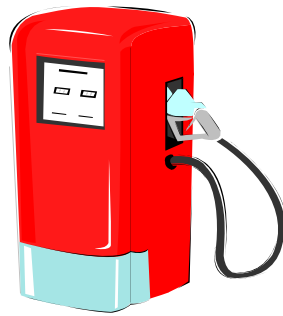


# Gasoline Handling & Storage



## Handling Gasoline Safely

Gasoline is dangerous. First, and foremost, it is highly flammable — it is easy to ignite and it burns explosively. Second, exposure to gasoline liquid or vapor can affect health adversely.

Chevron's *Material Safety Data Sheet* (MSDS) for gasoline contains the following warnings:

- Extremely flammable.
- Harmful or fatal if swallowed — can enter lungs and cause damage.
- Vapor harmful.
- Long-term exposure to vapor has caused cancer in laboratory animals.
- May cause eye and skin irritation.
- Keep out of reach of children.

## Filling a Container at a Service Station

Service stations are designed to minimize the hazards of handling gasoline: Flames are prohibited, dispensing equipment is grounded to prevent sparks, and dispensers are located outdoors so that escaping fumes are rapidly dispersed. (For environmental reasons, many Air Quality Management Control Districts now require that dispensers be equipped with nozzles that collect fumes from a vehicle's fuel tank.)

However, filling a container is a special situation that requires extra precautions:

- Use only an UL-approved plastic or metal container.
- Shut off the vehicle's engine.
- Place the container on the ground a safe distance from the vehicle, other customers, and traffic.
- Keep the nozzle in contact with the container during filling.
- Manually control the nozzle valve; do not latch it open (If nozzle is fitted with a fume-collector, the filler-spout seal must be compressed to activate the dispenser).
- Do not smoke.
- Avoid breathing gasoline fumes.

Flowing gasoline generates a static electric charge that builds up on the gasoline in the receiving container. If the charge isn't given an opportunity to dissipate, it can discharge to the metal spout of the dispenser nozzle as a static spark. (In a similar process, a static charge built up in a cloud during a storm discharges as lightning.) If the spark occurs near the open mouth of the container, where the concentration of gasoline vapor and air is in the flammable range, it could ignite the gasoline.

The static charge will dissipate more slowly from gasoline in a container being filled in the trunk of a car or on the bed of a pickup — particularly a pickup with a plastic bedliner. Putting the container on the ground and keeping the nozzle in contact with the container help dissipate the static charge. Another reason not to fill a container in a vehicle is that an accidental spill will contaminate the vehicle with gasoline.

Manually controlling the nozzle valve prevents the weight of the nozzle from tipping over the container and reduces the possibility of overfilling the container.

Caution: Only fill the container about 95% full. If the container is 10 inches tall, leave 1/2 inch (5%) between the surface of the gasoline and the top of the container. Fill vehicle fuel tanks one gallon short of their capacity.

Gasoline, like any liquid, expands as its temperature increases. In some parts of the country, stored gasoline might encounter temperatures as much as 50°F higher than the temperature at which it was dispensed. A 50°F temperature increase causes gasoline to expand about 3.5%. If there is no air space in the container for this increased volume to occupy, either gasoline will be forced out of the container or the walls of the container will be distorted.

## Handling Gasoline Away From the Service Station

**To avoid a fire, keep the gasoline away from any ignition source (flame or spark) and any ignition source away from the gasoline.** There should not be an appliance pilot light or igniter within 50 feet of where gasoline is stored or handled. Gasoline fumes, which are invisible and heavier than air, can travel along the floor for some distance when they are not dispersed by air currents. If ignited, the fumes become a fuse that brings the flame back to the liquid gasoline source.

To avoid eye and skin contact, wear safety glasses and gasoline-resistant gloves.

For both fire and health considerations, it is best to handle gasoline outdoors. There are fewer ignition sources and the fumes are diluted and dispersed more quickly.

## First Aid

The appropriate first-aid action depends on which part of the body was contacted by gasoline.

- **Eye Contact:** Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses, if worn. No additional first aid should be necessary. However, if irritation persists, see a doctor.
- **Skin Contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water. Wash contaminated clothing. Discard contaminated non-waterproof shoes and boots.
- **Inhalation:** If there are signs of respiratory irritation or nervous system irritation (headache, dizziness, lack of coordination), move the person to fresh air. If the signs continue, see a doctor.
- **Ingestion:** If swallowed, give water or milk to drink and telephone for medical advice. **DO NOT** make the person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person to the nearest medical emergency treatment center or hospital.
- **Emergency Information:** Call your local Poison Control Center or Chevron Emergency Information Center at (800) 321-0623 (24 hours).

All companies are required to develop and make available safety information on their products. You may obtain a Material Safety Data Sheet for Chevron gasoline by calling (415) 894-2783. The sheet provides

detailed information on the hazards associated with gasoline and the appropriate responses. All companies are required to develop and make available safety information on their products. [Material Safety Data Sheets \(MSDS\)](#) are available on our Web site. The sheet provides detailed information on the hazards associated with gasoline and the appropriate responses.

(Article from Chevron's Website,  
[www.chevron.com/prodserv/fuels/bulletin/longterm\\_gasoline/handling.shtml](http://www.chevron.com/prodserv/fuels/bulletin/longterm_gasoline/handling.shtml))

# Recommended Storage Practices

This section presents storage recommendations of a general nature, followed by recommendations and comments for some specific uses or situations.

## General Storage Recommendations

Three precautions will delay the deterioration of gasoline:

- Fill containers about 95% full.
- Cap containers tightly.
- Store containers out of direct sunlight in a location where the temperature stays below 80°F most of the time (a vehicle or piece of equipment with gasoline in the fuel tank may be stored in direct sunlight as long as the tank is shaded from the sun).

The first two actions reduce the evaporation of gasoline during storage and reduce the exposure of gasoline to air and water vapor. (See [Background Information](#) section.) The 5% air space allows room for the liquid gasoline to expand if its temperature rises.

If weather or storage conditions will keep the gasoline warmer than 80°F much of the time, add a fuel stabilizer additive to the gasoline. Fuel stabilizer additives are available at auto supply stores and some service stations and convenience stores. Follow the label directions. The best mixing is achieved when the stabilizer is added to the container before it is filled with gasoline. The stabilizer will work only if it is added to fresh gasoline; it can't fix gasoline that has started to deteriorate.

Federal and California reformulated gasolines will survive storage as well or better than conventional gasoline.

Adding oil to gasoline doesn't change its stability. Gasoline-oil mixtures for two-stroke-cycle engines will survive storage as well as gasoline itself.

Note: The volatility of gasoline is tailored for the range of temperatures expected in the locality where it is sold. Engines fueled with "summer gasoline" may be more difficult to start in cold weather. (See [Volatility](#) section.)

## Storage Containers

Store gasoline only in a container clearly intended for the purpose.

One and two and five gallon containers should carry a sticker indicating they are approved for gasoline storage by the Underwriters Laboratories (UL). A plastic container has the advantage that it will not rust if the gasoline is contaminated with water or if the container is stored in a wet place.

A 60-gallon metal drum is the only container approved by the Uniform Fire Code for the storage of more than five gallons of gasoline.

The Uniform Fire Code limits the amount of gasoline in residential buildings to the amount "necessary for maintenance purposes and operation of equipment," not to exceed a maximum of 25 gallons.

Note that local Fire Department regulations may supersede the Uniform Fire Code. When storing more than five gallons of gasoline it is best to check with your local Fire Department for local regulations.

Do not store a container of gasoline near an ignition source such as an appliance pilot light.

## Vehicles

This section applies to cars, trucks, motorcycles, and motor homes.

Follow the general storage recommendations.

If these recommendations can't be followed or if the gasoline was less-stable than Chevron gasoline, drivability problems (hesitation, lack of power) may be encountered after storage. The probable cause is gum deposits in the carburetor, on the injectors, or on the fuel filter/screen. Treating the gasoline in the vehicle's tank with a deposit-control additive may remove the problem deposits. Deposit-control additive concentrates are available at service stations and auto supply stores. Techron Concentrate is Chevron's most effective general purpose deposit-control additive. Follow the label instructions. Follow the label directions. If drivability doesn't improve by the time the additized fuel has been used, consult a mechanic. Chevron recommends the mechanic check the fuel filter and the screen (if any) in the fuel tank for plugging.

If drivability doesn't improve by the time the additized fuel has been used, consult a mechanic. Chevron recommends the mechanic check the fuel filter and the screen (if any) in the fuel tank for plugging.

## Boats

**Boats With In-Board Engines:** Follow the general storage recommendations. Seal/close the tank vent if possible.

**Boats With Outboard Engines:** Follow the recommendations for small-engine equipment (below).

Boat fuel tanks are more likely to be contaminated with water for obvious reasons. Check the fuel tank before storing the boat. Pump out any water and dispose of it in an environmentally responsible way.

Water removal is particularly important for boats used in salt water and for boats fueled with gasoline oxygenated with ethyl alcohol. Salt water corrodes some metals. So does the alcohol-water layer that separates if gasoline containing ethyl alcohol is contaminated with more than one percent water.

Formulation changes that have occurred in the past five years — the addition of oxygenates and the reduction in benzene and other aromatics — have made gasolines more subject to microbial growth. Even if no water is detected, add a biocide to the gasoline in the fuel tank. Follow the label directions. The best mixing is achieved if the biocide is added to the tank before it is filled with gasoline. Biocide additives are available at marinas and boat supply stores.

## Small-Engine Equipment

This section applies to outboard motors, jet skis, snowmobiles, and lawn-and-garden equipment.

The owner's manuals of much small-engine equipment recommend that the gasoline be less than 30 days old. They also recommend that the equipment not be stored with gasoline in the fuel tank. The tank should be emptied and the equipment run until the fuel line and carburetor also are empty. Both recommendations are intended to protect essential fuel system parts from gum deposits. While Chevron gasoline is stable for much longer than 30 days, it is Chevron's policy to defer to the recommendations of the equipment manufacturer.

### **Follow the fuel and storage recommendations in the owner's manual for your equipment.**

Even if it is not recommended, draining the fuel from the equipment is the preferred practice when it is easy to do.

If fuel is left in the equipment, follow the general storage recommendations.

Equipment with a two-stroke-cycle engine requires fuel that is a mixture of gasoline and oil. While this mixture is as stable as gasoline, Chevron recommends not preparing more than you can use in a month or two because disposing of any excess is not easy. The gasoline-oil mixture should not be added to the fuel tank of a gasoline-fueled four-stroke-cycle vehicle.

(Article from Chevron's Website,

[www.chevron.com/prodserv/fuels/bulletin/longterm\\_gasoline/storage.shtml](http://www.chevron.com/prodserv/fuels/bulletin/longterm_gasoline/storage.shtml))

# Detecting Deteriorated Gasoline

The modes of gasoline deterioration are:

- Evaporation
- Oxidation (Gum Formation)
- Microbial Activity
- Contamination

Moderate deterioration by any mode except contamination is impossible to detect without testing. However, testing by a qualified laboratory is impractical except when a large amount of gasoline or a very critical application is involved. While discarding deteriorated gasoline in an environmentally responsible way is not easy (see next section), it is the better answer for small quantities of questionable gasoline.

## Evaporation

The evaporation of some low-boiling components is impossible to detect without testing. Relevant tests are:

- Test Method for Distillation of Petroleum Products; ASTM D 86 (American Society for Testing and Materials)
- Test Method for Vapor Pressure of Petroleum Products (Mini Method); ASTM D 5191

If the first 10 volume percent of a gasoline distills above 160°F (summer) or 140°F (winter), the fuel no longer meets the ASTM specification for gasoline (Automotive Spark-Ignition Engine Fuel; ASTM D 4814).

A gasoline with a vapor pressure less than 5 psi (summer) or 9 psi (winter) is suspect.

## Oxidation

Severely oxidized gasoline has a rancid odor and darker color. The presence of solid gum particles also may result in the loss of brightness and clarity. Testing is required to detect moderate oxidation:

- Test Method for Existent Gum in Fuels by Jet Evaporation; ASTM D 381

Gasoline with a "washed gum" greater than 10 mg/ 100 mL is suspect.

## Microbial Activity

Microbial activity tends to concentrate at the gasoline-water interface. Moderate activity may cause the gasoline to lose brightness and clarity. Severe activity may stabilize gasoline-water emulsions and contaminate the fuel with visible particles of microbial sludge (biomass). Anaerobic microbial activity may generate hydrogen sulfide, giving the gasoline a "rotten egg" odor.

## **Contamination**

The common contaminants are dirt, water, and rust (generated when gasoline and water are stored in a steel container). All of these contaminants can be detected visually. However, since they all tend to settle, a sample from the bottom of the container or fuel tank is required.

(Article from Chevron's Website, (Article from Chevron's Website,

*[www.chevron.com/prodserv/fuels/bulletin/longterm\\_gasoline/detecting.shtml](http://www.chevron.com/prodserv/fuels/bulletin/longterm_gasoline/detecting.shtml)*)

# Background Information

## Volatility

*Volatility* describes a gasoline's tendency to form vapors. Liquid gasoline does not burn; only gasoline vapor burns. To start a cold engine, enough low boiling components ("light ends") must vaporize at the engine temperature to form a combustible vapor-air mixture.

This is one reason that the volatility of gasoline is tailored for the range of temperatures expected in the locality where it is sold. "Winter gasoline" has a higher volatility for easy starting in cold weather. "Summer gasoline" has a lower volatility because hydrocarbon vapor in the atmosphere contributes to smog formation.

## Evaporation

The gasoline light ends needed for easy starting have the same tendency to vaporize in storage as they do in an engine. If the storage container is not tightly sealed, some of the light ends gradually will be lost. Too great a loss decreases the gasoline's ability to start an engine.

Evaporation of gasoline from a vented fuel tank or a can with a loose cap would be minimal if the temperature of the container were constant. But daily temperature changes cause the temperature of the container to cycle. The heating portion of the cycle raises the pressure of the gas (gasoline vapor and air) above the liquid gasoline, which, in turn, drives some of the vapor-air mixture out of the container. The succeeding cooling cycle lowers the pressure of the gas, drawing fresh air into the container. Light ends evaporate from the liquid gasoline to saturate the new air. The daily repetition of this cycle gradually pumps light ends out of the container.

The cycle also brings air and water vapor into the container, especially during periods of high humidity. The oxygen in the air contributes to gum formation. (See [Oxidation](#) section.) And the water vapor, if it condenses during the cooling cycle, contaminates the gasoline with liquid water.

A larger volume of gas will be pumped in and out of the container when the air space above the liquid fuel is larger and when the daily temperature change is larger. Consequently, keeping the container almost full of gasoline and controlling the temperature fluctuations will minimize the loss of light ends, the exposure of the gasoline to air, and the contamination of the gasoline with water.

## Oxidation

Except for any added oxygenates, gasoline is made up almost entirely of hydrocarbons—molecules constructed from the building blocks of elemental carbon and hydrogen. Hydrocarbons, as a class, are chemically stable molecules.

However, there are types of hydrocarbons (olefins and diolefins) that can combine slowly with the oxygen in the air ("oxidize") at ambient temperatures. The products of the reaction are larger molecules, collectively called "gum."

The gum-forming reactions become faster as the temperature of the gasoline increases. This is why this bulletin recommends controlling the temperature of stored gasoline.

Most gasolines contain negligible amounts of gum when they are manufactured, and most contain special chemicals ("stabilizers") to retard gum formation. It is the stabilizers that make it possible to store Chevron gasolines for a year when the conditions are good.

## **Soluble Gum**

The gum formed by oxidation is usually soluble in gasoline. However, it remains behind as a sticky residue when the gasoline evaporates. Since gasoline begins to evaporate in the carburetor of a carbureted engine or in the injector of a fuel-injected engine, a gasoline containing soluble gum may leave a deposit on these parts and on the intake valves. These deposits will be in addition to the deposits normally formed by a gum-free gasoline — a formation triggered by the elevated engine temperatures.

Modern engines are designed to run best when vital engine parts are clean. Carburetor and fuel injector deposits can cause hesitation and stumbling on acceleration, lower fuel economy, lower power output, and higher emissions of hydrocarbons and carbon monoxide. Excessive intake valve deposits can cause many of the same performance problems, plus higher emissions of hydrocarbons, carbon monoxide, and nitrogen oxides.

Because the Federal Environmental Protection Agency recognizes that fuel system deposits increase emissions, they require all gasolines to contain a deposit-control additive. All deposit-control additives keep deposits from forming; the best ones clean up deposits formed by lower-quality gasolines.

If the gasoline contains a lot of soluble gum, the normal level of deposit-control additive may not be sufficient. This is why Chevron recommends treating a tank of gasoline with an extra dose of deposit-control additive if a vehicle displays drivability problems after being stored. (Note: Chevron does not recommend adding a deposit-control additive to the fuel for a two-stroke-cycle engine.) The gum-forming reactions become faster as the temperature of the gasoline increases.

## **Insoluble Gum**

Severe oxidation of gasoline may produce insoluble, as well as soluble, gum. The insoluble gum will take the form of brown or black particles, which float in the gasoline or settle to the bottom of the container.

When an engine is fueled with gasoline containing insoluble gum, the fuel filter will remove the gum. If the engine has an in-tank fuel pump, the screen on the pump's feed also may capture some of the gum. However, these devices can become plugged if the gasoline contains too much insoluble gum. This will cause the engine to lose power or stall because it is starved for fuel. Adding a deposit-control additive will not keep insoluble gum from plugging filters and screens.

## **Other Issues**

Storage, including storage involving gum formation, does not change the bulk properties and most of the performance characteristics of gasoline (excluding the characteristics affected by the gum itself). For example, storage does not change a gasoline's anti-knock index (octane) or energy content. However, these properties will change if the storage is accompanied by evaporative loss. The evaporation of light ends decreases a gasoline's antiknock index and increases its energy content.

Federal and California reformulated gasolines will survive storage as well or better than conventional gasolines. The regulations require reformulated gasolines to have less light ends and less olefins (federal,

later; California, now) than conventional gasolines. As explained above, it is the oxidation of olefins that leads to gum formation. Reformulated gasolines also contain oxygenates. The common oxygenates are stable molecules that do not form gums.

(Article from Chevron's Website,

[www.chevron.com/prodserv/fuels/bulletin/longterm\\_gasoline/background-info.shtml](http://www.chevron.com/prodserv/fuels/bulletin/longterm_gasoline/background-info.shtml))

# Disposing of Gasoline

## Gasoline in Good Condition

Excess gasoline in good condition can be added to the fuel tank of a gasoline-fueled car or truck. (Don't dispose of gasoline-oil mixtures for two-stroke-cycle engines in this way.) Using a funnel with a flexible stem to direct the gasoline past the flap valve in the filler tube of newer vehicles greatly simplifies the transfer. The funnel also will help keep gasoline from being spilled on the vehicle. Oxygenated gasoline can damage the finish of some vehicles. Flexible stem funnels are available at some auto supply stores.

## Deteriorated Gasoline

It is not as easy to get rid of gasoline that has deteriorated. There are organizations that will help dispose of gasoline in an environmentally responsible way. Finding the best option may take some searching. Sources of information are your community's fire department, recycling center, and hazardous waste disposal center. Check the government pages of your phone book to locate these organizations. Commercial disposal organizations are listed in the Yellow Pages under Environmental & Ecological Services and Oils, Waste.

You may have to pay for the disposal, but the cost should be weighed against the cost of repairing an engine damaged by bad gasoline.

Do not discard gasoline into a sewer, street drain, stream, or river. Such actions are environmentally harmful and may result in a fire or explosion.

(Article from Chevron's Website,

*[www.chevron.com/prodserv/fuels/bulletin/longterm\\_gasoline/disposing.shtml](http://www.chevron.com/prodserv/fuels/bulletin/longterm_gasoline/disposing.shtml))*



# Maine Farm Safety Program

Bulletin #2290

by Dawna L. Cyr, Farm Safety Project Assistant, and Steven B. Johnson, Ph.D., Area Crops Specialist

## Farm Fuel Safety

Accidents in the handling, use and storage of gasoline, gasohol, diesel fuel, LP-gas and other petroleum products (solvents, paint thinners and naphtha) can result in serious fires and explosions. The chances of fire or explosion can be reduced by following safety precautions and by keeping fuel storage facilities in top condition.

### ◆ Flammable Liquids and Gases

Gasoline, diesel fuel, LP gas, degreasing solvents, paint solvents and certain paints are among flammable materials found on most farms. Keep these liquids away from open flames and motors that might spark. Keep all petroleum storage and handling equipment in good condition and out of reach of children. Inspect for leaks, deterioration or damage. Never store fuel in food or drink containers.

When transferring farm fuels, bond the containers to each other, and ground the one being dispensed from to prevent sparks from static electricity. Clean up spills right away and put oily rags in a tightly covered metal container. Change your clothes immediately if you get oil or solvents on them.

In addition, watch out for empty containers that held flammable or combustible liquids. Vapors might still be present. Store these liquids in approved containers

### Farm Fuel Safety

- ◆ Never store fuel in food or drink containers.
- ◆ Watch for leaks or deterioration in fuel storage and delivery equipment.
- ◆ Locate fuel storage tanks away from buildings.
- ◆ Keep fuels away from children.



University of Maine  
Cooperative Extension

in well-ventilated areas away from heat and sparks.

Be sure all containers for flammable and combustible liquids are clearly and correctly marked. Read and heed directions on all product containers, noting flammability and safety precautions.

Do not keep gasoline inside the home or transport it in the trunks of automobiles or recreation vehicles. If gasoline must be transported, carry only a small amount in a labeled safety can on the floor of the back seat. Roll down the windows so moving air can sweep away vapors.

Before cutting or welding a fuel tank, fill it with water to drive out any lingering residue or vapor. Many explosions have resulted from using a torch on a tank that was thought to be empty.

◆ **Refueling**

Be cautious during refueling. Fires and explosions can happen. Besides being a fire hazard, spilled fuel can cause irritation and discomfort if it contacts the skin.

Breathing an excess of fuel vapor often causes dizziness and headache.

When arriving to refuel, drive up to the

fuel pump or storage tank slowly. Be careful not to bump it. Turn off the engine, and extinguish smoking materials. If the engine is hot, allow it to cool for a few minutes. Position yourself so you can refuel without slipping or becoming fatigued. Remove the fuel cap slowly and allow the pressure to dissipate.

Avoid over filling. Allow any spilled fuel to evaporate before starting the engine. After releasing the nozzle valve to shut off fuel flow, keep the nozzle in the filler opening a few moments to allow it to empty. Check vents to be sure they're not clogged, and replace the filler cap. Then lock up the pumps so children, or other unauthorized persons cannot pump fuel.

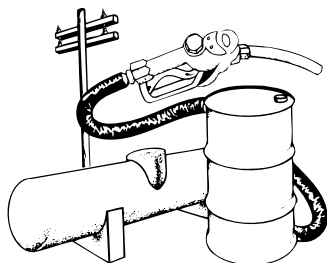
Refuel small equipment outside — *never* in an enclosed area. A funnel will make the job easier when using a safety can.

Wipe up spills and allow the excess to evaporate before starting the engine. Before resuming work, put the safety can back into safe storage.

◆ **Aboveground Tanks**

An aboveground storage facility is cost effective. The tanks are movable and ground water or limited flooding has little effect on them.

Aboveground storage tanks must be sturdy and designed for fuel storage. They should be 40 feet or





more from buildings. A tank too near a burning building could explode and spread the fire. Mount a tank elevated for gravity discharge on sturdy supports placed on a firm, level surface. Keep the area clear of weeds and trash to reduce fire risk. Remind machinery operators to stay away from the support structure and to not bump it when pulling up to refuel.

Unless tanks are located in a shaded spot or have overhead canopies to shield the sun, evaporation losses can be sizable. Use a pressure-vacuum relief valve (rather than the standard vented cap).

#### ◆ Safety Cans

A labeled safety container is made of heavy-gauge metal and has a cap that automatically closes to prevent a spill if the can is dropped or tipped over. The squat shape makes a safety can difficult to tip. A pressure-relief valve opens when vapor pressure inside the can reaches three to five pounds per square inch. A flash-arresting screen in the filler opening and pouring spout will reduce the possibility of a spark which could cause a fire or explosion.

Label fuel containers according to their contents. Do not risk confusing diesel fuel and gasoline. Paint gasoline cans red and diesel cans green. Store cans in a cool, well-ventilated place, away from living quarters and ignition sources.

#### ◆ LP Gas

The fire or explosion hazard with LP gas usually involves leaks or failures in the system, improper transfer of liquid from one tank to another, or accidents where tanks or lines are ruptured. Also, an LP tank involved in a building, trash or tractor fire can greatly intensify such a fire or even explode.

Large LP storage tanks should be at least 50 feet from the nearest building and 20 or more feet from other aboveground fuel tanks. Provide and maintain solid foundations to support LP-gas tanks so they won't settle or tip and break or damage connections.

Equip the storage tank with a liquid-fill hose and a vapor-return hose. If the vapor escapes into the atmosphere, a fire or explosive danger is created. Therefore, when you fill your fuel tank, the vapor from the top should be fed back into the storage tank.

Be alert for leaks in the LP-gas system. Protect gauges and regulators from weather and dirt. If you smell gas, turn off valve(s) at the tank(s). Open windows and doors to ventilate the building, and don't switch on anything electrical. Get everyone out, and call a technician to find and fix the leak.

***Label fuel containers according to their contents.***

◆ **More Safety Reminders**

Keep all equipment used for petroleum storage and handling in good condition. Watch for leaks, deterioration or damage. Make needed repairs or replace faulty components immediately. Keep cap vents clean and free, and tank and safety can pressure-relief valves functional.

If fuel is spilled on your clothing, go outside, away from any ignition source, and allow the clothing to dry. If more than a little was spilled, remove the garment, and wash the fuel from your skin to avoid irritation.

When siphoning fuel, use a pump. Never use your mouth. A mouthful of gasoline or diesel fuel could be fatal, especially if it gets into your lungs. Also avoid excessive inhalation of gasoline vapor.

Each year, several children are poisoned after accidentally ingesting gasoline and other petroleum products. Protect your fuel facilities so children cannot draw out any fuel. The facility should be off limits. Warn children sternly about playing

with matches in fuel areas. Keep gas cans out of their reach, and never store fuel in food or drink containers.

When servicing machinery, check the fuel system for leaks. Double check connections to be sure they are secure and leak-free after changing fuel filters or performing other work requiring disconnecting or removing a fuel line or fuel system component.

Turn off oil heaters before refueling. Make sure the filler cap is replaced and tightened. Set portable heaters away from combustibles where they cannot be tipped over.


Motor oil and grease are considerably less flammable than engine fuels, but they will burn. Keep them away from ignition sources.

Following these safety tips on the handling, use and storage of gasoline and other farm fuels will help to prevent fires and explosions.

**This Maine Farm Safety Fact Sheet is part of an educational fact sheet series produced by the University of Maine Cooperative Extension. For more information on farm safety, contact your county Extension office.**



Published and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, by the University of Maine Cooperative Extension, Vaughn H. Holyoke, Director for the University of Maine Cooperative Extension, the Land Grant University of the state of Maine and the U.S. Department of Agriculture cooperating. Cooperative Extension and other agencies of the U.S.D.A. provide equal opportunities in programs and employment. 7/95

 Printed on recycled paper.