

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

INITIAL STATEMENT OF REASONS

TITLE 13, CALIFORNIA CODE OF REGULATIONS, DIVISION 2, CHAPTER 6.5
AMEND ARTICLE 8, SECTION 1253

LIQUID FUEL SUPPLY TANKS AND SYSTEMS (CHP-R-15-05)

PURPOSE AND NECESSITY OF REGULATORY ACTION

Section 2402 of the California Vehicle Code (CVC) authorizes the Commissioner of the California Highway Patrol (CHP) to make and enforce regulations as necessary to carry out the duties of the CHP. Sections 32002, 34501, 34501.2, and 34501.5 CVC authorize the CHP to adopt reasonable rules and regulations that, in the judgment of the CHP, are designed to promote the safe operation of vehicles described in Section 34500 CVC including, but not limited to, controlled substances and alcohol testing of drivers by motor carriers, hours of service of drivers, equipment, fuel containers, fuel operations, inspection, maintenance, record keeping, accident reports, and drawbridges. The adopted regulations are contained in Title 13, California Code of Regulations (CCR).

Current federal regulation contained in Title 49, Code of Federal Regulations (CFR) requires states to remain compatible with federal regulations. Current state regulations contained in Title 13, CCR, Section 1253 are currently in jeopardy of federal preemption, therefore, an amendment is needed to create consistency between state and federal regulations. State regulations do not incorporate the current federal liquid fuel tank laws and regulations; therefore, they are not compatible with federal regulations. In order for the CHP to fulfill the mandate established in Section 34501(a) CVC, and be in compliance with federal law, the CHP must align its liquid fuel tank requirements. This rulemaking action will eliminate state regulations which conflict with updated federal regulations in Title 49, CFR, thereby allowing California businesses to compete with out-of-state businesses under identical safety rules. This rulemaking would adopt Subpart E of Part 393, Title 49, CFR, as it was published on October 1, 2014.

SECTION OVERVIEW

Title 13, CCR, Section 1253 – Liquid Fuel Supply Tanks and Systems.

This section will be amended to remove subsection (a) General Requirements, subsection (b) Projection, subsection (c) Installation, and subsection (d) Additional Requirements for Motor Vehicles Manufactured after July 1, 1997. The section will be amended to read: *Motor vehicles (except school buses) propelled by fuel that is liquid at normal atmospheric pressures and temperatures shall be subject to the requirement of Subpart E, Part 393, Title 49, Code of Federal Regulations, as published on October 1, 2014.*

Subpart E, Part 393, Title 49, CFR

Subpart E—Fuel Systems

§ 393.65 All fuel systems.

- (a) *Application of the rules in this section.* The rules in this section apply to systems for containing and supplying fuel for the operation of motor vehicles or for the operation of auxiliary equipment installed on, or used in connection with, motor vehicles.
- (b) *Location.* Each fuel system must be located on the motor vehicle so that—
- (1) No part of the system extends beyond the widest part of the vehicle;
 - (2) No part of a fuel tank is forward of the front axle of a power unit;
 - (3) Fuel spilled vertically from a fuel tank while it is being filled will not contact any part of the exhaust or electrical systems of the vehicle, except the fuel level indicator assembly;
 - (4) Fill pipe openings are located outside the vehicle's passenger compartment and its cargo compartment;
 - (5) A fuel line does not extend between a towed vehicle and the vehicle that is towing it while the combination of vehicles is in motion; and
 - (6) No part of the fuel system of a bus manufactured on or after January 1, 1973, is located within or above the passenger compartment.
- (c) *Fuel tank installation.* Each fuel tank must be securely attached to the motor vehicle in a workmanlike manner.
- (d) *Gravity or syphon feed prohibited.* A fuel system must not supply fuel by gravity or syphon feed directly to the carburetor or injector.
- (e) *Selection control valve location.* If a fuel system includes a selection control valve which is operable by the driver to regulate the flow of fuel from two or more fuel tanks, the valve must be installed so that either—
- (1) The driver may operate it while watching the roadway and without leaving his/her driving position; or
 - (2) The driver must stop the vehicle and leave his/her seat in order to operate the valve.
- (f) *Fuel lines.* A fuel line which is not completely enclosed in a protective housing must not extend more than 2 inches below the fuel tank or its sump. Diesel fuel crossover, return, and withdrawal lines which extend below the bottom of the tank or sump must be protected against damage from impact. Every fuel line must be—
- (1) Long enough and flexible enough to accommodate normal movements of the parts to which it is attached without incurring damage; and
 - (2) Secured against chafing, kinking, or other causes of mechanical damage.
- (g) *Excess flow valve.* When pressure devices are used to force fuel from a fuel tank, a device which prevents the flow of fuel from the fuel tank if the fuel feed line is broken must be installed in the fuel system.

[36 FR 15445, Aug. 14, 1971, as amended at 37 FR 4341, Mar. 2, 1972; 37 FR 28752, Dec. 29, 1972]

§ 393.67 Liquid fuel tanks.

- (a) *Application of the rules in this section.* The rules in this section apply to tanks containing or supplying fuel for the operation of commercial motor vehicles or for the operation of auxiliary equipment installed on, or used in connection with commercial motor vehicles.

- (1) A liquid fuel tank manufactured on or after January 1, 1973, and a sidemounted gasoline tank must conform to all rules in this section.
 - (2) A diesel fuel tank manufactured before January 1, 1973, and mounted on a bus must conform to the rules in paragraphs (c)(7)(ii) and (d)(2) of this section.
 - (3) A diesel fuel tank manufactured before January 1, 1973, and mounted on a vehicle other than a bus must conform to the rules in paragraph (c)(7)(ii) of this section.
 - (4) A gasoline tank, other than a side-mounted gasoline tank, manufactured before January 1, 1973, and mounted on a bus must conform to the rules in paragraphs (c) (1) through (10) and (d)(2) of this section.
 - (5) A gasoline tank, other than a side-mounted gasoline tank, manufactured before January 1, 1973, and mounted on a vehicle other than a bus must conform to the rules in paragraphs (c) (1) through (10), inclusive, of this section.
 - (6) Private motor carrier of passengers. Motor carriers engaged in the private transportation of passengers may continue to operate a commercial motor vehicle which was not subject to this section or 49 CFR 571.301 at the time of its manufacture, provided the fuel tank of such vehicle is maintained to the original manufacturer's standards.
 - (7) Motor vehicles that meet the fuel system integrity requirements of 49 CFR 571.301 are exempt from the requirements of this subpart, as they apply to the vehicle's fueling system.
- (b) *Definitions.* As used in this section—
- (1) The term *liquid fuel tank* means a fuel tank designed to contain a fuel that is liquid at normal atmospheric pressures and temperatures.
 - (2) A *side-mounted* fuel tank is a liquid fuel tank which—
 - (i) If mounted on a truck tractor, extends outboard of the vehicle frame and outside of the plan view outline of the cab; or
 - (ii) If mounted on a truck, extends outboard of a line parallel to the longitudinal centerline of the truck and tangent to the outboard side of a front tire in a straight ahead position. In determining whether a fuel tank on a truck or truck tractor is side-mounted, the fill pipe is not considered a part of the tank.
- (c) *Construction of liquid fuel tanks—*
- (1) *Joints.* Joints of a fuel tank body must be closed by arc-, gas-, seam-, or spot-welding, by brazing, by silver soldering, or by techniques which provide heat resistance and mechanical securement at least equal to those specifically named. Joints must not be closed solely by crimping or by soldering with a lead-based or other soft solder.
 - (2) *Fittings.* The fuel tank body must have flanges or spuds suitable for the installation of all fittings.
 - (3) *Threads.* The threads of all fittings must be Dryseal American Standard Taper Pipe Thread or Dryseal SAE Short Taper Pipe Thread, specified in Society of Automotive Engineers Standard J476, as contained in the 1971 edition of the "SAE Handbook," except that straight (nontapered) threads may be used on fittings having integral flanges and using gaskets for sealing. At least four full threads must be in engagement in each fitting.
 - (4) *Drains and bottom fittings.*
 - (i) Drains or other bottom fittings must not extend more than three-fourths of an inch below the lowest part of the fuel tank or sump.
 - (ii) Drains or other bottom fittings must be protected against damage from impact.

- (iii) If a fuel tank has drains the drain fittings must permit substantially complete drainage of the tank.
 - (iv) Drains or other bottom fittings must be installed in a flange or spud designed to accommodate it.
- (5) *Fuel withdrawal fittings.* Except for diesel fuel tanks, the fittings through which fuel is withdrawn from a fuel tank must be located above the normal level of fuel in the tank when the tank is full.
- (6) [Reserved]
- (7) *Fill pipe.*
 - (i) Each fill pipe must be designed and constructed to minimize the risk of fuel spillage during fueling operations and when the vehicle is involved in a crash.
 - (ii) For diesel-fueled vehicles, the fill pipe and vents of a fuel tank having a capacity of more than 94.75 L (25 gallons) of fuel must permit filling the tank with fuel at a rate of at least 75.8 L/m (20 gallons per minute) without fuel spillage.
 - (iii) For gasoline- and methanol-fueled vehicles with a GVWR of 3,744 kg (8,500 pounds) or less, the vehicle must permit filling the tank with fuel dispensed at the applicable fill rate required by the regulations of the Environmental Protection Agency under 40 CFR 80.22.
 - (iv) For gasoline- and methanol-fueled vehicles with a GVWR of 14,000 pounds (6,400 kg) or less, the vehicle must comply with the applicable fuel-spit-back prevention and onboard refueling vapor recovery regulations of the Environmental Protection Agency under 40 CFR part 86.
 - (v) Each fill pipe must be fitted with a cap that can be fastened securely over the opening in the fill pipe. Screw threads or a bayonet-type point are methods of conforming to the requirements of paragraph (c) of this section.
- (8) *Safety venting system.* A liquid fuel tank with a capacity of more than 25 gallons of fuel must have a venting system which, in the event the tank is subjected to fire, will prevent internal tank pressure from rupturing the tank's body, seams, or bottom opening (if any).
- (9) *Pressure resistance.* The body and fittings of a liquid fuel tank with a capacity of more than 25 gallons of fuel must be capable of withstanding an internal hydrostatic pressure equal to 150 percent of the maximum internal pressure reached in the tank during the safety venting system test specified in paragraph (d)(1) of this section.
- (10) *Air vent.* Each fuel tank must be equipped with a nonspill air vent (such as a ball check). The air vent may be combined with the fill-pipe cap or safety vent, or it may be a separate unit installed on the fuel tank.
- (11) *Markings.* If the body of a fuel tank is readily visible when the tank is installed on the vehicle, the tank must be plainly marked with its liquid capacity. The tank must also be plainly marked with a warning against filling it to more than 95 percent of its liquid capacity.
- (12) *Overflow restriction.* A liquid fuel tank manufactured on or after January 1, 1973, must be designed and constructed so that—
 - (i) The tank cannot be filled, in a normal filling operation, with a quantity of fuel that exceeds 95 percent of the tank's liquid capacity; and
 - (ii) When the tank is filled, normal expansion of the fuel will not cause fuel spillage.
- (d) *Liquid fuel tank tests.* Each liquid fuel tank must be capable of passing the tests specified in paragraphs (d)(1) and (2) of this section. The specified tests are a measure of performance

only. Alternative procedures which assure that equipment meets the required performance standards may be used.

(1) *Safety venting system test*—

(i) *Procedure.* Fill the tank three-fourths full with fuel, seal the fuel feed outlet, and invert the tank. When the fuel temperature is between 50 °F. and 80 °F., apply an enveloping flame to the tank so that the temperature of the fuel rises at a rate of not less than 6 °F. and not more than 8 °F. per minute.

(ii) *Required performance.* The safety venting system required by paragraph (c)(8) of this section must activate before the internal pressure in the tank exceeds 50 pounds per square inch, gauge, and the internal pressure must not thereafter exceed the pressure at which the system activated by more than five pounds per square inch despite any further increase in the temperature of the fuel.

(2) *Leakage test*—

(i) *Procedure.* Fill the tank to capacity with fuel having a temperature between 50 °F. and 80 °F. With the fill-pipe cap installed, turn the tank through an angle of 150° in any direction about any axis from its normal position.

(ii) *Required performance.* Neither the tank nor any fitting may leak more than a total of one ounce by weight of fuel per minute in any position the tank assumes during the test.

(e) *Side-mounted liquid fuel tank tests.* Each side-mounted liquid fuel tank must be capable of passing the tests specified in paragraphs (e)(1) and (2) of this section and the test specified in paragraphs (d)(1) and (2) of this section. The specified tests are a measure of performance only. Alternative procedures which assure that equipment meets the required performance criteria may be used.

(1) *Drop test*—

(i) *Procedure.* Fill the tank with a quantity of water having a weight equal to the weight of the maximum fuel load of the tank and drop the tank 30 feet onto an unyielding surface so that it lands squarely on one corner.

(ii) *Required performance.* Neither the tank nor any fitting may leak more than a total of 1 ounce by weight of water per minute.

(2) *Fill-pipe test*—

(i) *Procedure.* Fill the tank with a quantity of water having weight equal to the weight of the maximum fuel load of the tank and drop the tank 10 feet onto an unyielding surface so that it lands squarely on its fill-pipe.

(ii) *Required performance.* Neither the tank nor any fitting may leak more than a total of 1 ounce by weight of water per minute.

(f) *Certification and markings.* Each liquid fuel tank shall be legibly and permanently marked by the manufacturer with the following minimum information:

(1) The month and year of manufacture,

(2) The manufacturer's name on tanks manufactured on and after July 1, 1989, and means of identifying the facility at which the tank was manufactured, and

(3) A certificate that it conforms to the rules in this section applicable to the tank. The certificate must be in the form set forth in either of the following:

(i) If a tank conforms to all rules in this section pertaining to side-mounted fuel tanks:
“Meets all FMCSA sidemounted tank requirements.”

- (ii) If a tank conforms to all rules in this section pertaining to tanks which are not side-mounted fuel tanks: “Meets all FMCSA requirements for non-side-mounted fuel tanks.”
- (iii) The form of certificate specified in paragraph (f)(3) (i) or (ii) of this section may be used on a liquid fuel tank manufactured before July 11, 1973, but it is not mandatory for liquid fuel tanks manufactured before March 7, 1989. The form of certification manufactured on or before March 7, 1989, must meet the requirements in effect at the time of manufacture.
- (4) *Exception.* The following previously exempted vehicles are *not* required to carry the certification and marking specified in paragraphs (f)(1) through (3) of this section:
 - (i) Ford vehicles with GVWR over 10,000 pounds identified as follows: The vehicle identification numbers (VINs) contain A, K, L, M, N, W, or X in the fourth position.
 - (ii) GM G-Vans (Chevrolet Express and GMC Savanna) and full-sized C/K trucks (Chevrolet Silverado and GMC Sierra) with GVWR over 10,000 pounds identified as follows: The VINs contain either a “J” or a “K” in the fourth position. In addition, the seventh position of the VINs on the G-Van will contain a “1.”

[36 FR 15445, Aug. 14, 1971, as amended at 37 FR 4341, Mar. 2, 1972; 37 FR 28753, Dec. 29, 1972; 45 FR 46424, July 10, 1980; 53 FR 49400, Dec. 7, 1988; 59 FR 8753, Feb. 23, 1994; 69 FR 31305, June 3, 2004; 70 FR 48053, Aug. 15, 2005; 78 FR 58484, Sept. 24, 2013]

§ 393.68 Compressed natural gas fuel containers.

- (a) *Applicability.* The rules in this section apply to compressed natural gas (CNG) fuel containers used for supplying fuel for the operation of commercial motor vehicles or for the operation of auxiliary equipment installed on, or used in connection with commercial motor vehicles.
- (b) *CNG containers manufactured on or after March 26, 1995.* Any motor vehicle manufactured on or after March 26, 1995, and equipped with a CNG fuel tank must meet the CNG container requirements of FMVSS No. 304 (49 CFR 571.304) in effect at the time of manufacture of the vehicle.
- (c) *Labeling.* Each CNG fuel container shall be permanently labeled in accordance with the requirements of FMVSS No. 304, S7.4.

[70 FR 48053, Aug. 15, 2005]

§ 393.69 Liquefied petroleum gas systems.

- (a) A fuel system that uses liquefied petroleum gas as a fuel for the operation of a motor vehicle or for the operation of auxiliary equipment installed on, or used in connection with, a motor vehicle must conform to the “Standards for the Storage and Handling of Liquefied Petroleum Gases” of the National Fire Protection Association, Battery March Park, Quincy, MA 02269, as follows:
 - (1) A fuel system installed before December 31, 1962, must conform to the 1951 edition of the Standards.
 - (2) A fuel system installed on or after December 31, 1962, and before January 1, 1973, must conform to Division IV of the June 1959 edition of the Standards.
 - (3) A fuel system installed on or after January 1, 1973, and providing fuel for propulsion of the motor vehicle must conform to Division IV of the 1969 edition of the Standards.

- (4) A fuel system installed on or after January 1, 1973, and providing fuel for the operation of auxiliary equipment must conform to Division VII of the 1969 edition of the Standards.
- (b) When the rules in this section require a fuel system to conform to a specific edition of the Standards, the fuel system may conform to the applicable provisions in a later edition of the Standards specified in this section.
- (c) The tank of a fuel system must be marked to indicate that the system conforms to the Standards.

[36 FR 15445, Aug. 14, 1971, as amended at 37 FR 4342, Mar. 2, 1972; 41 FR 53031, Dec. 3, 1976; 53 FR 49400, Dec. 7, 1988]

LOCAL MANDATE

These regulations do not impose any new mandate on local agencies or school districts.

IMPACT ON SMALL BUSINESSES

The CHP has not identified any significant adverse impact on businesses since these changes either maintain reasonable exceptions for carriers not directly subject to federal jurisdiction (to minimize impact on businesses), or they simply adopt federal regulations (by publishing date) which already apply to the majority of the regulated community, thereby eliminating a conflict between state and federal regulations.

ALTERNATIVES

The CHP has not identified, nor been made aware of, an alternative that would be as effective and less burdensome to affected parties than the proposed action. Additionally, the CHP has not identified an alternative which would be more cost effective to affected parties and equally effective in implementing the statutory policy or other provision of law.

Alternatives Identified and Rejected:

Alternative 1: Do nothing and allow the outdated section to remain in Title 13, CCR: This could result in federal preemption of California's motor carrier safety regulations. If preempted, the state could not enforce any of these regulations as they apply to transportation in commerce, thus jeopardizing public safety and environmental protection. Failure to maintain consistency with the Federal Motor Carrier Safety Regulations (FMCSR) would also jeopardize federal Motor Carrier Safety Assistance Program grants used for commercial vehicle enforcement and training. The loss of all or a portion of this funding would in itself represent a negative impact on public safety.

Alternative 2: Change statutes to directly require compliance with the FMCSR as these regulations now exist or are hereafter amended, in lieu of the existing delegation of rulemaking prescribed in Section 34501(b) CVC: This alternative would eliminate the present state regulatory mechanism which provides for the adoption of exceptions to the FMCSR presently adopted by reference in Title 13, CCR. The CHP also retains discretion to promulgate

regulations and/or exceptions for carriers not subject to federal jurisdiction (e.g., noncommercial or governmental).

Alternative 3: Amend Title 13, CCR, to adopt Subpart E, Part 393, Title 49, CFR: This is the alternative selected as it meets the safety needs of the public and the Department.

ECONOMIC IMPACT ANALYSIS

Creation or Elimination of Jobs in the State of California

The CHP has made an initial determination this proposed regulatory action will neither create or eliminate jobs in the State of California, nor result in the elimination of existing businesses, nor create or expand businesses in the State of California. Additionally, this proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Creation, Expansion or Elimination of Businesses in the State of California

The CHP has not identified any significant adverse impact on businesses. Businesses subject to federal jurisdiction are currently required to comply with the FMCSR, and therefore, the mere adoption of regulations to avoid preemption or to grant enforcement authority of preexisting regulations provides no additional impact on industry. The proposed regulations updated and amended in Title 13, CCR, Section 1253, are already applicable and enforceable on businesses subject to federal jurisdiction, pursuant to Title 49, CFR, Parts 385-399. Businesses involved in the transportation of interstate and intrastate commerce via commercial trucking may choose to purchase the current Title 49, CFR, Volume 5, subtitle B - Chapter III, October 1, 2014, Edition at a cost of approximately \$20 annually through various vendors. The regulations are also available online at:

<http://www.gpo.gov/fdsys/pkg/CFR-2014-title49-vol5/pdf/CFR-2014-title49-vol5-subtitleB-chapIII.pdf>

These businesses will not otherwise experience any greater effect due to the implementation of the listed sections of Title 49, CFR, Volume 5, subtitle B - Chapter III, October 1, 2014, Edition, other than what is already commonly known and accepted.

Benefits of the Regulation

This rulemaking action will ensure the most current standards are used in liquid fuel supply tank construction, installation, and maintenance which would ultimately contribute to safer motor vehicle operations. Additionally, this rulemaking action will enhance the competitiveness of California by eliminating or modifying, to the extent possible, regulations which conflict with updated federal regulations, in order to prevent any negative impact on businesses. This proposed regulatory action will continue to provide a nonmonetary benefit to the protection and safety of public health, employees, and safety to the environment because changes to the

application of the regulation are not substantive and bring the regulation in conformance with existing statute. Minor additions and changes to the regulations are clarifying in nature and all are within existing requirements for industry.

The CHP has made an initial determination this proposed regulatory action:

- Will have no effect on housing costs;
- Will impose no new mandate upon local agencies or school districts;
- Will involve no nondiscretionary cost or savings to any local agency, no cost to any local agency or school district for which Sections 17500-17630 of the Government Code require reimbursement, no cost or savings to any state agency, nor costs or savings in federal funding to the state;
- Will neither create or eliminate jobs in the state of California, nor result in the elimination of existing businesses, nor create or expand businesses in the state of California;
- Will continue to provide a nonmonetary benefit to the protection and safety of public health, employees, and safety to the environment by providing a regulatory basis for enforcement efforts as they relate to the CFR;
- Will have no significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states; and
- Will provide safety to the environment by providing an updated regulatory authority for enforcement efforts.

FISCAL IMPACT TO THE STATE

The Department has determined these regulation amendments will result in:

- No significant increase in costs for owners or operators of commercial vehicles. This rulemaking action will simply provide a regulatory basis to provide consistency between California's regulations and the FMCSR which are already being used by the CHP and throughout North America;
- No significant compliance cost for persons or businesses directly affected;
- No discernible adverse impact on the quantity and distribution of goods and services to large and small businesses or the public;
- No impact on the level of employment in the state; and

- No impact on the competitiveness of this state to retain businesses, as state, provincial, and national governments throughout North America have already adopted these requirements.