HSE BULLETIN

Issue 80, April 2024

Vehicle Fire Safety

Research indicates, that 75% of vehicle fire are caused by bad maintenance, mechanical or electrical failure or malfunctions. Collisions or overturns caused only 3% of this fire but 57% of the associated deaths. One third of non-fatal vehicle fire injuries occurred when civilians attempted to fight the fire themselves.

Possible causes of Vehicle Fire:

Vehicles require combustion, high heat, flammable liquid, and friction to function, these elements create many different scenarios in which car can catch fire, including:

1) Fuel system leak.
2) Electrical system failure
3) Overheating catalytic converters
4) Arson
5) Hybrid and Electric Car Batteries
6) Neglecting to perform the maintenance
7) Overheating engine
8) Spilled fluid
9) Design Flaws
10) Car Crashes

Nature of the threats

- The true danger are the toxic fumes, and shooting debris from parts of the vehicle which can burst because of heat. Explosion from car fires is rare.
- Vehicle fires usually progress slowly in the early stage, allowing occupants time to scape injury.
- Most vehicles fires start in the engine compartment.

What to Do in the Event of a Vehicle Fire

Escape from a burning car is a challenge that requires fast thinking and even faster acting.

- Stay as calm as you can. The worst possible things that you can do is panic. Panic will cause you to waste precious second and make mistake that could end up being tragic.
- Signal and immediately move to the closest safe place to stop, and off the ignition.
- Get every person out of the car and don't allow anyone to go back to retrieve personal items.
- Move far from the burning vehicle to avoid the flames and toxic fumes — at least 100 feet.
- Warn oncoming traffic if possible.
- Notify emergency services ‘999’ (“911” for international)
- Do not open the hood or trunk if you suspect a fire under it. Air could rush in, enlarging the fire leading to injury.
- Be cautions of attempting to put out the fire yourself- there is risk of explosion and toxic fumes emanating from vehicles fires. Inhalation of toxic fumes is the most common from of fire-related health.
- If the fire is relatively small and, in the interior, use you extinguisher. If there is a small amount for smoke coming under the hood, pop the release but don’t lift the hood. Quickly spray through the gap, from several feet away, aiming at the base of the fire rather than the flame.
- If fire is big, don’t put yourself in danger, wait for the emergency team.

If in an accident and not possible to get out immediately

- Unlock the doors and windows. Do whatever you can to accomplish this critical step.
- Even if you cannot open the door yourself, unlocking the doors will give bystanders or rescuers a good shot of getting you out of burning vehicle quickly.
- Kick out a window if you cannot get the door open.
- Safety tools to have on board in case of an accident. Fire Extinguisher and emergency hammer/cutter to cut with one strike and do slash through jammed seat belts.

How to prevent the vehicle fire

- Have your vehicle serviced regularly by a professionally trained mechanic. If you spot leaks, your car is not running properly, get it checked. A well-maintained car is less likely to have a fire.
- Inspect the coolant and oil level on regular basis.
- Checking for oil leakage.
- Checking air conditioning system, which becomes crucial during the scorching heat.
- Check the tire pressure.
- Monitoring unusual smell and warning signs.
- Avoid overheating by not overloading the vehicles.
- Driver should not leave flammable material inside the parked car like e-cigarette, hand sanitizer, perfumes, lighter, power bank.

Prepared By
Kailash Amrute

*Note: Please provide your feedback on kailash@aimsgt.com