

**FIRE DEPARTMENT • CITY OF NEW YORK**



**STUDY MATERIAL FOR THE EXAMINATION FOR THE**

**CERTIFICATE OF FITNESS**

**FOR**

**Supervision of the Automotive Salvage and Wrecking Facilities**

**P-53**

ALSO INCLUDED IN THIS BOOKLET YOU WILL FIND THE FOLLOWING:

NOTICE OF EXAMINATION (NOE)

## **NOTICE OF EXAMINATION**

**Title:** Examination for Certificate of Fitness for Supervision of the Automotive Salvage and Wrecking Facilities (P-53)

**Date of Test:** Written tests are conducted Monday through Friday (except on legal holidays) from 8:00 AM to 2:30 PM.

### **QUALIFICATION REQUIREMENTS**

1. Applicants have to be at least 18 years of age.
2. Applicants must have a reasonable understanding of the English language.
3. Applicants have to present a letter of recommendation from their employers. The letter must be on official letterhead and must state the applicant's full name, character, physical condition, experience, and address of premises where the applicant would be assigned.
4. Applicant must provide two forms of government issued photo identification, such as a State-issued Drivers' License or Non Drivers License or a passport.

### **APPLICATION INFORMATION**

**Application Fees:** \$25.00 for originals and \$15.00 for renewals. The fee may be paid by credit card (no debit), in cash, money order, or personal check payable to New York City Fire Department. The \$25.00 fee must be payable by all applicants prior to taking the Certificate of Fitness test. Application forms are available at the Public Certification Unit, 1<sup>st</sup> floor, 9 Metro Tech Center, Brooklyn, NY 11201.

### **TEST INFORMATION**

**Test:** The test will be written and multiple choice type. A passing score of at least 70% is required in order to secure a Certificate of Fitness. Call 718-999-1988, or 2504 for additional information and forms.

## About The Study Material

This study material will help you prepare for the written examination of the certificate of fitness (**C of F**) for the supervision of the automotive salvage and wrecking facilities. The study materials include information taken from the New York City Fire Code (**FC**) and Fire Department rules. The study material does not contain all the information you need to know in order to perform the responsibilities of conducting de-fueling motor vehicle fuel tanks operations safely. It is your responsibility to become familiar with all applicable laws, rules and regulations of the federal, state and city agencies having jurisdiction on subject matter, even though such requirements are not included in this study material. You need to be familiar with **FC3** Section 316 which regulates automotive salvage and wrecking facilities and **FC22** Section **2204.4.1 - 2204.4.3, 2206.1- 2206.6 & FC34** Section **3406.2** that regulates storage, handling and use of flammable and combustible liquids in order to adequately prepare for the exam. **It is critical that you read and understand this booklet to help increase you chance of passing this exam.**

## About the Test

You must pass the given multiple choice test to qualify for the certificate of fitness. A score of 70% correct is required in order to pass the test. All questions have four optional answers. There is **only one** correct answer for each question. If you do not answer a question, or if you mark more than one answer to a single question, your answer to that question will be scored as incorrect. Read each question carefully before marking your answer. There is no penalty for guessing.

## Sample Questions

### **1. Who was the first president of the United States?**

- (A) George Washington.
- (B) Winston Churchill.
- (C) Abraham Lincoln.
- (D) Barack Obama.

The correct answer is "**A**". You would mark "**A**" on your touch-screen terminal.

### **2. What sports team plays at Madison Square Garden?**

- (A) Yankees.
- (B) Mets
- (C) Cardinals.
- (D) Knicks.

The correct answer is "**D**". You would mark "**D**" on your touch-screen terminal.

## **I. Introduction**

This document outlines New York City Fire Department regulations for the Automotive Salvage and Wrecking Facilities to de-fueling motor vehicle fuel tanks crankcase oil and other flammable or combustible liquid at automotive salvage and wrecking facilities.

Automotive salvage and wrecking facilities should maintain requirements of the New York State Department of Motor Vehicles and the New York City Department of Consumer Affairs in order to get permits and other approvals.

Fuel must be removed from a motor vehicle fuel tank prior to performing maintenance work on the tank or wrecking the motor vehicle. Although a small amount of fuel is involved the procedure of de-fueling is dangerous. De-fueling of a motor vehicle fuel tank or the transfer of fuel from de-fueling equipment must be done without violating safety regulations.

There are different types of de-fueling equipments that can be used to quickly and safely transfer gasoline, diesel or kerosene fuel from motor vehicles. This equipment prevents accidental spills and overfilling. The capacity of such de-fueler/re-fueler equipment must not exceed 65 gallons.



**De-fueling equipment**

## **II. Definition**

**AUTOMOTIVE SALVAGE AND WRECKING FACILITY** - Premises used for dismantling and/or wrecking of motor vehicles in connection with the sale of auto parts or scrap metal.

**CERTIFICATE OF FITNESS** - A written statement issued by the NYC Fire Department certifying that the person to whom it is issued has passed an examination, and that his or her is qualified or is otherwise deemed qualified to use or supervise the storage, handling and use of a flammable and combustible liquid,

conduct or supervise de-fueling operation, or supervise a facility for which such certificate is required by this code or related rules. The certificate is valid for 3 years.

**Clearance from ignition sources** - Clearance between ignition sources, such as light fixtures, heaters and open-flame devices, and combustible materials shall be maintained in an approved manner.

**Draining of other motor vehicle fluids** - Crankcase oil and other flammable or combustible liquid waste should be removed from motor vehicles and stored outdoors, in tanks complying with the requirements of Chapter 34, or, when approved, portable containers.

**EXCESS FLOW CONTROL** - A fail-safe system or other approved device, equipment or system designed to shut off flow caused by a rupture in a pressurized piping system.

**DISPENSING** - The pouring or transferring by other means of any material from a container, tank or similar vessel, which would release dusts, fumes, mists, vapors or gases to the atmosphere, unless such release is prevented by a device, equipment or system designed for that purpose.

**FLAMMABLE LIQUID MOTOR FUEL** - Gasoline or other flammable liquids used as fuel in the operation of motor vehicles, motorcycles, watercraft and aircraft.

**FLAMMABLE AND COMBUSTIBLE LIQUID STORAGE SYSTEM** - A flammable or combustible liquid storage tank and all devices, equipment and systems associated with such tank, including the tank, piping, valves, fill connection, vent lines, pumps and any other auxiliary equipment, except liquid motor fuel storage and dispensing systems and flammable and combustible liquid storage systems at a bulk plant or terminal used for bulk transfer operations.

**FIRE EXTINGUISHING SYSTEM** - An approved system of devices and equipment which detects a fire and discharges an approved fire extinguishing agent onto or in the area of a fire. Such term includes automatic systems and, where such systems are authorized by this code or the Building Code, manually activated systems.

**LIQUID MOTOR FUEL** - **Gasoline**, diesel fuel or other flammable or combustible liquids used as fuel in the operation of motor vehicles, motorcycles, watercraft and aircraft.

**LOWER EXPLOSIVE LIMIT (LEL)** - See "Lower flammable limit."

**LOWER FLAMMABLE LIMIT (LFL)** - The minimum concentration of vapor in the air at which propagation of flame will occur in the presence of an ignition source. The LFL is sometimes referred to as LEL or lower explosive limit.

**MOTOR VEHICLE** - A vehicle or other means conveyance having more than 2 running wheels and using liquid motor fuel or flammable gas as fuel for generating motive power, except such vehicles as have a storage tank with a maximum capacity

for less than 2 gallons (7.6 L) of liquid motor fuel or flammable gas that generates energy that is equivalent to the energy generated by 2 gallons (7.6 L) of gasoline.

**PROCESS TRANSFER** - The transfer of flammable or combustible liquids between cargo tanks or tank cars and containers, tanks piping and other equipment that is to be used in process operations.

**PERMIT ISSUANCE** - Every permit shall be valid for a period specified therein, not to exceed one year, and shall expire at the end of such period unless the commissioner approves its renewal. **All FDNY original permits shall be on site and available for inspection at all times.** Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

**PERSONAL SUPERVISION** - A method of supervision by the holder who is required to be personally present on the premises, or other proximate location acceptable to the department, while performing the duties for which the certificate is required.

**POWERED INDUSTRIAL TRUCK** - a forklift, tractor, platform lift truck or motorized hand truck powered by an electrical motor or internal combustion engine. Powered industrial trucks do not include farm vehicles or automotive vehicles for highway use.

**SPILL** - any escape of petroleum from the equipment or ordinary containers employed in the normal course of storage, transfer, processing or use.

**SUPERVISION** - the de-fueling of motor vehicle fuel tanks and the transfer of fuel from the de-fueling equipment shall be under the personal supervision of a certificate of fitness holder.

**TANK, PROTECTED ABOVEGROUND** - an atmospheric aboveground tank listed in accordance with UL 2085 or equivalent standard that is provided with integral secondary containment, protection from physical damage, and an insulation system intended to reduce the heat transferred to the primary tank when the tank is exposed to a high intensity liquid pool fire.

### **III. De-fueling operation.**

De-fueling motor vehicle fuel tanks should be conducted at an approved location protected throughout by a **fire extinguishing system**. Outdoors, the location must be approved by the FDNY and the de-fueling location protected by an automatic fire extinguishing system. The type of system (extinguishing agent used in the system) requires FDNY approval.

Fuel tanks of motor vehicles received at salvage or wrecking facilities must be de-fueled through the vehicle's fuel connection or other approved procedures.

De-fueling equipment must have a container capacity not exceeding 65 gallons (246 L). De-fueling equipment shall not be used to fuel motor vehicles.

A Certificate of Fitness (C of F) holder must be present when a de-fueling operation is in a process. Before the de-fueling operation starts the C of F holder must inspect the following -

- that electrical equipments , open flame devices, or any other spark source are not around the de-fueling area;
- No smoking sign is visibly displayed;
- The fire extinguisher shall be readily accessible, in proper operating condition and within 30 ft of the de-fueling area. .is operating and within a distance of not more than 30ft;
- De-fueling must be on a concrete surface to avoid soil contamination in the event of a spill;
- All fluid draining, removal, and collection activities shall be conducted on asphalt or concrete surface or other surface that allows equivalent protection to surface and groundwater. Such surfaces shall be cleaned daily, or more frequently when spillage has occurred, using absorbent materials that are collected and properly disposed.

General De-fueling procedure -

- connect hose to the vehicle's fuel fill connection;
- punch a hole into the vapor space (above the liquid level) of the fuel tank of vehicle;
- when de-fueling from punched hole ensure tight connections;
- Spark free tool must be used to punch a hole in fuel tank;
- the fuel connection should be closed after de-fueling;
- the punched hole in the fuel tank must be plugged before shredding;
- de-fueling should be shut down and cool to the touch
- salvaged fuel can be transferred with fueler- defueler equipment to a steel container with a maximum capacity of 55 gallons;
- the aggregate capacity of 55 gallon steel containers shall not exceed 550 gallons.

**Always refer and read the manufacturer operating manual for the de-fueling equipment prior de-fueling operations.**



**An Example of non sparking punch tool**

Non-sparking hand tools such as hammers, flange wedges, striking wrenches are safe for punching tanks with hazardous, flammable or combustible vapors. They are specifically designed to eliminate the risk of sparks.

## IV. Storage, Handling and Use

The fuel recovered by the defueler must be transferred to storage containers or tanks. This fuel cannot be used for **RESALE**. The fuel can be used **ONLY** for self consumption.



**55 Gallon Portable Storage containers**

### **Storage Permit**

A FDNY permit is required to store, handle or use flammable and combustible liquids

- Class I liquids such as **gasoline** in amounts exceeding **2½** gallons (9.5 L);
- Class II or III liquids with a flash point of 300°F or less such as **diesel** in amounts exceeding **10** gallons;
- Petroleum based Class III liquids with a flash point exceeding 300°F such as **antifreeze (coolant), lube oil, transmission oil**, etc. in amounts exceeding **70** gallons.

### **Handling and Use**

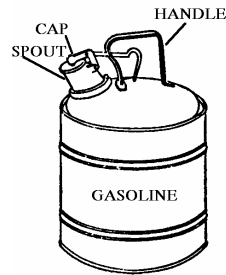
A C of F holder should be aware that explosive vapors may be left in the tank after de-fueling.

The handling and use of flammable and combustible liquids, including the dispensing of such liquids, for de-fueling purpose, shall be under the **personal supervision** of the certificate of fitness holder of flammable/combustible liquids and other hazardous chemicals or materials (C-98). The C of F is required when 275 gallons or more are stored on the premises.

**NOTE:** Certificate of fitness is not required for combustible liquids with flash point over 300°F (149°C).

Liquid motor fuel shall not be dispensed into a portable container, unless such container is of approved material and construction, and has a tight closure with screwed or spring-loaded cover so designed that the contents can be dispensed without spilling. Liquids shall not be dispensed into portable or cargo tanks.

Combustible liquid should never be dispensed into glass or plastic containers. An example of an approved and listed gasoline container is shown below -



### APPROVED GASOLINE CONTAINER

Gasoline shall be dispensed into approved containers with an individual capacity not greater than 2½ gallons (9.5 L). Never fill a portable container while it is in the trunk of a vehicle.

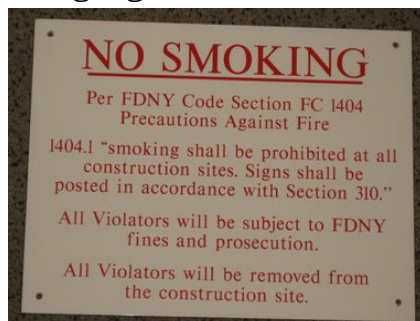
The Certificate of Fitness holder may pump volatile flammable liquid into an approved storage container or tank. The maximum capacity of the container is fifty five gallon. It has to be made of metal. The spout is designed to allow the combustible liquid to be poured without spilling. The contents of a container must be clearly marked on the side of the container.

The maximum capacity of de-fueling storage tank is 65 gallons (246L). This type of tank is only used under special circumstances. For example, they may be used to supply motor fuel to industrial machinery located at building sites. However, no flammable liquid should be dispensed into any storage tank that holds more than 65 gallons (246L).

Volatile flammable liquids are easily ignited. There fore, smoking is prohibited at all times at automotive salvage and wrecking facilities.

**Warning Signs** must be easily read, constructed of a durable metal and visibly posted. The signs must reflect that no smoking is permitted on the premises and must include procedures to follow in case of a fire emergency. Safety regulations must be posted in visible locations on the site. The Certificate of Fitness holder must ensure that such signs are visible at all times.

A sample of a No Smoking sign is shown below:



## **NO SMOKING SIGN**

## **Unacceptable Warning Sign**

Durable warning signs should be noticeably posted, on or immediately adjacent to each de-fueler in the fuel-dispensing area and should state the following:

1. It is illegal and dangerous to dispense fuels into unapproved containers;
2. Smoking is prohibited;
3. Engines must be shut off during de-fueling process;
4. Portable containers must not be filled while located inside the trunk or inside a passenger compartment or on a truck bed of a vehicle.

**Dangerous areas** - Descriptive warning signs must be placed in areas where special danger to the public exists, such as, the entrances and exits of vehicles, hoisting areas, points of storage of explosives or highly flammable material or discharge ends of chutes. Such warning signs shall contain the word "**DANGER**" in prominent letters and where in or adjacent to a public way, shall be illuminated from sunset to sunrise. Barricades and /or designated personnel shall be provided to the extent necessary to keep the public away from such areas or to guide them around it.

The Certificate of Fitness holder should pour sand or other absorbing material on a fuel spill. An absorbent material (i.e. like cat litter or sand) is commonly used to contain and soak up fuel spills. The area should then be cleaned. If a large spill or leak occurs the Fire Department dispatcher must be notified immediately (call 911).

Brush, grass, vines or other vegetation and combustible waste should be kept not less than 10 feet (3048 mm) from the tanks and de-fueling location.

## **V. GENERAL SAFETY REGULATIONS**

**Emergency operations** - The owners of automotive salvage and wrecking facilities having cranes for moving or stacking motor vehicle should develop a procedure that a crane operator would be made available in a reasonable period of time in the event that crane operation is required during a fire or other emergency.








**Certificate of fitness holder's Inspection** - A person responsible for the supervision of de-fueling motor vehicle fuel tanks at a construction sites should not perform any illegal activities and/or create an unsafe condition.

**Notifications** - If a fire occurs the person responsible of the supervision for automotive salvage and wrecking facilities must notify the FDNY immediately (call 911).

**Fire Extinguishers** – At least one (1) portable fire extinguisher, having a minimum 40-B: C rating shall be provided and such that an extinguisher is within 30 ft of the de-fueling area but not more than 75 feet from the storage tank and de-fueling operation area.

According to the **National Fire Protection Association and New York City Fire Department's Rule**, fire extinguishers are categorized according to their compatibility with the fuel they are expected to extinguish, or the danger of energized electrical equipment. Fuels include four basic groups: wood, liquids, metals, and animal fats; and the hazard of electrical conductivity.

Further, extinguishes are designated by alphabetical letters and symbols as shown in the table below:

Classes	Symbol	Material
<b>Class A</b> 		<b>Class A</b> fire extinguishers are designed to fight fires caused by common ordinary combustibles, such as wood, paper, some plastics and textiles. To extinguish a Class A fire, these extinguishers utilize either the heat-absorbing effects of water or the coating effects of certain dry
<b>Class B</b> 		<b>Class B</b> fire extinguishers are designed to fight fires originating from flammable or combustible liquids and gases such as oil, gasoline, etc. These fire extinguishers work by starving the fire of oxygen and interrupting the fire chain by inhibiting the release of combustible vapors.
<b>Class C</b> 		<b>Class C</b> fire extinguishers are effective on fires that involve live electrical equipment which require the use of electrically nonconductive extinguishing agents. (Once the electrical equipment is deenergized, extinguishers for Class A or B fires may be used.)
<b>Class D</b>		<b>Class D</b> fire extinguishers are designed for use on fires involving combustible metals such as magnesium, titanium, sodium, etc., which require an extinguishing medium that does not react with the burning metal.
<b>Class K</b>	<b>K</b>	<b>Class K</b> fire extinguishers are effective for fighting fires involving cooking fats, grease, oils, etc., in commercial cooking environments. These fire extinguishers work on the principal of saponification. Saponification takes place when alkaline mixtures such as potassium acetate, potassium citrate or potassium carbonate are applied to burning cooking oil or fat. The alkaline mixture combined with the fatty acid creates soapy foam on the surface which holds in the vapors and steam and extinguishes the fire.

**Travel Distance** - is the actual walking distance from any point to the nearest fire extinguisher.

Inspection is a "quick check" that a portable fire extinguisher is available and will operate. It is intended to give reasonable assurance that the portable fire extinguisher is fully charged and operable.

This is done by verifying that:

- Fire extinguishers are in their assigned place;
- Fire extinguishers are not blocked or hidden;
- it has not been actuated or tampered with;
- Fire extinguishers show no visual sign of damage or abuse that prevents its operation;
- Pressure gauge reading or indicator in the operable range or position;
- Ensure that the fire extinguishers tags are current;
- Pin and seals are in place;
- Nozzles are free of blockage.

Basically, inspection means a visual examination of the portable fire extinguisher. In addition, fire extinguisher maintenance should be done annually and consists of complete examination of the unit, and involves disassembly and inspection of each part and replacement where necessary. This annual inspection must be performed by an FDNY approved portable fire extinguisher company. It involves internal examination and replacement of defective parts.

**Obstructed & inaccessible portable fire extinguisher.**

