NCDA&CS Food Truck Inspection Items & Commentary

Background

In this context, "food truck" is a generic term that includes any vehicle or trailer mounted on wheels from which prepared food is sold.

Food trucks are licensed/permitted by the city or county where the truck operates, with each jurisdiction having its own requirements and process for permitting. Parts of the inspection process are often performed by allied agencies, and some jurisdictions require propane system inspection and approval by the North Carolina Department of Agriculture & Consumer Services Standards Division prior to issuing the license/permit.

NCDA&CS LP-Gas Inspectors use the latest edition of *NFPA 58: Liquefied Petroleum Gas Code* (aka *LP-Gas Code*) as the minimum standard, as referenced by state regulation. Changes in requirements necessitated by revisions to the *LP-Gas Code* go into effect on January 1 following the release of a new edition.

Inspection Details

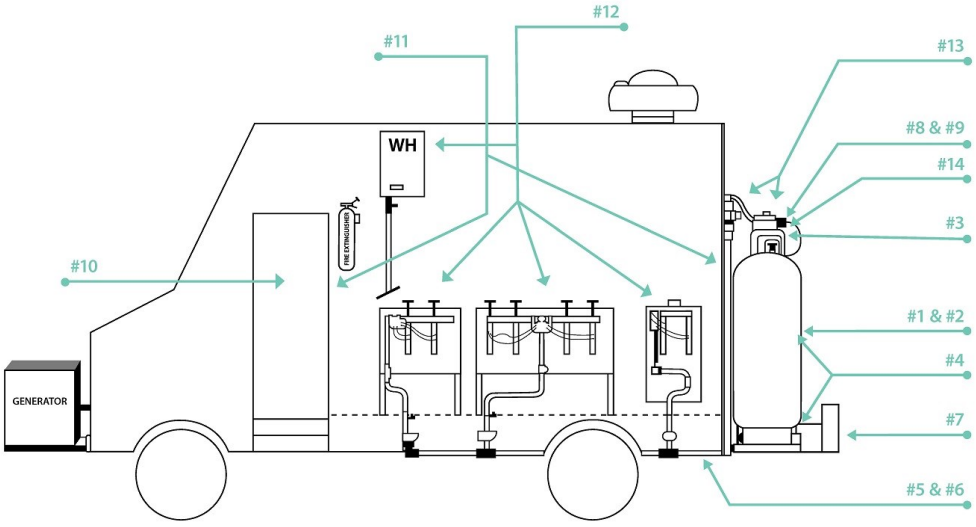
Items most commonly checked during a routine NCDA&CS inspection are shown below, along with a drawing to aid understanding. **This is not intended to be an exhaustive list**—other items covered by NFPA 58 may be checked at the inspector's discretion, depending on the specific design of the vehicle or equipment installed at the time of inspection.

NCDA&CS has authority only over those items covered by NFPA 58. Please note that there are additional rules governing food truck design and operation that jurisdictions follow. There is language in Annex B of *NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, that some jurisdictions may incorporate in their food truck safety inspection. Some of those items apply to the propane system.

The fire extinguisher requirement for food trucks was removed from the *LP-Gas Code* in the 2017 edition, and is therefore not a part of the NCDA&CS inspection. However, fire extinguisher and extinguishing system requirements are addressed in NFPA 1, 10 & 96, and are required by all jurisdictions

NCDA&CS Inspection Items

1. Number of tanks
2. Paint condition
3. Requalification date
4. Tank location on vehicle
5. Leak free
6. Proper piping and connections
7. Tank security and protection from impact
8. Tank valves and shutoffs accessible
9. Relief valve position
10. Path of egress not blocked
11. Safety sticker or plate installed
12. Pilot shutoff devices
13. Regulators
14. Controlled sources of ignition



Item	Code Reference	NCDA&CS Commentary
1	NFPA 58 (6.26.3.1.(B)) - LP gas containers in this application shall not exceed 200 gallon individual or aggregate capacity.	Several propane cylinder sizes can be used in this application, depending on the load demand and available space for installation. Specific requirements may apply as to their location on the unit. ASME tanks may be used instead of or with cylinders.
2	NFPA 58 (6.8.1.4) — Aboveground containers shall be painted or constructed of corrosion-resistant material, such as aluminum.	Painted containers must be free of any corroded areas or physical damage. The color of the container is not a requirement but it is suggested that it be a light reflective color.
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Item	Code Reference	NCDA&CS Commentary
3	NFPA 58 (5.2.2.2 & 5.2.2.3) — Cylinders must be within a current qualification date. Cylinders shall be requalified within 12 years of the date of manufacture and within 5 years thereafter, in accordance with sections 5.2.3.2 through 5.2.3.4 to remain in service.	"Cylinders" refers to containers built to USDOT specifications. Other containers on food trucks may be ASME tanks, built to an ASME code. Cylinders are generally removable and ASME tanks are generally "permanently-mounted," requiring tools to remove them.
4	NFPA 58 (6.26.3.2, 6.26.3.3, 11.8.5 & 11.9) — Containers must be mounted securely to the exterior of the vehicle in an approved area. They cannot be on the front or the side of the unit.	Cylinders must not be inside of the vehicle for any reason, except that they may be installed in an appropriately-designed compartment within the exterior shell of the vehicle. Placing cylinders on the inside of the vehicle for use or for transport is prohibited. ASME tanks specifically designed to be installed underneath the unit must meet certain location and clearance criteria.
5	NFPA 58 (6.16.1 & 6.16.2.2) — Piping systems shall be tested for leaks at not less than the normal operating pressure.	This is done by spraying the joints with an approved liquid leak detecting solution. Piping must be tested to assure a gas-tight system. There must be no leaks.
6	NFPA 58 (6.26.5.1) — Piping materials used must be approved for LP-Gas service. Piping must be underneath the floor in a protected location, fastened and protected from vibration, abrasion, and damage.	Gas piping shall be installed to enter the vehicle through the floor directly beneath or adjacent to the appliance served. The piping must be open and visible underneath the vehicle and cannot be covered in a false floor or between floors. A protective sleeve or grommet must be installed at every location where the gas line enters the vehicle to prevent wear or damage from vibration. Gas piping cannot be installed in a wheel well.
7	NFPA 58 (6.26.3.4(A through I)) — Containers must be securely mounted to prevent jarring loose, slipping, or rotating. The fasteners or brackets shall be designed and constructed to withstand static loading in any direction equal to four times the weight of the container filled with fuel. Approved containers mounted underneath the vehicle must meet the required design pressures and mounting clearances specified in section 11.8.3.	All containers must be protected from damage from loose objects and from damage due to overturns or similar vehicle accidents. A bumper protecting containers mounted on the rear shall extend at least six inches beyond the container and be of substantial fabrication matching or exceeding the strength of the existing bumper for protection of the container in the event of a rear end collision.
8	NFPA 58 (6.26.4.1 (3)) — All container valves shall be protected and accessible.	Cylinders must have a protective collar. ASME tanks must have protection for valves.
9	NFPA 58 (6.9.2.1, 6.9.2.2, & 6.9.2.4) — Relief valves shall communicate with the vapor space of the container. Relief valves shall be positioned to minimize the possibility of relief valve discharge impingement on the container. Rain caps shall be installed on relief valves to minimize the entrance of water and debris from entering the valve and affecting proper operation.	The relief valves on containers must be covered to prevent foreign materials from entering. Relief valves must be pointed in a direction as to not cause impingement on the container or adjacent containers in the event of activation. Containers must be installed and operated in the position it is designed for, whether horizontal or vertical, to insure the proper position and operation of its relief valve.
10	NFPA 58(6.26.7.9) — Appliances shall be located so that a fire at any appliance will not block egress of persons from the vehicle.	When installing appliances, it should be taken into account how persons would exit the unit should there be a fire at each particular appliance.
11	NFPA 58 (6.26.7.10) — A permanent caution plate shall be affixed to either the appliance or the vehicle outside of any enclosure, shall be adjacent to the container(s), and shall include the following instructions: CAUTION • Be sure all appliance valves are closed before opening container valve. • Connections at the appliances, regulators, and containers shall be checked periodically for leaks with soapy water or its equivalent. • Never use a match or flame to check for leaks. • Container valves shall be closed when equipment is not in use.	Often new appliances will come with a sticker affixed to it that includes this information.

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Item	Code Reference	NCDA&CS Commentary
12	NFPA 58 (6.26.7.4, 6.26.7.11, & 5.23.7(A)) — Gas-fired heating appliances, deep fat fryers, and water heaters shall be equipped with automatic devices designed to shut off the flow of gas to the main burner and the pilot in the event the pilot flame is extinguished.	All heating appliances that can operate automatically when unattended must have valves that stop the flow of gas in case of an interruption. Most cook tops and some other appliances are classified as cooking appliances which are attended during operation and do not require automatic safety shutoff type pilot lights.
13	NFPA 58 ((6.26.4.2) — Regulators shall be installed in accordance with sections 6.10.2 and 6.26.4.2(A) through 6.26.4.2(E).	A single stage regulator setup is not permitted in this type of installation. Reference 6.10.2.2 states that the requirement for two-stage regulation shall includes fixed piping systems for appliances on catering vehicles and food service vehicle installations. This requires either a first stage regulator at the container and a second stage regulator at the beginning of the piping or an integral two stage regulator. Regulators must be properly sized to accommodate the total number of BTUs for all of the appliances in the unit so that they will properly operate.
14	NFPA 58 ((6.26.4.2) — Sources of ignition should be considered when locating propane containers, with as much separation as possible provided.	Sources of ignition would include appliances, generators, etc., mounted or operating near the container. Where sources of ignition are present in close proximity to propane containers, a partial enclosure or metal partition must be installed to act as a shield to prevent heat exposure to the container(s).

Additional Tips

- Install a cut off valve inside the unit for each appliance within 6 ft. of the appliance. This will give you the option to isolate or remove an appliance from service without interfering with the rest of the system. Never leave any line open without a plug or cap installed.
- Securely fasten piping outside and underneath at frequent intervals (every 2-3 ft.) to prevent movement, vibration, and wear on the piping.
- When installing piping underneath the vehicle, consider placement, protection, road clearances, debris, and the movement of the vehicle as it pertains to wheel wells, turns and twists, springs and suspension, and axles. Tanks or piping shall not be located in a location that could possibly drag on the road surface in a low clearance or steep drive type situation.

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