



REFUELING SAFETY

TOOLBOX TALK SERIES – CHEMICAL SAFETY

February 2026

Video Introduction

Today's safety topic begins with a short training video from **Safety One Source**:

Title: *"Toolbox Talk: Refueling Safety"*

Watch here: <https://youtu.be/EcyiwKgUcl0?si=6VP3ij1DV4NKnBc>

This video highlights safety tips when refueling.

Introduction

Fuel is essential to daily operations, powering vehicles, heavy equipment, mowers, chainsaws, generators, and other tools. While fuel allows us to perform our jobs efficiently, it also presents serious safety, fire, health, and environmental hazards when not handled properly.

Proper fuel handling protects:

- Employees and coworkers
- The public
- Town property and equipment
- The environment and waterways
- The department from regulatory violations and cleanup costs

Every employee who fuels equipment or transports fuel plays an important role in preventing accidents and spills.

Understanding Fuel Hazards

Fuel products such as gasoline and diesel are highly flammable and potentially harmful to people and the environment.

Fire and Explosion Risks

Fuel vapors can ignite quickly when exposed to:



- Sparks
- Static electricity
- Open flames
- Hot engines or exhaust components
- Electrical equipment

Gasoline vapors are especially dangerous because they are heavier than air and can travel along surfaces before igniting.

Health Hazards

Exposure to fuel can cause:

- Skin irritation or chemical burns
- Eye irritation
- Respiratory irritation from vapors
- Dizziness or headaches from inhalation
- Long-term health effects from repeated exposure

Avoid direct contact whenever possible and always use proper protective equipment.

Environmental Hazards

Even small fuel spills can:

- Contaminate soil and groundwater
- Enter storm drains and local waterways
- Harm wildlife and vegetation
- Require costly cleanup and reporting

Fuel spilled onto pavement can quickly travel through stormwater systems and into local streams or lakes.

Common Causes of Fuel Spills

Most fuel spills occur due to preventable mistakes, including:

- Overfilling fuel tanks



- Using damaged hoses or containers
- Fueling equipment while it is running
- Dropping or improperly securing fuel containers
- Equipment leaks that go unreported
- Poor housekeeping in fueling areas
- Cold weather equipment failures

Recognizing these risks helps prevent incidents.

Safe Fuel Handling Procedures

Before Fueling

Taking a few minutes to prepare can prevent accidents and spills.

Employees should:

- Inspect fuel hoses, nozzles, and containers for cracks, leaks, or loose fittings
 - Ensure fuel containers are approved and properly labeled
 - Verify the correct fuel type is being used
 - Shut off engines and allow equipment to cool before fueling
 - Park equipment on stable, level ground
 - Remove ignition sources (no smoking, open flames, or sparks)
 - Locate the nearest spill kit before fueling begins
 - Wear appropriate PPE
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During Fueling

Fueling requires full attention at all times.

Employees must:

- Maintain control of the nozzle during fueling
- Never leave fueling equipment unattended
- Fill tanks slowly to avoid splashing or overflow
- Avoid topping off tanks once automatic shutoff occurs
- Keep fuel containers in contact with fueling nozzles when filling portable containers
- Watch for leaks, drips, or unusual odors



- Stop fueling immediately if equipment or containers appear damaged
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After Fueling

Fueling is not complete until the area is checked for safety.

Employees should:

- Secure fuel caps tightly
 - Wipe off any spilled fuel or residue
 - Return fuel containers to proper storage areas
 - Inspect surrounding ground and equipment for leaks or drips
 - Properly dispose of contaminated absorbent materials
 - Report any fueling equipment problems
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Cold Weather Fueling Hazards

Winter conditions create additional risks during fueling operations.

Equipment Concerns

Cold temperatures can cause:

- Fuel hoses to become brittle and crack
- Rubber seals and gaskets to fail
- Frozen fuel caps and valves
- Slower fueling rates

Employees should perform extra inspections during cold weather.

Static Electricity Risks

Dry winter air increases static buildup, which can ignite fuel vapors. Reduce static risks by:

- Keeping the fuel nozzle in contact with the container or tank
- Avoiding fueling while seated inside vehicles
- Using proper bonding and grounding procedures when required



Proper Fuel Storage and Transportation

Safe fuel storage reduces the likelihood of spills and fire hazards.

Storage Requirements

Fuel must be:

- Stored in approved containers only
 - Clearly labeled with contents
 - Stored away from heat and ignition sources
 - Secured to prevent tipping or damage
 - Kept away from storm drains and water sources
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Transporting Fuel Safely

When transporting fuel:

- Secure containers upright
 - Use caps and closures designed for transport
 - Do not transport leaking containers
 - Avoid overfilling containers
 - Place containers where they will not shift or fall during transit
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Spill Prevention Best Practices

Preventing spills is always the goal.

Employees should:

- Avoid rushing fueling operations
 - Maintain equipment regularly
 - Immediately report leaking tanks, hoses, or containers
 - Keep fueling areas clean and organized
 - Use drip pans or absorbent materials when necessary
 - Never leave fuel containers unsecured
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Spill Response Procedures

Despite prevention efforts, spills may still occur. Quick and proper response reduces damage and hazards.

Step 1: Stop the Source

If safe to do so:

- Shut off pumps or equipment
 - Upright containers
 - Close valves or caps
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Step 2: Contain the Spill

Use spill kit materials such as:

- Absorbent pads
- Absorbent socks or booms
- Granular absorbents

Prevent fuel from reaching storm drains, waterways, or soil.

Step 3: Notify Supervisors

Immediately report spills to your supervisor or designated department contact. Some spills must be reported to regulatory agencies.

Step 4: Clean Up Safely

- Use absorbent materials only
 - Do NOT hose down or wash fuel into drains
 - Dispose of contaminated materials according to department procedures
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Spill Kit Awareness

Employees must know:

- Where spill kits are located (vehicles, fueling stations, job sites)
- How to deploy absorbent materials
- Who to contact following a spill
- How to properly dispose of cleanup materials

If a spill kit is missing or depleted, report it immediately.

Employee Responsibilities

All employees are responsible for:

- Following safe fueling procedures
 - Using required personal protective equipment
 - Reporting equipment damage or leaks
 - Reporting spills immediately
 - Participating in training and safety discussions
 - Protecting coworkers, the public, and the environment
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Personal Protective Equipment (PPE)

Depending on fueling tasks, employees may need:

- Safety glasses or goggles
 - Chemical-resistant gloves
 - Slip-resistant footwear
 - High visibility clothing
 - Protective outerwear in cold conditions
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Signs of Equipment or Fuel System Problems

Employees should immediately report:

- Fuel odors
- Visible leaks or wet spots



- Damaged hoses or cracked containers
- Fuel consumption that appears abnormal
- Loose or missing fuel caps

Early reporting helps prevent major spills and equipment damage.

Discussion Points for Employees

- Do you know where the closest spill kit is located?
 - What additional hazards exist during winter fueling?
 - Have you noticed equipment issues that could lead to spills?
 - What challenges do you experience when fueling equipment?
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Conclusion

Safe fuel handling protects employees, the public, the environment, and department operations. Every employee plays a role in preventing spills and responding quickly when they occur. Taking a few extra moments to follow safe procedures can prevent injuries, environmental damage, and costly incidents.

