

# REMOVING AND STORING FUEL TANKS



Fuel tanks are dangerous to work on or store; whenever possible replace a tank and never work on a tank if you are not fully qualified to do so.

## Hazard: Gasoline Liquid, Vapours or Fumes

### Details

- Gasoline vaporizes when it is exposed to the air (e.g., fuel spill, open container)
- Benzene, a contaminant found in gasoline, and its vapours can cause damage to lung tissue over time, even cancer
- Incandescent light bulbs used in trouble lights can shatter when dropped or break if liquid is splashed on them; such breakage can cause the filament to glow, leading to a fire if it is exposed to gasoline vapour
- Static electricity can cause fire or explosion when exposed to gasoline fumes

### Threat

- Severe burns from fire or explosion
- Dermatitis and removal of the fats and oils from the skin resulting in severely cracked skin with prolonged exposure
- Cancer
- Death

**Note:** Do not use gasoline – alone or mixed with other liquids to clean anything, including your hands (See Industrial Establishments Regulations 851 (s. 22, 63, 78))

### Safe Work Guidelines

#### Before You Start

- Repair fuel tanks only if you are fully qualified; use the testing and cleaning equipment specified by the tank manufacturer
- Whenever possible, replace fuel tanks instead of repairing them
- Keep a portable ABC-type fire extinguisher handy
- Put a flammable sign up to warn others
- Make certain your work area is well ventilated with a mechanical ventilation system delivering a continuous movement of air; if necessary, consult an occupational hygienist or a heating, ventilation and air conditioning (HVAC) technician to make sure you have the proper exhaust system
- Eliminate all sources of ignition: smoking, static electricity, compressors, nearby welding, cutting or grinding operations, electric or gas hot water or hot air heaters, wet/dry shop vacuum cleaners, and any other devices/tool that can create sparks

## Before You Remove a Fuel Tank

- Disconnect the ground lead or negative terminal to the battery before removing the tank
- Turn off the engine before draining and removing the tank
- Use a gas transfer unit to empty the tank before removing it from the vehicle – attach a ground cable from the unit to the car frame to prevent static electricity from igniting fuel vapours; make sure the alligator clips make contact with bare metal
- Immediate push or tow a vehicle with a leaking tank outside or to a ventilated area to pump out the fuel
- Ensure that you bond and ground the siphon tank and keep the vehicle outside or in a well ventilated area until you have drained an removed the fuel tank
- Since the fuel pump on most newer cars is located in the fuel tank, be careful to minimize leaks when disconnecting the gasoline line which may be under pressure
- Before working on a gasoline tank, clean any combustible components or residues
- Before you repair a tank, purge it with water

## While You Are Working

- **Do not** use an acetylene torch to cut straps or to loosen bolts on a gas tank
- Store fuel drained from a gasoline tank only in a CSA-approved safety container or in a gasoline caddy – never in an open container
- If you siphon gasoline, use equipment that is recommended by suppliers for the purpose – not hoses, tubes or your mouth
- Test the tank to ensure that it is free of vapours before starting repair work
- Use a double-insulated trouble light with a fluorescent light that has a strong plastic cover or a Teflon-coated bulb instead of a common wire-cage style trouble light

- Store the gas tank face up outdoors or in a well-ventilated area
- Put duct tape or a plastic cap on the filter nozzle opening of the gas tank to keep vapours from spreading

## Hazard: Weight

### Details

- Fuel tanks are heavy and can cause serious injury to you if they fall

### Threat

- Musculoskeletal injuries (e.g., sprains, pulls)

### Safe Work Guidelines

- Use a transmission jack to support the gas tank under the car
- Get help if the tank is too heavy to lift
- Lift with your legs by bending your knees and straightening up; keep your back straight
- When carrying a tank, do not twist your body to change direction; change your position by moving your feet

## Hazard: Working in a Fixed Position

### Details

- Muscles tire quickly when you stay in a fixed position which causes them to be at a higher risk for injury

### Threat

- Muscle strain and associated tendon, nerve, disc or joint pain (common areas include neck, shoulder, elbow, wrist, and lower back)

## Safe Work Guidelines

- Use height-adjustable controls on hoists and platforms to position the work to suit your standing height
- If you have to use awkward and fixed head and neck positions, take frequent breaks from working under the car
  - For short jobs: 15 second break for every 1-2 min. of work
  - For long jobs: 5 minute break every 15-20 min. of work
- If you are working outside, without a hoist, get help from another technician to move the tank
- Keep parts, tools, and supplies as close to you as possible
- If possible, use two hands to support hand tools
- Change to a task that involves moving around or uses a different body part to improve blood flow

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