



Department
of Commerce

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Mobile Food Units

Referenced Codes and Standards: OAC § 1301:7-7-3(T); OFC § 320
OAC § 1301:7-7-2(B); OFC § 202
OAC § 1301:7-7-9(F); OFC § 906
NFPA 58 (2014)
NFPA 70 (2017)
ANSI Z21-69-2015/CSA 6.6

New language added to the 2017 Ohio Fire Code (OFC) at section 320 put basic safety measures into place for mobile food trucks. These provisions became effective on December 15, 2017. This bulletin is intended to provide general guidance regarding the new requirements and to help educate on the new provisions that will affect this growing industry.

I. What is a “Mobile Food Unit”?

A definition of “mobile food unit” added in OFC Rule 2 is as follows:

“Mobile food unit.” Any apparatus or equipment that is used to cook, prepare or serve food, and that routinely changes or can change location and is operated from a moveable vehicle or apparatus, including but not limited to motorized vehicles, trailers, and hand propelled carts.

II. Basic Safety Measures

The new OFC provisions in Section 320 address basic safety measures that must be followed to operate a mobile food unit within the state of Ohio.

A. Blocking fire protection equipment

Mobile food units cannot block fire lanes, fire hydrants, or other fire protection equipment.

B. Operation of LP-Gas fueled equipment while in transit

LP-Gas fueled equipment cannot be operated while the mobile food unit is in transit. There is one exception to this rule: LP-Gas fueled equipment can be operated while the mobile food unit is in transit **if** the equipment is designed for operation while it is in transit (such as a cargo heater) **and** the equipment has a mechanism in place to stop fuel flow in the

event of a line break (such as an excess flow valve). If the equipment does not meet both of these parameters, it cannot be operated while the mobile food unit is in transit.

C. Carbon monoxide detection

All mobile food units must have at least one (1) listed carbon monoxide detection device. The only exception to this rule is for open air hand propelled carts. Open air hand propelled carts are not required to have carbon monoxide detection. All other mobile food units are required to have carbon monoxide detection.

D. Portable fire extinguishers

All mobile food units are required to have at least one (1) **5-pound ABC** portable fire extinguisher. Again, there is one exception to this rule: open air hand propelled carts that do not have fossil fuel powered equipment are not required to have a portable fire extinguisher. For all other mobile food units, one 5-pound portable fire extinguisher must be located in the unit and must be readily accessible by the operator of the unit.

Any mobile food unit that utilizes cooking equipment involving solid fuels or vegetable or animal oils and fats must also have at least one **Class K** rated portable fire extinguisher. This is in addition to the one 5-pound ABC extinguisher that is required in all mobile food units.

The provisions of OFC section 906 apply with regard to the installation, servicing, testing, inspection and maintenance of all portable fire extinguishers contained or used in a mobile food unit.

E. Egress

All mobile food units that operate commercial cooking equipment must have at least two means of egress which are remotely located from each other. The means of egress cannot be smaller than 5.7 square feet.

F. Smoking

Smoking is prohibited inside all mobile food units. If a mobile food unit has a fuel source other than the vehicle fuel tank, smoking is also prohibited within 10 feet of the unit.

All mobile food units must have “no smoking” signs conspicuously posted **inside** the vehicle. All mobile food units must also have “no smoking” signs **outside** the unit in the vicinity of any location where compressed gas is stored or kept; the sign(s) must be visible to the public.

All “no smoking” signs must be in English and must have a dark background with lettering in a contrasting color. The lettering must be at least 4 inches tall and have a minimum brush stroke width of 1 inch.

G. Separation distances

All mobile food units that use or contain a generator or fuel source other than the vehicle fuel tank are required to be separated from entrances and exits of building or structures, combustible materials, vehicles, and other cooking operations by a clear space distance of 10 feet. This does not include awnings and other appurtenances.

A local authority having jurisdiction (AHJ) can approve a separation distance of less than 10 feet **from other mobile food units**, but cannot approve a distance of less than 7 feet from other mobile food units. This exception only applies to the separation distance between mobile food units. A separation distance of 10 feet is still required between mobile food units and buildings or structures, combustible materials, vehicles that are not mobile food units, and other cooking operations. The local AHJ does not have the authority to decrease the 10-foot separation distance for these installations.

H. Generators

Generators that service a mobile food unit cannot be fueled while the mobile food unit is in operation.

Generators cannot be fueled while the generator is in use.

Generators cannot be fueled until the generator has been turned off and the surface temperature of both the engine and the fuel tank are below the autoignition temperature of the fuel.

Generators cannot be operated, used or fueled within the occupant space of the mobile food unit.

I. Electrical equipment and wiring

All electrical equipment in a mobile food unit must be installed in accordance with NFPA 70 (2017).

All electrical wiring in a mobile food unit that is built, manufactured or altered on or after December 15, 2017, must be contained in exposed conduit. This provision does not retroactively apply to existing mobile food units (those in operation prior to the effective date of the 2017 OFC) unless a distinct hazard exists.

III. **LP-Gas storage, use and handling in a mobile food truck**

In addition to the basic safety features discussed above, the 2017 OFC also includes specific provisions for the safe storage, use and handling of LP-Gas in mobile food units. Please be aware, however, that in addition to these LP-Gas related provisions found in section 320, other provisions of the OFC may also apply. (See Rules 53, 57, 58, and/or 61.)

A. Containers

Current OFC language provides that LP-Gas containers used in a mobile food unit must be ASME mobile LP-Gas containers. However, this language will be amended to also allow for the use of DOTn containers as well.

LP-Gas containers installed in the enclosed spaces of a mobile food unit must have a maximum allowable working pressure of 312 psi (2.2 MPag) or higher.

LP-Gas containers installed on the exterior of a mobile food unit must have a maximum allowable working pressure of 250 psi (1.7 MPag) or higher.

All propane tanks must be kept in a secure manner at all times.

The maximum aggregate capacity of LP-Gas containers in a mobile food unit cannot exceed 200 gallons aggregate water capacity.

B. Location and Installation

LP-Gas supply systems that are used for a mobile food unit (including the containers) can be installed in one of two locations: 1) outside of the vehicle, or 2) in a recess or cabinet that is vapor tight to the inside of the vehicle but accessible from and vented to the outside with vents located near the top and bottom of the enclosure and 3 feet (1 m) horizontally away from any opening into the vehicle.

LP-Gas containers must be securely mounted on the vehicle or within an enclosing recess or cabinet. They must also be secured with non-combustible material or devices. They must be kept in a secure manner at all times. Additionally, LP-Gas containers must comply with all of the following:

- Cylinders must be located in such a manner that minimize exposure to excessive temperature rises, physical damage, and/or tampering.
- Vehicle mounted propane tanks must be mounted with a minimum 36-inch clearance from the bottom of the tank to the ground.
- LP-Gas containers cannot be installed on the roof of a mobile food unit.
- LP-Gas containers can be mounted within the vehicle housing, but the housing must be secure to the vehicle and any removable parts of the housing must be secured to the housing while the mobile food unit is in transit.
- All LP-Gas container valves, appurtenances, and connections must be protected to prevent damage from accidental contact with stationary objects, loose object, stones, mud, and/or ice. They must also be protected from damage due to overturn or similar vehicular accident.
- LP-Gas cylinders must have permanent protection for cylinder valves and connections.
- Weather protection must be provided for all LP-Gas cylinders that are located on the outside of a mobile food unit.

- Any device or material used to secure an LP-Gas container must be made of non-combustible material.

C. Piping and Connectors

In addition to the above, specific language was added to the new OFC regarding piping and connectors used in a mobile food unit. However, unlike other provisions that would (absent a distinct hazard) apply prospectively only, provisions added regarding piping and connectors will apply to all mobile food units in Ohio. For existing units, mobile food unit owners or operators will have until December 31, 2018, to bring their units into compliance with these provisions. Specifically, all piping in any mobile food unit operated in Ohio (regardless of when the unit was built, manufactured, altered, or brought into service) will have to comply with the following on or before **December 31, 2018**:

- All piping must be installed per NPFA 58 (2014), section 6.9.3.
- All steel tubing must have a minimum wall thickness of 1.2 mm.
- To protect against expansion, contraction, jarring, and vibration strains, a flexible connector must be installed between any regulator outlet and the fixed piping system.
- Flexibility must be provided between a cylinder and the gas piping system or regulator.
- Flexible connectors must be installed in accordance with NFPA 58 (2014), section 6.9.6. If they are installed between apparatus and the piping system, they must be installed in accordance with ANSI Z21-69-2015/CSA 6.6 2015.
- Flexible connectors that are longer than the length allowed in the OFC cannot be used unless they are approved.
- Fuel lines that incorporate hose cannot be used unless they are approved.
- Fixed piping systems used in a mobile food unit must be designed, installed, supported and secured in such a manner as to minimize the possibility of damage due to vibration, strains, or wear, and in such a manner to preclude loosening while in transit.
- Piping must be installed in a secure location.
 - If piping is installed outside the vehicle, it must be under the vehicle and below any insulation or false bottom.
 - Piping must be fastened or have other protection to prevent damage due to vibration or abrasion.
 - A rubber grommet or equivalent protection must be installed to prevent chafing at each point where piping passes through sheet metal or a structural member.
- Gas piping must be installed so that it enters the mobile food unit through the floor directly beneath or adjacent to the appliance served.
- If a branch line is installed, a tee connection must be located in the main gas line under the floor and outside the vehicle.
- Any exposed part of a fixed piping system must either be of corrosion-resistant material or be coated or protected in such a manner as to minimize exterior corrosion.
- Isolated sections of liquid piping must have hydrostatic relief valves; they must be installed in accordance with NPFA 58 (2014), section 6.13.
- All piping systems (including hose) must be pressure tested and must be proven free of leaks in accordance with NPFA 58 (2014), section 6.14.

D. Emergency Shut-off Controls

All mobile food units that use LP-Gas must have marked exterior emergency shut-off controls. The controls must be readily distinguishable and accessible and must have a quarter-turn manual gas ball valve.

Emergency shut-off controls must be signed. Signage must be permanently mounted at the location of the controls and must state: "EMERGENCY GAS SHUT-OFF VALVE." Signage must be clearly visible and must remain unobscured at all times. Signs must be weather resistant and of contrasting colors, and must be readable from a distance of 25 feet.

This Technical Bulletin is intended only as an informational tool. Affected individuals and code enforcement officials should consult their legal advisor to determine specific requirements, their applicability, and courses of action that should be taken to ensure compliance with all applicable requirements and standards.

1301:7-7-03 General Requirements

(T) Section 320 Mobile food units

320.1 Scope. This paragraph applies to all mobile food units operated within this state.

320.2 General. In addition to other applicable provisions of this code, all mobile food units being operated in this state shall comply with the provisions of this paragraph and with all applicable provisions of this code for the type of cooking performed.

(a) 320.2.1 Obstructions of fire lanes and equipment. Mobile food unit shall not block fire lanes, fire hydrants, or other fire protection devices and equipment.

(b) 320.2.2 Operation of fuel source during transit. LP-Gas fueled equipment shall not be operated during transit unless the equipment meets both of the following:

- (i) The equipment is designed to be in operation while the vehicle is in transit, such as cargo heaters or coolers; and
- (ii) There is a means installed to stop the flow of gas in the event of a line break, such as an excess flow valve.

(c) 320.2.3 Carbon monoxide detection. All mobile food units shall be equipped with at least one listed carbon monoxide detection device.

Exception: Carbon monoxide detectors shall not be required in open air hand propelled carts.

320.3 Portable fire extinguishers. All mobile food units shall have a minimum of one 5-pound ABC portable fire extinguisher located within the unit and readily accessible by the operator of the unit.

Exception: Open air hand carts that do not have fossil fuel powered equipment.

(a) 320.3.1 Class K portable fire extinguishers. In addition to the portable fire extinguisher required in paragraph (T)(3)(320.3) of this rule, all mobile food units that contain cooking equipment involving solid fuels or vegetable or animal oils and fats shall also be protected by at least one Class K rated portable fire extinguisher in accordance with paragraphs

(D)(11)(e)(904.11.5) to (D)(11)(e)(ii)(904.11.5.2) of rule 1301:7-7-09 of the Administrative Code.

(b) 320.3.2 Installation and maintenance. All portable fire extinguishers located within or at a mobile food unit shall be installed, serviced, tested, inspected and maintained in accordance with paragraph (F)(906) of rule 1301:7-7-09 of the Administrative Code.

320.4 Egress. All mobile food units that operate commercial cooking equipment shall have two accessible means of egress remotely located from each other. (a)

320.4.1. No means of egress required by this paragraph shall be smaller than 5.7 square feet.

320.5 Smoking. Smoking shall be prohibited inside of and within 10 feet of any mobile food unit that has any fuel source other than the vehicle fuel tank.

(a) 320.5.1. "No Smoking" signs shall be conspicuously posted inside each mobile food unit, outside each mobile food unit in the vicinity of any location where compressed gas is stored or kept, and in a location that is visible to the public.

(b) 320.5.2. "No Smoking" signs shall be in English, shall have a dark background, and shall have lettering in a contrasting color that is at least 4 inches tall and with a minimum brush stroke width of 1 inch.

320.6 LP-Gas. The storage, use and handling of LP-Gas in a mobile food unit shall comply with this rule and, except as otherwise provided herein, shall also comply with rules 1301:7-7-30, 1301:7-7-34, 1301:7-7-35 and 1301:7-7-38 of the Administrative Code.

(a) 320.6.1 Containers. Only ASME mobile LP-Gas containers in compliance with the following shall be used:

(i) A maximum allowable working pressure (MAWP) of 312 psi (2.2 MPag) or higher for LP-Gas containers installed in the enclosed spaces of a vehicle.

(ii) A maximum allowable working pressure (MAWP) of 250 psi (2.2 MPag) or higher for LP-Gas containers installed on the exterior of a vehicle.

(iii) Propane tanks must be kept in a secure manner at all times.

(iv) *The maximum aggregate capacity of containers used in a mobile food unit to contain LP-Gas shall not exceed 200 gallons (0.8 m³) aggregate water capacity.*

(b) 320.6.2 Location and installation. *Supply systems for mobile food units shall comply with the following:*

(i) *LP-Gas supply systems used for a mobile food unit, including the containers, shall be installed either on the outside of the vehicle or in a recess or cabinet that is vapor tight to the inside of the vehicle but accessible from and vented to the outside, with the vents located near the top and bottom of the enclosure and 1 m (3 ft) horizontally away from any opening into the vehicle and below the level of the vents.*

(ii) *LP-Gas containers shall be mounted securely on the vehicle or within the enclosing recess or cabinet and secured with noncombustible material or devices, shall be kept in a secure manner at all times, and shall comply with the following:*

(a) *Cylinders shall be located to minimize exposure to excessive temperature rises, physical damage, or tampering.*

(b) *Vehicle mounted propane tanks shall be mounted with minimum 36" clearance from the bottom of the tank to the ground when secured to the vehicle.*

(c) *LP-Gas containers shall not be installed on the roof of the vehicle.*

(d) *Where LP-Gas containers are mounted within the vehicle housing, the housing shall be secure to the vehicle and any removable portions of the housing shall be secured to the housing while in transit.*

(e) *All LP-Gas container valves, appurtenances, and connections shall be protected to prevent damage from accidental contact with stationary objects, loose objects, stones, mud, or ice thrown,*

up from the ground or floor, and damage due to overturn or similar vehicular accident.

(f) *LP-Gas cylinders shall have permanent protection for cylinder valves and connections.*

(g) *Where LP-Gas cylinders are located on the outside of a vehicle, weather protection shall be provided.*

(h) *All materials or devices used to secure LP-Gas containers shall be made of non-combustible material.*

(c) 320.6.3 Piping and connectors. *On or before, but no later than, December 31, 2018, all piping used in a mobile food unit shall comply with the following:*

(i) *Piping shall be installed in accordance with section 6.9.3 of NFPA 58 as listed in rule 1301:7-7-80 of the Administrative Code.*

(ii) *Steel tubing shall have a minimum wall thickness of 1.2 mm (0.049 in.).*

(iii) *A flexible connector shall be installed between the regulator outlet and the fixed piping system to protect against expansion, contraction, jarring, and vibration strains.*

(iv) *Flexibility shall be provided in the piping between a cylinder and the gas piping system or regulator.*

(v) *Flexible connectors shall be installed in accordance with section 6.9.6 of NFPA 58 as listed in rule 1301:7-7-80 of the Administrative Code. Flexible connectors installed between apparatus and the piping system shall be installed in accordance with ANSI Z21-69-2015/CSA 6.6-2015 as listed in rule 1301:7-7-80 of the Administrative Code.*

(vi) *Flexible connectors longer than the length allowed in the code, or fuel lines that incorporate hose, shall be used only where approved.*

(vii) *The fixed piping system shall be designed, installed, supported, and secured to minimize the possibility of damage due to vibration, strains, or wear and to preclude any loosening while in transit.*

(viii) Piping shall be installed in a protected location.

(a) Where piping is installed outside the vehicle, piping shall be under the vehicle and below any insulation or false bottom.

(b) Fastening or other protection shall be installed to prevent damage due to vibration or abrasion.

(c) At each point where piping passes through sheet metal or a structural member, a rubber grommet or equivalent protection shall be installed to prevent chafing.

(ix) Gas piping shall be installed to enter the vehicle through the floor directly beneath or adjacent to the appliance served.

(x) If a branch line is installed, the tee connection shall be located in the main gas line under the floor and outside the vehicle.

(xi) Exposed part of the fixed piping system shall be of corrosion -resistant material or shall be coated or protected to minimize exterior corrosion.

(xii) Hydrostatic relief valves shall be installed in isolated sections of liquid piping in accordance with section 6.13 of NFPA 58 as listed in rule 1301:7-7-80 of the Administrative Code.

(xiii) Piping systems, including hose, shall be pressure tested and proven free of leaks in accordance with section 6.14 of NFPA 58 as listed in rule 1301:7-7-80 of the Administrative Code.

(d) **320.6.4 Emergency shut off controls.** Mobile food units using LP-Gas shall be provided with readily distinguishable and accessible marked exterior emergency shut off controls with a quarter-turn manual gas ball valve.

(i) **320.6.4.1 Signage.** Signs shall be permanently mounted at the location of the emergency shut off controls and shall state: "EMERGENCY GAS SHUT-OFF VALVE"

(a) **320.6.4.1.1.** Signs shall be clearly visible and shall remain unobscured at all times. Signs shall be weather resistant, of contrasting colors, and shall be readable from a minimum distance of 25 feet.

320.7 Distance and separation requirements. While parked and in operation mobile food units, exclusive of awnings and appurtenances, using or containing a fuel source or generator other than the vehicle fuel tank shall be separated from the entrances and other exits of buildings or structures, combustible materials, vehicles and other cooking operations by a clear space distance of 10 feet (3 m).

Exception: When approved by the local authority having jurisdiction, mobile food service operations using LP -Gas may be located at a distance of less than 10 feet from other mobile food units except that at no time shall a mobile food unit be closer than 7 feet from other mobile food units.

320.8 Generators.

(a) **320.8.1.** Generators servicing a mobile food unit shall not be fueled while the mobile food unit is in operation.

(b) **320.8.2.** Generators shall not be fueled while the generator is in use and shall not be fueled until the generator has been turned off and the surface temperature of the engine and fuel tank is below the autoignition temperature of the fuel.

(c) **320.8.3.** No generator shall be operated or used or fueled within the occupant space of a mobile food unit.

320.9 Wiring. Electrical wiring in a mobile food unit shall comply with this paragraph.

(a) **320.9.1.** All electrical equipment shall be installed in accordance with NFPA 70 as listed in rule 1301:7-7-80 of the Administrative Code.

(b) **320.9.2.** All electrical wiring shall be contained in exposed conduit in all mobile food units built, manufactured or altered on or after the effective date of this rule.