



# Requirements For Service Stations

Board Of Underground  
Tank Installers  
Spring 2016 Training  
March 30, 2016

Office Of The State  
Fire Marshal  
52 Statehouse Station  
Augusta, Maine 04333-0052

**The audience shall understand:**

**Types of service stations**

**Why there are different requirements for different types of service stations**

**Requirements for each type of service station**

**Change of use of a service station**

# Safety

The condition of being protected from or unlikely to cause danger, risk, or injury

Who is responsible  
for safety?

Say:

**I Am!**

Tell your customer to say:

**I Am!**

**Law of Disaster:**

**When anything can go wrong,  
It Will!**

**Corollary 1:**

**Whatever does go wrong will go  
wrong at the worst possible time!**

**Corollary 2:**

**Whenever more than one thing can  
go wrong, they will all go wrong at  
the same time!**



## Service Station

Where fuel is dispensed into fuel tanks of motor vehicles



## Attendant

Owner, manager, or designated employee responsible for operating a service station

**Customer**

**Person purchasing fuel**

**Self-Service**

**Customer dispenses fuel**

**Unattended Self-Service**

**No supervision of customer**

**Attended Self-Service**

**Attendant supervises customer**

**Full Service**

**Attendant dispenses fuel**

# Private Fueling

Fueling vehicles or equipment owned by or leased by the facility owner

Different requirements from a service station

Not included in this program



## Dispensing

Moving fuel from a bulk tank to the fuel tank of a motor vehicle or a container

# Dispenser

Device that meters the amount of fuel dispensed and has the hose and nozzle to connect to the vehicle fill pipe

Customer or attendant controls the dispensing of fuel



# Pump

Device that moves fuel from  
bulk tank to the dispenser

Slang for dispenser

# Pressure Pump

In tank

# Suction Pump

In dispenser



## **Customer Accessible**

**Located where customer  
has uninhibited access to  
controls**

# Hazard Area

Ignitable vapors are expected  
within:

20 feet of fueling area and

20 feet of the reach of nozzles

# Motor Fuel

Fuels for vehicle motors

Gasoline

Gas

Diesel

# Diesel Fuel

On Road

Off Road

No difference in hazards

Distinction for taxation

# Heating Fuel

Fuel for heating appliances

#2 Fuel

Kerosene

K-1

# Spectrum of Safety

**Supervision**

**Full service**

**Supervision/Equipment**

**Attended self-service**

**Equipment**

**Unattended self-service**

**24 hour pay-at-the-pump**

**More Supervision**

**Less requirements and  
equipment**

**Less Supervision**

**More requirements and  
equipment**

# Different Requirements

Full Service

Attended Self Service

Unattended Self-Service

24 Hour Pay-At-The-Pump

# Demonstration

**Use The Right Tool For The Job!**

**When you change the job  
(The type of service station),  
You need to change the tools  
(The regulations)**

## All Service Stations:



## Traffic Pattern

Discourage passage of  
people and vehicles  
not getting fuel

All Service Stations:

**Vehicles must be entirely on the  
service station property**

All Service Stations (Continued):

## Dispensers

No less than 10 feet to  
Property Lines  
Buildings

Nozzle must not reach within  
5 feet of a building opening

Protected against collision  
damage

All Service Stations (Continued):

## Pressure Systems

Shut-off valve

Thermal actuated device

## Suction Systems

Vacuum actuated shut-off

Shear section in piping

All Service Stations (Continued):

**Heating fuel dispensers  
may not be within 20 feet of a  
motor fuel dispenser**



**Nozzles**

**Auto-Closing**

**Latch-Open Device**



All Service Stations (Continued):

Breakaway device In hose

Coin and currency  
operated dispensers  
are NOT permitted by the  
Fire Marshal

All Service Stations (continued):

## All Equipment

Listed for use

Used as listed

Inspected daily

Maintained in proper operating  
condition

All Service Stations (Continued):

When equipment Is  
not operating properly

Shut off electricity  
to the pump

Take the equipment out of  
service until:

Repaired

Replaced

**All Service Stations (Continued):**

**National Electrical Code  
NFPA 70**

**Class I Division I**

**Gasoline**

**Vapor-proof wiring**

**Maine Electrician's Licensing Board  
Licensed Master Electrician**

All Service Stations (Continued):

One or more  
portable fire extinguishers  
40 B: C rating

Annual inspection

Monthly inspection

Repair/replace when necessary  
Initial & date tag

All Service Stations (Continued):

## Sources of Ignition

Smoking

Use of smoking materials

Smoking material receptacles

Vehicle and equipment motors

Use of unapproved equipment or  
appliances

Construction

Decorations

All Service Stations (Continued):

Signage

**NO SMOKING**

**SHUT OFF ENGINE**

Visible on approach to dispenser  
area

Conspicuous

Large, easily legible font

Contrasting colors and background

All Service Stations (Continued):

## Containers

Approved for flammable and  
combustible liquids

Marked with name of liquid

All Service Stations (Continued):

**Additional requirements for  
repair garages at service  
stations**

# Unattended Self-Service 24 Hour Pay-At-The-Pump

## Dry Chemical Fire Suppression System

NFPA 13

Current listing

Supported by manufacturer

End of island/arc of hose

Multiple systems interconnected

Flame detectors and heat detectors

Customer accessible manual release

Unattended Self-Service

24 Hour Pay-At-The-Pump (continued):

Dry Chemical Fire Suppression System (Continued):

Annual inspection

Monthly inspections

Armed/Tripped

Gauges

In Green

Moisture

Nozzles

Caps

Obstructions

Repair/Replace

Date & Initial Tag



**Unattended Self-Service**

**24 Hour Pay-At-The-Pump (continued):**

**Portable Fire Extinguishers**

**Customer Accessible**

**Electrical Disconnect**

**Customer Accessible**

**Unattended Self-Service**

**24 Hour Pay-At-The-Pump (continued):**

**Direct contact with emergency services**

**Payphone**

**Free 9-1-1 calls**

**Direct line telephone**

**Customer accessible**

**Unattended Self-Service**

**24 Hour Pay-At-The-Pump (continued):**

## **Customer Accessible**

**Immediate, uninhibited access  
by the customer**

**No less than 20 feet from  
closest dispenser**

**No more than 100 feet from  
farthest dispenser**

**Conspicuous, easily legible  
signs showing location**

← RESTROOM  
← EMERGENCY  
SHUT-OFF SWITCH

EMERGENCY  
SHUT-OFF  
SWITCH



IT IS UNLAWFUL  
AND DANGEROUS  
TO DISPENSE  
GASOLINE INTO  
UNAPPROVED  
CONTAINERS

NO SMOKING  
STOP ENGINE

IN CASE OF FIRE OR SPILL  
USE EMERGENCY SHUT-OFF  
REPORT THE INCIDENT TO  
FIRE DEPARTMENT - DIAL 911

USER MUST STAY  
OUTSIDE OF  
VEHICLE IN VIEW  
OF FUELING  
NOZZLE - DURING  
DISPENSING

Unattended Self-Service  
24 Hour Pay At The Pump

Signage

NO SMOKING

Shut Off Engine

Do Not Reenter Your  
Vehicle

Discharge Static  
Electricity

Unattended Self-Service  
24 Hour Pay-At-The-Pump  
(continued):

Signage (Continued):

Do Not Allow  
Individuals Under  
Licensed Age To Use  
The Pump  
If Fire Starts,  
Walk Away  
Immediately





**Place Container On Ground**

**Do Not Fill Containers In A Vehicle**

**It Is Unlawful And Dangerous**

**To Dispense Gasoline Into**

**Unapproved Containers**

**Unattended Self-Service (continued):**

**Signage (Continued):**

**Emergency Instructions:**

**In Case Of Fire Or Spill**

**(1) Use Emergency Stop**

**(2) Report Accident By**

**Calling (Specify fire department number) and**

**(3) Report Location (show address).**

Attended Self-Service :

Attendant supervises each fuel dispensing operation

Attendant may perform cashier or other duties **ONLY** when there are  
**NO DISPENSING OPERATIONS  
IN PROGRESS**

**Attended Self-Service (continued):**

## **Attendant Enforces Rules**

**Control sources of ignition**

**No Smoking**

**Activate emergency controls**

**Call fire department**

**Handle spills**

**Standby with or use portable  
fire extinguishers as necessary**

**Customers remain at nozzle**

**Shut-off dispenser**

Attended Self-Service (continued):

**Filling Containers**

**On ground**

**Approved type**

**Be sure the customer remains  
outside of the vehicle**

**Discharge static electricity  
away from nozzle**



**CLEAR, UNOBSTRUCTED VIEW  
of entire dispensing area**



# Electrical Disconnect Manual Release for fire suppression system



**2-way intercom system  
between attendant and  
islands**



## Fire Suppression System

Flame detectors not required

Customer accessible manual release not required

**Attended Self-Service (continued):**

**One attendant for every 16 nozzles**

**No more than 8 nozzles per  
attendant in operation at one time**

# Full Service

Portable fire extinguishers

No extinguishing system

Electrical disconnects

Not customer accessible

Means of contacting Fire  
department

Not customer accessible

# Summary

Change of Operation  
Change of Requirements

Comply with the correct  
requirements for an  
upgraded facility and  
operation

**Do you have customers  
afflicted with PDSS?**

**People Doing Stupid Stuff**

**Do You Trust Your  
Customers  
To Protect  
Your Facility?**