- ❏ Always follow the safety recommendations on the product MSDS.

6.9 Bloodborne Pathogens

To avoid injury from bloodborne pathogens, personnel should take these precautions:

- ❏ Treat all blood and other bodily fluids as if they are known to be infectious.
- ❏ Wear rubber gloves when handling or treating any material contaminated with blood or other bodily fluids.
- ❏ Remove contaminated clothing or protective equipment as soon as possible, and place it in the designated container for cleaning or disposal.
- ❏ Replace clothing or protective equipment that gets torn or punctured, or loses its ability to block bloodborne pathogens. Dispose of properly.
- ❏ Remove personal protective equipment, and place it in the designated container for cleaning, before leaving the work area.
- ❏ Wash your hands with soap and water, as soon as possible after removing gloves or other personal protective equipment.
- ❏ Do not eat, drink, apply cosmetics, or handle contact lenses in the work area.
- ❏ Carefully handle contaminated materials to minimize spattering.
- ❏ Carefully examine and clean equipment or tools that may have become contaminated.
- ❏ Seek medical advice.

Hepatitis B virus vaccine should be administered to employees following any chance of exposure to bloodborne pathogens.

7. Environmental Safety

Does not apply.

8. Vehicle Protection

Does not apply.

9. Repair Procedure

9.1 Jump-Starting A Vehicle

To avoid injury when jump-starting a vehicle, personnel should refer to the vehicle maker's service manual for the proper procedure, use approved jumper cables, and observe proper safety precautions (See **6.7**.), while following this procedure:

- ❏ 1. Visually inspect the battery and the electrolyte. Do not jump-start a vehicle if the battery is frozen.
- ❏ 2. Ensure that the transmission is in Neutral or Park, and the parking brake is set.
- ❏ 3. If the booster battery is installed in a vehicle, make sure the vehicles are not in electrical contact, and that all electrical switches are OFF in both vehicles.
  Note: Some vehicle makers recommend turning the blower switch ON in both vehicles, to avoid damage to the electrical system.
- ❏ 4. Connect the positive (+) terminal of the booster battery to the positive (+) terminal of the dead battery, using the red cable.
- ❏ 5. Use the black cable to carefully connect the negative (ground) terminal of the booster battery to a bracket or bolt on the dead vehicle's engine, away from the battery. Connect to a grounding strap if recommended by the vehicle maker.
- ❏ 6. Start the booster vehicle, and run the engine at moderate speed.
- ❏ 7. Let the dead battery charge for a few minutes, then start the dead vehicle.
- ❏ 8 Let both vehicles idle for a few minutes.
- ❏ 9. Disconnect the black cable, first from the engine, and then from the booster battery.
- ❏ 10. Disconnect the red cable from both batteries.

10. Use Of Recycled (Salvage) Parts

Does not apply.

11. Inspection And Testing

11.1 Safety Inspections

Periodic safety inspections should be performed to ensure that the following items currently meet all federal and local health and safety requirements:

- ❏ medical supplies
- ❏ safety equipment
- ❏ equipment safety features
- ❏ hazard communication program (includes MSDS collection, product labeling, written plan, and employee training)
- ❏ building code compliance
- ❏ expiration dates

11.2 Respirator Protection Program

A written respirator protection program should be set up and maintained at the workplace. The written program should include the following:

- ❏ types of respirators available at the workplace
- ❏ list of tasks where respirators are required
- ❏ procedures for selecting and using the proper respirator
- ❏ schedule to maintain, clean, and inspect respirators
- ❏ list of what is included in respirator protection training

A respirator fit test should be performed before selecting any respirator. To check the condition of a respirator before every use:

- ❏ Check for any cracks, tears, holes, dirt, etc.
- ❏ Clean the respirator if it is dirty. If it cannot be properly cleaned, replace the respirator.
- ❏ Check the condition of the inhalation valve by lifting the valves from the inside and inspecting the exhalation valve from the outside.
- ❏ Replace the particle filters on a dual-cartridge respirator if they are clogged. A clogged filter will be difficult to breathe through.
- ❏ Replace the vapor cartridges on a dual-cartridge respirator when you can smell or taste the contaminate.

Facial features, facial hair, and inappropriate respirator size can affect the respirator seal.

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11. Inspection And Testing (cont'd)

To fit-check the respirator:

- ❏ Fasten the straps of the respirator and make sure the fit is snug, but not too tight.
- ❏ Cover the exhalation valve and gently exhale. There should be a slight pressure inside the respirator without leaking at the seal.
- ❏ With cartridge-type respirators, cover the cartridges with your hands. Inhale gently until the respirator collapses slightly. Hold your breath. The respirator should stay slightly collapsed and not leak from the sides of the mask.