



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

SAFE WORK GUIDELINES

► 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.

Note: The energy in one gallon of gasoline, if it could be used at one time, is powerful enough to lift the Empire State Building off its foundation.

Threat

Severe burns from fire or explosion

Dermatitis and removal of the fats and oils from the skin resulting in severely cracked skin (known as de-fatting of the skin) with prolonged exposure

Cancer

Death

Note: Do not use gasoline—alone or mixed with other liquids—to clean anything, including your hands

See Regulation 851: Regulation for Industrial Establishments (Sections 22, 63 and 78)

Before You Start

- Repair fuel tanks only if you are fully qualified; use the testing and cleaning equipment specified by the tank manufacturer, to do it safely
- 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 or tools that can create electrical 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

▶ Gasoline Liquid, Vapours or Fumes (continued)

- Immediately 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 and 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 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 filler nozzle opening of the gas tank to keep vapours from spreading

▶ Weight

Details

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

Threat

Musculoskeletal injuries (e.g., strains, pulls)

- 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

▶ Working in a Fixed Position

Details

Muscles tire quickly when you stay in a fixed position. That places them at 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

Before You Start

- Whenever possible, keep fit: stretch and exercise your body regularly outside of work
- Get help (e.g., another worker, support for the part)

While You Are Working

- Use height-adjustable controls on hoists and platforms to position the work to suit your standing height

▶ Working in a Fixed Position *(continued)*

- 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 minutes of work
 - for long jobs: 5 minute break every 15-20 minutes, working or resting in a different position
- 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 2 hands to support hand tools

After You Finish

- Change to a task that involves moving around or uses a different body part to improve blood flow