

DISPENSING OPERATIONS AND DEVICES—ALL FUELS

Dispensing is the *pouring or transferring of any material from a container, tank, or similar vessel whereby vapors, dusts, fumes, mists, or gases are liberated to the atmosphere*. Dispensing operations under the IFC may be attended or unattended. Attended dispensing occurs where an individual at the motor fuel-dispensing station supervises or performs the transfer of fuel. Note that in “attended” dispensing operations, the attendant does not necessarily need to fuel the vehicle. The attendant must be able to supervise the fueling operations that occur. Self-service operations, where the fueling is performed by the customer, can occur at either an attended dispensing facility or unattended dispensing facility. A self-service operation with an attendant present who can supervise the dispensing operation, even though the attendant does not perform the fueling, is considered an attended dispensing operation. [Ref. 2302.1]

At attended dispensing operations, at least one responsible person is on site who supervises, controls and observes the fuel dispensing operations. This individual is responsible for ensuring containers filled with fuel comply with the IFC Chapter 57 requirements. The attendant is responsible for controlling spills and is trained in the use of portable fire extinguishers. The attendant must be able to communicate with persons in the dispensing area and have access to the emergency controls to stop dispensing if an incident occurs (see Figure 13-1). [Ref. 2304.2]



FIGURE 13-1 Attended motor-fuel dispensing



FIGURE 13-2 Unattended motor-fuel dispensing

Unattended fuel dispensing is self-service dispensing and commonly the dispenser serves as the point of sale (see Figure 13-2). The IFC requires the owner perform a daily reconciliation of fuel sales as well as an inspection of dispensing equipment. The daily reconciliation verifies the fuel storage tanks are not leaking or otherwise losing product. Each dispenser requires operating instructions and identification of the location of emergency controls that can be used to stop

dispensing operations, as well as statements that address dispensing of fuels into unauthorized containers. The signs inform individuals dispensing fuel of the actions they need to take in the event of a fire, spill or release (see Figure 13-3). An on-site means of communicating with the fire department is required. [Ref. 2304.3 and 2305.6]

Dispensing devices must be properly located in relation to property lines, buildings and their openings, and fixed sources of ignition. Dispensers are to be located so the vehicle receiving fuel and the dispensing nozzle are located on the same property. Regardless of the fuel, all dispensers require a clearly identified emergency disconnect switch that stops dispensing upon activation (see Figure 13-4). Switches can be located indoors or outdoors. Outdoor switches must be a minimum of 20 feet but not more than 100 feet from a dispenser. The 20-foot minimum separation protects individuals who are self-dispensing by removing the person from potential harm if a fuel spill is ignited. [Ref. 2303.1 and 2303.2]

The IFC also establishes operational requirements for tank filling, maintenance of dispensers and the control of spills and ignition sources (see Figure 13-5). Before a storage tank is filled, the tank vehicle driver is required to gauge (measure) the tank and determine the available capacity before transferring product. The liquid transfer and vapor recovery connections on storage tanks with a volume of more than 1,000 gallons must be liquid and vapor tight. When liquid is pumped into aboveground storage tanks, the tank vehicle must be located at least 15 feet from a tank receiving Class II and IIIA combustible liquids and 25 feet from a tank receiving a Class I flammable liquid. [Ref. 2305.1]



FIGURE 13-3 Dispenser operating instructions and warning statements are required for attended and unattended motor-fuel dispensing.



FIGURE 13-4 Emergency disconnect switch

Dispensing equipment must be properly maintained so it does not become a source of ignition or a leak. Any equipment that is leaking should be removed from service as it is a well-known fact that leaks never become smaller. Emergency shutoff valves and liquid leak detectors require an annual functional test (see Figure 13-6). When repairs are performed on dispensing devices, the IFC requires the electrical

power to the dispenser and its source pump be disconnected, the dispenser emergency shutoff valve is closed and a minimum 12-foot exclusion zone be established. Only persons knowledgeable in performing the repairs are allowed within the work zone. [Ref. 2305.2.3]

Portable fire extinguishers are required near dispensers, pumps and storage tank fill connections. Minimum 2-A:20-B:C portable fire extinguishers are required within 75 feet of the indicated components. Portable fire extinguishers must be installed in accordance with IFC Section 906 and NFPA 10 (see Figure 13-7). [Ref. 2305.5]



FIGURE 13-5 Connections from a tank vehicle to a storage tank must be liquid and vapor tight.



FIGURE 13-6 Devices such as these vapor and liquid leak detectors in a below-grade vaulted storage tank must be tested annually.



FIGURE 13-7 Portable fire extinguishers serving dispensers, pumps and tank fill connections require a minimum 20-B Class B fire hazard rating. (Courtesy of TYCO/ Ansul, Marinette, WI)