PMA COMPANIES

Vehicle Fuel Tank Repairs – Safe or Unsafe?

Have you ever given thought to the dangers of repairing fuel tanks? Recently, one of our fellow dealers thought about it after they had a serious employee injury. Here's the story…

A technician removed the metal fuel tank from a vehicle. He recognized that the baffle inside the tank had broken off, and the technician attempted to repair the baffle by welding it to the metal tank. The technician began tack welding the baffle, and as a result, the vapors inside the tank began to heat up and ignited resulting in a fire which severely burned the technician's arms and face.

Tanks are often repaired, or even cut open in preparation for disposal at landfills, and the technicians who cut and/or weld on these fuel tanks are taking a risk if certain safety procedures are not followed.

The following procedures are suggested when handling vehicle fuel tanks.

Whenever possible, choose to replace a customer's fuel tank rather than attempt to repair it!

- Use two experienced technicians to remove the fuel tank via a jack or chain hoist, and transfer the tank to a stable work bench in a well ventilated area, preferably outdoors.
- One technician should be placed on fire watch, standing by with an extinguisher.
- Use appropriate safety glasses.
- Drain the fuel using a UL rated, flash arresting fuel pump.

At this point, the decision must be made to replace or repair the tank. Tank replacement is safer, faster, and often less costly than attempting a tank repair. The following safe handling procedures can be followed when disposing of used fuel tanks:

- Do not attempt to cut open the tank. Rinse the tank with a water hose and drain. (Note: The rinse water will be considered "contaminated" and must be disposed of according to state and local environmental requirements. A licensed hazardous waste disposal company may be required to assure proper disposal.)

Fuel tank repair is extremely dangerous due to the difficulty involved in removing all gasoline vapors that may be lingering inside the tank. When repair is absolutely necessary, following these procedures:

- The tank must be purged of any potential flammable vapors. This requires vapor displacement by inserting an inert gas, dry ice, negative pressure vacuum, etc., into the tank. This displacement process forces the flammable vapors out of the tank (be sure that all secondary pipe openings, *except the nozzle opening*, are closed to force vapors out of the tank).

- Following this vapor displacement procedure, a gas meter should be used to confirm that vapor displacement successfully removed flammable vapors.
- Once the tank is completely purged of flammable vapors, the tank can then be repaired. Use only pneumatic tools that are spark resistant when repairing or cutting open fuel tanks.
- Use only fluorescent work lights with fully encased shatterproof housing.
- No smoking or other open flames near or around the work area.