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# Vehicle Fires - Prevention and Safety



# Vehicle Fire Topics

- Statistics
- Prevention
- Fire Extinguishers
- Extinguishment

## Vehicle Fires in the U.S. in 2003 - 2007

- U.S. fire departments responded to an average of 287,000 vehicle fires per year in 2003 – 2007.
- These fires caused an average of 480 civilian deaths.
- 1,525 civilian injuries.
- \$1.3 billion in property damage.

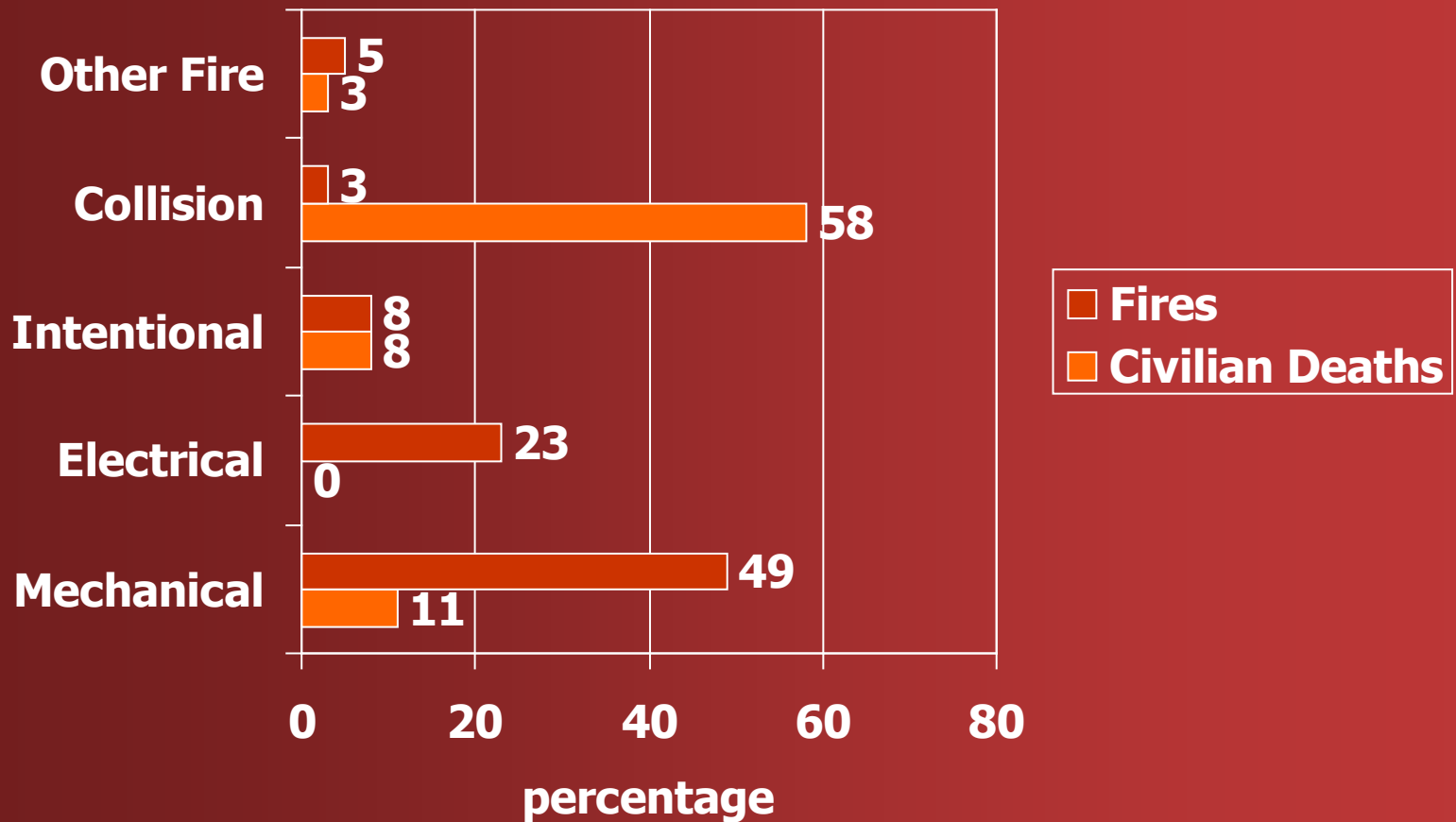
# Vehicle Fire Statistics

- Vehicle fires were involved in 17% of reported U.S. fires.
- 12% of U.S. fire deaths.
- 8% of U.S. civilian fire injuries.
- 9% of property damage.

# Vehicle Fire Statistics

- On average, 31 vehicle fires were reported per hour.
- These fires killed one person a day.
- Older teens and young adults are age groups at highest risk of vehicle fire deaths.
- 1/3 of non-fatal vehicle fires injuries occurred when civilians attempted to fight the fire themselves.

# 2003-2007 Highway Vehicle Fires and Deaths by Fire Causal Factors



# Vehicle Fire Prevention

## Vehicle maintenance is crucial to preventing vehicle fires.

- Have your vehicle inspected annually by a professional technician.
- Watch for fluid leaks under vehicles, cracked or blistered hoses.
- Watch for wiring that is loose, has exposed metal or has cracked insulation.
- Be alert to the way your vehicle sounds when running.



# Vehicle Fire Prevention

- Be alert to a visible plume of exhaust coming from the tailpipe.
- Be alert to a louder than usual exhaust tone or a backfiring exhaust.
- These could indicate damage to the high-temperature exhaust and emission control system.

Have any of these conditions inspected and repaired as soon as possible.

# Vehicle Fire Prevention

- Avoid smoking. If you must smoke, use your vehicle ashtray, not window.
- Drive to posted speed limits, traffic rules and changing road conditions.
- Have a multipurpose fire extinguisher in your vehicle, easily seen and accessible.
- Do not park vehicle where combustibles come in contact with the catalytic converter. (Car Shows)

# Vehicle Fire Extinguishers

What type of fire extinguisher is best?

- Several fire hazards.
- Oil, gas, electrical wires and upholstery.
- Must be able to handle all fire hazards.

Dry chemical fire extinguishers are the best.

- Rated for use on any A,B and C class fire.
- Class A – Combustibles. Upholstery, etc.
- Class B - Liquids. Oil, gas, etc.
- Class C - Electrical. Wires, etc.

# Vehicle Fire Extinguishers

How do dry chemical extinguishers work?

- Filled with foam or powder (baking soda).
- Pressurized with nitrogen.
- Baking soda, once decomposed, releases carbon dioxide which smothers oxygen.
- The chemical reaction is interrupted by a layer of powder separating the fuel from the oxygen.

# Vehicle Fire Extinguishers

## Proper Use Of Fire Extinguishers

- **P.A.S.S.** Method
- **Pull** - The pin releasing the locking mechanism.
- **Aim** - At the base of the fire/fuel, not the flames.
- **Squeeze** - The lever releasing the extinguishing agent.
- **Sweep** – From side to side approaching the fire once it starts to diminish.

# Fire Extinguisher Demonstration

- You tube video

- Fire Extinguisher Demonstration.

- <http://www.youtube.com/watch?NR=1&feature=endscreen&v=2Z2C13gJh-g>

# Vehicle Fire Extinguishment

Before fighting a fire, be certain that:

- The fire is small and not spreading.
- You have the proper fire extinguisher.
- Your fire extinguisher is charged.
- You know how to use your fire extinguisher.

# Vehicle Fire Extinguishment

## Never fight a fire if:

- The fire is spreading rapidly.
- Extinguishers are for small fires only. Fire doubles in size every minute.
- There is too much smoke.
- Due to the risk of explosion and toxic fumes from vehicle fires, smoke inhalation is the most common form of fire-related deaths.



# Vehicle Fire Extinguishment

## How to fight a fire safely

- Pull to the side of the road – Avoid traffic.
- Stop the vehicle – Secure vehicle.
- Put the vehicle in park - Secure vehicle.
- Turn off the ignition – Stopping gas/electric.
- Set the emergency brake – Secure vehicle.

# Vehicle Fire Extinguishment

## How to fight a fire safely

- Safely exit the vehicle - Avoid traffic.
- Extinguish fire – Using P.A.S.S.
- Call 9-1-1 – Fire department response.
- Watch for re-ignition – Avoid smoke.
- **Note:** Never raise the hood with visible flames in the engine compartment. The rapid influx of oxygen could cause the fire to flash causing serious injury.

# Enjoy Our Fiero's



# Thank You

