

Proposed Revision for Consideration at Workshop #2 – July 8, 2010

Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate

Amend article 8, Off-Road Airborne Toxic Control Measures, and section 2477, within division 3, chapter 9, title 13, California Code of Regulations (CCR), to read as follows: (Note: Proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions.)

Article 8. Off-Road Airborne Toxic Control Measures

Section 2477. Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate.

(a)2477.1 Purpose.

Diesel particulate matter (PM) was identified in 1998 as a toxic air contaminant. This regulation implements provisions of the Diesel Risk Reduction Plan, adopted by the Air Resources Board in October, 2000, as mandated by the Health and Safety Code Sections 39650-39675, to reduce emissions of substances that have been determined to be toxic air contaminants. Specifically, this regulation will use a phased approach to reduce the diesel PM emissions from in-use transport refrigeration units (TRUs) and TRU generator (gen) set equipment used to power electrically driven refrigerated shipping containers and trailers that are operated in California.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(b)2477.2 Applicability.

~~(1)~~(a) Owners and operators: Except as provided in subsection ~~(c)2477.3~~, section 2477.5 of this regulation applies to owners and operators of diesel-fueled TRUs and TRU gen sets (see definition of operator and owner in subsection ~~(d)2477.4~~ that operate in the state of California, regardless of where the vehicle is based. This specifically includes California-based and non-California-based TRUs and TRU gen sets that are installed on trucks, trailers, shipping containers, and railcars.:

~~(A) Operators and owners of California-based TRUs and TRU gen sets that are installed on trucks, or trailers, shipping containers, or railcars; and~~

~~(B) Operators and owners of non-California-based TRUs and TRU gen sets that are installed on trucks, trailers, shipping containers, or trailers.~~

(b) Operators: Section 2477.6 of this regulation applies to operators of terminals located in California where TRU-equipped trucks, trailers, or shipping containers, or TRU gen sets are regularly garaged, maintained, operated, or dispatched from, including a dispatch office, cross-doc facility, maintenance shop, business, or private residence.

(c) Drivers: Section 2477.7 applies to drivers (see definition of driver in section 2477.4) that drive trucks or trailers that use TRUs or TRU gen sets on California highways.

(d) California-based freight brokers: Section 2477.8 applies to California-based freight brokers (see definition of freight broker and California-based freight broker in section 2477.4) that maintain a business location in California and arrange or dispatch the transport of perishable goods on California highways or rails in trucks, trailers, shipping containers, or railcars that are equipped with TRUs or TRU gen sets.

(e) Carriers: Subsection 2477.9 applies to carriers (see definition of carrier in section 2477.4) that use, cause to be used, or dispatch TRU-equipped trucks, trailers, or railcars, or trailer chassis or shipping containers with TRU gen sets that are driven on California highways or rails.

(f) California-based shippers: Subsection 2477.10 applies to California-based shippers (see definition of shipper and California-based shipper in section 2477.4) that arrange or dispatch the transport of perishable goods from any location in California in TRU-equipped or TRU gen set-equipped trucks, trailers, shipping containers, or railcars.

(g) California-based receivers: Section 2477.11 applies to California-based receivers (see definition of receiver and California-based receiver in section 2477.4) that arrange or dispatch the transport of perishable goods to any location in California in TRU-equipped or TRU gen set-equipped trucks, trailers, shipping containers, or railcars.

(h) Lessors and Lessees: Section 2477.12 applies to any person that rents or leases (lessor) TRUs or TRU gen sets and those persons renting (renter) or leasing (lessee) such equipment that is operated in California or that is based in California.

- (i) TRU and TRU gen set original equipment manufacturers: Section 2477.13 applies to original equipment manufacturers (see definition of original equipment manufacturer in section 2477.4) that direct TRU or TRU gen set sales to the California market.
- (j) TRU, TRU gen set, and TRU-equipped truck and trailer dealers located in California: Section 2477.14 applies to TRU, TRU gen set, and TRU-equipped truck and trailer dealers that maintain a business location in California and sell, maintain, or repair new or in-use TRUs, TRU gen sets, or TRU-equipped trucks or trailers.
- (k) Repair shops located in California that work on TRUs or TRU gen sets: Section 2477.15 applies to repair shops that maintain a business located in California and install replacement engines in TRUs or TRU gen sets, or retrofit TRUs or TRU gen sets with verified diesel emissions control strategies to comply with this subarticle.
- (l) Engine rebuilders: Section 2477.16 applies to TRU or TRU gen set engine rebuilders that sell to the California market.
- ~~(2)~~(m) Facilities: Section 2477.17 This regulation applies to facilities located in California with 20 or more loading dock doors spaces serving refrigerated areas where perishable goods are loaded or unloaded for distribution on trucks, trailers, shipping containers, or rail cars that are equipped with TRUs and TRU gen sets and that are owned, leased, or contracted for by the facility, its parent company, affiliate, or subsidiary that are under facility control (see definition).
- ~~(3)~~(n) To the extent not already covered under subsections (b)(1) and (b)(2) (a) through (m), above, subsection (g) 2477.18 of this regulation shall apply to any person engaged in this State in the business of selling to an ultimate purchaser, or renting or leasing new or used TRUs or TRU gen sets, including, but not limited to, manufacturers, distributors, and dealers, auctioneers, carriers, private fleets, and independent owner-operators, and rental and leasing companies.
- ~~(4)~~ Severability. If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulations is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

~~(c)~~**2477.3 Exemptions.**

(a) This regulation does not apply to military tactical support equipment.

(b) Obviously non-operational TRUs or TRU gen sets are exempt from certain sections of this subarticle, as specified below, except that the prohibitions in section 2477.18 apply with respect to selling, renting, or leasing to a person that could be reasonably expected to operate the TRU in California:

- (1) Any TRU that is removed or separated from the truck or trailer van, shipping container, or rail car is not subject to this subarticle. This exemption does not include TRU gen sets that are not attached to a shipping container or trailer chassis.
- (2) Any trailer TRU housing that remains attached to a trailer van, but the fuel tank and battery have been removed and a label with the word "NONOPERATIONAL" has been affixed or attached to the housing in letters that contrast sharply with the color of the TRU housing and can be seen from 50 feet during daylight hours when the vehicle is stationary.
- (3) Any truck TRU housing that remains attached to a truck van, but the positive and negative battery cables, fuel supply and return lines, and condensate drain line have been removed so that there are no visible ancillary connections to the TRU housing and a label with the word "NONOPERATIONAL" has been affixed or attached to the housing in letters that contrast sharply with the color of the TRU housing and can be seen from 50 feet during daylight hours when the vehicle is stationary.
- (4) Any TRU or TRU gen set that has no engine or fuel injection system installed, making the engine incapable of being started.
- (5) TRU gen sets that have been quarantined in a designated area that is separated from other compliant TRU gen sets by a cordon or barrier with signs that read "NONCOMPLIANT – DO NOT OPERATE IN CALIFORNIA". Bright red tags must be affixed to the TRU gen set control panel at all times while in California that read: "NONCOMPLIANT – DO NOT OPERATE IN CALIFORNIA". TRUs may be stored in a shipping container in lieu of being quarantined in a cordoned area.

(c) Transport refrigeration systems that are not driven by an integral diesel internal combustion engine are exempt from the requirements of this subarticle. Examples of exempt equipment include, but are not limited to:

- (1) transport refrigeration systems that are driven by gasoline-fueled internal combustion engines;

(2) transport refrigeration systems that are driven by electric motors with no integral diesel engine providing power; or

(3) Pure cryogenic temperature control systems with no diesel engine driven refrigeration system integration.

(d) TRUs that are used during an emergency (as defined) are exempt from this subarticle.

(e) Exemption for Low-Use TRUs.

(A) Low-use TRUs operating only in California may qualify for an exemption from the requirements of section 2477.5(a) and (b), provided certain conditions are met:

1. The owner must register the TRU or TRU gen set in ARBER.
2. The owner must keep TRU engine hour meter records from a properly functioning non-resettable hour meter that must be connected to the unit's microprocessor, logging engine run time in order for the unit to run, for at least one year prior to qualifying for the exemption (units with hour meters that can be disconnected from unit power and still run the engine do not qualify);
3. The TRU must be equipped with an electronic tracking system as defined in section 2477.4(jj).
4. The owner must meet hour meter reporting requirements in accordance with sections 2477.5(d)(5) by January 10th of each year.
5. The total engine run time during a calendar year must not exceed 100 hours.
6. [\[Evaluate the use of a "Low-Use" label or decal to help I.D.\]](#)

(B) TRUs operating both inside and outside of California may qualify for the low-use exemption from the requirements of section 2477.5(a) and (b), provided certain conditions are met:

1. The owner must register the TRU or TRU gen set in ARBER.
2. The owner must keep TRU engine hour meter records from a properly functioning non-resettable hour meter that must be connected to the unit's microprocessor, logging engine run time in order for the unit to run, for at least one year prior to qualifying for the exemption (units with hour meters that can be disconnected from unit power and still run the engine do not qualify);
3. The TRU must be equipped with an electronic tracking system as defined in section 2477.4(jj). [see above]
4. The owner must meet hour meter reporting requirements in accordance with sections 2477.5(d)(5), for California operations, by January 10th of each year..
5. The total engine run time in California during a calendar year must not exceed 100 hours.
6. [\[Evaluate the use of a "Low-Use" label or decal to help I.D.\]](#)

(C) TRU engines that formerly met the low-use TRU definition, but whose use increases to more than 100 hours per year, must meet the requirements of section 2477.5 (a) and (b) by March 31st, after the annual report indicates the 100 hour limit was exceeded.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(d) 2477.4 Definitions.

For purposes of this regulation, the following definitions apply:

(1)(a) “Affiliate or Affiliation” refers to a relationship of direct or indirect control or shared interests between the subject business and another business.

(2)(b) “Alternative Fuel” means natural gas, propane, ethanol, methanol, or advanced technologies that do not rely on diesel fuel, except as a pilot ignition source at an average ratio of less than 1 part diesel fuel to 10 parts total fuel on an energy equivalent basis. Alternative fuels also means any of these fuels used in combination with each other or in combination with other non-diesel fuels. Alternative-fueled engines shall not have the capability of idling or operating solely on diesel fuel at any time.

(3)(c) “Alternative-Fueled Engine” means an engine that is fueled with a fuel meeting the definition of alternative fuel.

(4)(d) “Alternative Diesel Fuel” means any fuel used in diesel engines that is not ~~commonly or commercially known, sold or represented as a reformulated diesel fuel No. 1-D or No. 2-D, pursuant to the specification for Diesel Fuel Oils D975-84 as defined in sections 2281 and 2281 of title 13, California Code of Regulations (CCR),~~ and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g. recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel, Fischer Tropsch fuels, and emulsions of water in diesel fuel. Natural gas is not an alternative diesel fuel. An emission control strategy using a fuel additive will be treated as an alternative diesel fuel based strategy unless:

(1) The additive is supplied to the vehicle or engine fuel by an on-board dosing mechanism, or

(2) The additive is directly mixed into the base fuel inside the fuel tank of the vehicle or engine, or

(3) The additive and base fuel are not mixed until vehicle or engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine or vehicle.

(5)(e) “ARB” means the California Air Resources Board.

- (f) “ARBER” means the ARB’s Equipment Registration system.
- ~~(6)~~(g) “B100 Biodiesel Fuel” means 100% biodiesel fuel derived from vegetable oil or animal fat and complying with American Society for Testing Materials (ASTM) D 6751-02 and commonly or commercially known, sold, or represented as “neat” biodiesel or B100. B100 biodiesel fuel is an alternative diesel fuel.
- ~~(7)~~(h) “B100 Biodiesel-Fueled” (compression-ignition engine) means a compression-ignition engine that is fueled by B100 biodiesel fuel.
- ~~(8)~~(i) “Business” means an entity organized for profit including, but not limited to, an individual, sole proprietorship, partnership, limited liability partnership, corporation, limited liability company, joint venture, association or cooperative; or solely for purposes of the Prompt Payment Act (Government Code 927 et seq.), a duly authorized nonprofit corporation.
- (j) “California-based freight broker” means a freight broker that maintains a business location in California.
- (k) “California-based shipper” means a shipper that operates a facility in California where wholesale freight is located prior to its transportation.
- (l) “California-based receiver” means a receiver that operates a facility in California where wholesale freight is received.
- ~~(9)~~(m) “California-Based TRUs and TRU Gen Sets” means TRUs and TRU gen sets equipped on trucks, trailers, shipping containers, or railcars that a reasonable person would find to be regularly assigned to terminals within California.
- ~~(10)~~(n) “CARB Diesel Fuel” means any diesel fuel that is commonly or commercially known, sold or represented as diesel fuel No. 1-D or No. 2-D, pursuant to the specification for Diesel Fuel Oils D975-81 and meets the specifications defined in *13 CCR 2281, 13 CCR 2282, and 13 CCR 2284.*
- ~~(11)~~(o) “Carbon Monoxide (CO)” means a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.
- ~~(12)~~(p) “Carrier” means any person, party, or entity who undertakes the transport of goods from one point to another. This includes, but is not limited to, motor carrier, which is defined in California Vehicle Code Section 408.
- ~~(13)~~(q) “Certification” means the obtaining of an Executive Order for a new off-road compression-ignition engine family that complies with the off-road compression-ignition emission standards and requirements specified in the California Code of

~~Regulations, Title 13 CCR~~, Section 2423. A "certified engine" is an engine that belongs to an engine family that has received a certification Executive Order.

~~(14)~~(r) "Certification Data" means the ARB Executive Order number and related exhaust emission data for each test cycle mode used to certify the engine family and obtain the certification level shown in the certification Executive Order. Such data includes modal exhaust emissions data for nitrogen oxides, nonmethane hydrocarbons, carbon monoxide, and particulate matter includes, as a minimum, torque, engine speed, weighting factor, power, mass emission rate (grams per hour), and certification test fuel.

~~(15)~~(s) "Compression Ignition (CI) Engine" means an internal combustion engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

~~(16)~~(t) "Consignee" (see receiver).

~~(17)~~(u) "Consignor" (see shipper).

~~(18)~~(v) "Cryogenic Temperature Control System" means a heating and cooling system that uses a cryogen, such as liquid carbon dioxide or liquid nitrogen that is routed through an evaporator coil that cools air blown over the coil. The cryogenic system uses a vapor motor to drive a fan and alternator, and a propane-fired heater superheats the carbon dioxide for heating and defrosting. Electrically driven fans may be used instead of a vapor motor and heating and defrost needs may be met by using electric heaters and/or vehicle engine coolant.

~~(w)~~ "Delegation" means entrusting by contract another party to act on the owner's behalf without forfeiture of any rights or property.

~~(19)~~(x) "Deterioration Factor (DF)" means a factor that is applied to the certification emission test data to represent emissions at the end of the useful life of the engine. Separate DFs apply to each measured pollutant, except that a combined NMHC+NOx DF applies to engines that do not use aftertreatment devices. Decreasing emissions over time would not be allowed to offset increasing emissions of the other pollutant in this combined DF.

~~(20)~~(y) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented as diesel fuel, including any mixture of primarily liquid hydrocarbons – organic compounds consisting exclusively of the elements carbon and hydrogen – that is sold or represented as suitable for use in an internal combustion, compression-ignition engine.

- (21)(z) “Diesel-Fueled” means fueled by diesel fuel or CARB diesel fuel in whole or in part, except as allowed for a pilot ignition source under the definition for “alternative fuel”.
- (22)(aa) “Diesel Oxidation Catalyst (DOC)” means the use of a catalyst to promote the oxidation processes in diesel exhaust. Usually refers to an emission control device that includes a flow-through substrate where the surfaces that contact the exhaust flow have been catalyzed to reduce emissions of the organic fraction of diesel particulates, gas-phase hydrocarbons, and carbon monoxide.
- (23)(bb) “Diesel Particulate Filter (DPF)” means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate. Periodically the collected particles are either physically removed or oxidized (burned off) in a process called regeneration.
- (24)(cc) “Diesel Particulate Matter” means the particles found in the exhaust of diesel-fueled CI engines. Diesel PM may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- (dd) “Dispatch” means to coordinate delivery, pickup, and drop-off schedules of vehicles; and monitor the delivery of freight from these vehicles.
- (ee) “Dispatch driver” means the driver of a truck or tractor-trailer combination that has been dispatched by a carrier or freight broker.
- (ff) “Driver” means a person who physically operates a truck or tractor. Drivers may also be an owner or an operator.
- (25)(gg) “Dual-Fuel Engine” means an engine designed to operate on a combination of alternative fuel, such as compressed natural gas (CNG) or liquefied petroleum gas (LPG), and conventional fuel, such as diesel or gasoline. These engines have two separate fuel systems, which either inject both fuels simultaneously into the engine combustion chamber or fumigate the gaseous fuel with the intake air and inject the liquid fuel into the combustion chamber.
- (hh) “Effective model year” means the last year that a prior tier standard was in effect that a new or rebuilt replacement engine, or flexibility engine meets. If a replacement engine does not meet the current tier of new engine emissions standards, then the model year is not the manufacture year, rebuild year, or the installation year of the replacement engine. The effective model year must be used to determining in-use requirements and compliance dates for prior-tier new or rebuilt replacement engines or flexibility engines (except as allowed in subsection 2477.5(b)(6)). Table 1 lists the tier standards that apply to TRUs and TRU gen sets and the corresponding effective model years.

Table 1
Effective Model Year

<u>Prior-Tier Engine Emissions Standard</u>	<u>Tier Standard Effective Years</u>	<u>Effective Model Year</u>
<u>Tier 1, 25-50 Hp (trailer)</u>	<u>1999-2003</u>	<u>2003</u>
<u>Tier 1, under 25 Hp (truck)</u>	<u>2000-2004</u>	<u>2004</u>
<u>Tier 2, 25-50 Hp (trailer)</u>	<u>2004-2007</u>	<u>2007</u>
<u>Tier 2, under 25 Hp (truck)</u>	<u>2005-2007</u>	<u>2007</u>
<u>Tier 4i, 25-50 hp (trailer)</u>	<u>2008-2012</u>	<u>2012¹</u>

(ii) “Electric-Standby-Equipped TRU” means a TRU that may be driven by either an integral diesel internal combustion engine or an integral electric motor.

(ij) “Electronic Tracking System” means:

(1) The tracking device must acquire, at a minimum, date, time, TRU engine hour meter reading, and location data at a rate of at least one reading per minute, with no more than 10 minutes data gap.

(2) The tracking device must be capable of determining if the TRU or TRU gen set location is within California and determining the TRU engine run time in California for each day.

(3) The tracking records must be collected by an independent entity with no business relationship to the owner or operator of the TRU or TRU gen set being tracked, other than to provide the tracking service. The data shall be stored on a server that is secure from tampering and inaccessible to the TRU or TRU gen set owner, other than to download reports over the Internet. The ARB inspectors shall have free access to download reports from this website over the Internet that show the TRU or TRU gen set engine operation in California for each day.

(26)(kk) “Emergency” means any of the following times:

(A)(1) A failure or loss of normal power service that is not part of an “interruptible service contract” (see definition in section 2477.4);

(B)(2) A failure of a facility’s internal power distribution system, provided the failure is beyond the reasonable control of the operator;

(C)(3) When an affected facility is placed under an involuntary “rotating outage” (see definition in section 2477.4).

(4) When the president of the United State or the Governor of California declares a state of emergency related to any type of disaster where TRU-equipped trucks or trailers provide foodservice to response crews, including but not limited to, forest fires and earthquakes.

(ll) “Emissions Control Group” has the same meaning as defined in title 13 CCR, section 2701

¹ Effective model year applies for this tier only after Tier 4f becomes effective in 2013.

- ~~(27)~~(mm) “Emission Control Strategy” means any device, system, or strategy employed with a diesel-fueled CI engine that is intended to reduce emissions. Examples of emission control strategies include, but are not limited to, particulate filters, diesel oxidation catalysts, selective catalytic reduction systems, alternative fuels, fuel additives used in combination with particulate filters, alternative diesel fuels, and combinations of the above.
- ~~(28)~~(nn) “Emissions Rate” means the weight of a pollutant emitted per unit of time (e.g., grams per second).
- ~~(29)~~(oo) “Executive Officer” means the Executive Officer of the California Air Resources Board or his or her delegate.
- ~~(30)~~(pp) “Facility” means any facility where TRU-equipped trucks, trailers, shipping containers or railcars are loaded or unloaded with perishable goods. This includes, but is not limited to, grocery distribution centers, food service distribution centers, cold storage warehouses, and intermodal facilities. Each business entity at a commercial development is a separate facility for the purposes of this regulation, provided the businesses are “independently owned and operated” (see definition in subsection ~~(d)~~2477.4).
- ~~(31)~~(qq) “Facility Control (of TRUs or TRU Gen Sets)” means the TRUs or TRU gen sets located at the facility are owned or leased by the facility, its parent company, affiliate, or a subsidiary, or under contract for the purpose of providing carrier service to the facility, and the TRUs' or TRU gen sets' arrival, departure, loading, unloading, shipping and/or receiving of cargo is determined by the facility, parent company, affiliate, or subsidiary (e.g scheduled receiving, dispatched shipments).
- ~~(32)~~(rr) “Fischer-Tropsch Diesel Fuel” See “ultra-low-aromatic synthetic diesel fuel”.
- (ss) “Flexibility engine” means an engine installed by an original equipment manufacturer in accordance with title 40 Code of Federal Regulations (40 CFR) sections 89.102 and 1039.625, and 13 CCR section 2423(d). Flexibility engines have not been certified to meet new engine non-road or off-road emissions standards in effect at the time of installation; therefore, the effective model year (see definition) shall be used to determine the in-use performance standards and compliance dates of this subarticle for flexibility engines.
- (tt) “Freight Broker” means a person who, for compensation, arranges, offers to arrange, or dispatches the transportation of property by a carrier. A carrier, or person who is an employee or bona fide agent of a carrier, is not a freight broker within the meaning of this subarticle when it arranges or offers to arrange the transportation of shipments which it is authorized to transport and which it has accepted and legally bound itself to transport.

- ~~(33)~~(uu) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine.
- ~~(34)~~(vv) "Generator Set (gen set)" means a CI engine coupled to a generator used as a source of electricity.
- (ww) "Highway" means a "highway" as defined in California Vehicle Code section 360.
- (xx) "Hybrid electric TRU" means a TRU that is powered by an integral diesel internal combustion engine coupled to an electric generator that provides electric power to an electric motor-driven refrigeration system designed to control the environment of temperature sensitive products that are transported in trucks and refrigerated trailers. Hybrid electric TRUs may be capable of both cooling and heating.
- ~~(35)~~(yy) "Hybrid Cryogenic Temperature Control System" means a temperature control system that uses a cryogenic temperature control system in conjunction with a conventional TRU.
- ~~(36)~~(zz) "Independently Owned and Operated" means a business concern that independently manages and controls the day-to-day operations of its own business through its ownership and management, without undue influence by an outside entity or person that may have an ownership and/or financial interest in the management responsibilities of the applicant business or small business.
- ~~(37)~~(aaa) "Intermodal Facility" means a facility involved in the movement of goods in one and the same loading unit or vehicle which uses successively several modes of transport without handling of the goods themselves in changing modes. Such a facility is typically involved in loading and unloading refrigerated shipping containers and trailers to and from railcars, trucks, and ocean-going ships.
- ~~(38)~~(bbb) "Interruptible Service Contract" means any arrangement in which a nonresidential electrical customer agrees to reduce or consider reducing its electrical consumption during periods of peak demand or at the request of the System Operator in exchange for compensation, or assurances not to be blacked out or other similar non-monetary assurances.
- ~~(39)~~(ccc) "In Use TRU, TRU gen set, or engine" means a TRU, TRU gen set, or engine that is not a "new" TRU, TRU gen set, or engine.
- ~~(40)~~(ddd) "Low Emission TRU (LETRU or L)" means a TRU or TRU gen set that meets the performance standards described under paragraph (e)(1)(A)1. or (e)(1)(A)2.

- (eee) “Low-use TRU” means a TRU that qualifies for exemption under subsection 2477.3(e). Qualifications include, but are not limited to, engine operations that do not exceed 100 hours per calendar year in California and the TRU must be equipped with a properly functioning non-resettable, tamper-proof hour-meter and an electronic tracking system.
- (41)(fff) “Manufacturer” means a business as defined in Government Code § 14837(c).
- (42)(ggg) “Military tactical support equipment (TSE)” means equipment that meets military specifications, owned by the U.S. Department of Defense and/or the U.S. military services, and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.
- (43)(hhh) “Model Year (MY)” means diesel-fueled engine manufacturer’s annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year. Engines manufactured to meet the current emissions standard tier that is in effect will have the model year on the engine emissions label. Engines manufactured to meet a prior tier emissions standard do not have a model year and must use an effective model year, as defined above.
- (44)(iii) “New TRU, TRU Gen Set, or Engine” means any TRU, TRU gen set, or engine that has never been subject to a retail sale or lease to an “ultimate purchaser” (see definition in subsection ~~(d)~~2477.4).
- (45)(jjj) “Nitrogen Oxide (NOx)” means compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition.
- (46)(kkk) “Non-California-Based TRUs and TRU Gen Sets” means TRUs and TRU gen sets that are equipped on or used in trucks, trailers, shipping containers, or railcars that a reasonable person would find to be regularly assigned to terminals outside of California and operate in California from time to time for the purpose of transporting perishable goods into or out of the state.
- (47)(lll) “Non-methane Hydrocarbons (NMHC)” means the sum of all hydrocarbon air pollutants except methane. NMHCs are precursors to ozone formation.
- (mmm) “Nonretail Delivery or Pick-up Point” means wholesale perishable goods distribution facilities or businesses in the supply chain prior to the retail facilities or businesses. This includes, but is not limited to, food manufacturing facilities, shipper warehouses, transfer points, distribution centers, cold storage

warehouses, and intermodal facilities where perishable goods are loaded or unloaded.

~~(48)~~(nnn) "Operate" means to start, cause to function, program the temperature controller, select an operating program or otherwise control, fuel, monitor to assure proper operation, or keep in operation.

~~(49)~~(ooo) "Operator" means any person (as defined), party or entity that operates a TRU or TRU gen set for the purposes of transporting perishable goods, excluding an employee driver and third party maintenance and repair service, and including but not limited to a: (1) Manufacturer, producer, supplier, carrier, shipper, consignor, consignee, receiver, distribution center, or warehouse of perishable goods; An operator may also be a driver if they are the owner (e.g. independent owner-operator).

~~(2) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including but not limited to, a government corporation;~~

~~(3) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.~~

~~(ppp)~~ "Original equipment manufacturer (OEM)" means any person that originally manufactured new equipment for sale in commerce. This does not include a dealer who receives new equipment for sale in commerce.

~~(50)~~(qqq) "Owner" means any person that legally holds the title (or its equivalent) showing ownership of a TRU or TRU gen set, excluding a bank or other financial lending institution, and including but not limited to:

~~(A) Manufacturer, producer, supplier, carrier, shipper, consignor, consignee, receiver, distribution center, warehouse;~~

~~(B) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including but not limited to, a government corporation;~~

~~(C) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.~~

means, except as modified by paragraphs (1) or (2) below, the person legally holding title (or its equivalent) to the TRU or TRU gen set, or either the person (see definition) registered as the owner or lessee of a vehicle by the California Department of Motor Vehicles or its equivalent in another state, province, or

country, as evidenced on the vehicle registration document carried in the vehicle to which the TRU is attached, unless such person, can clearly demonstrate, with written documentation, that another person (e.g., a lessee) is financially responsible for the maintenance of the TRU or TRU gen set, including responsibility for installing and maintaining the emissions control technologies on the TRU or TRU gen set, and registering the TRU with the California Air Resources Board's Equipment Registration (ARBER) system, as required by this subarticle. An owner may also be a driver or operator.

(1) Banks, other financial lending institutions, or other entities engaged in the act of financing TRUs are not owners, for the purposes of this subarticle unless they otherwise have an obligation to comply with this regulation (e.g., contractually responsible for the maintenance of a TRU under a sales or lease agreement) .

(2) For a TRU-equipped truck or trailer, or TRU gen set owned by the federal government and not registered in any state or local jurisdiction, the owner means the department, agency, branch, or other entity of the United States, including the United States Postal Service, to which the vehicles in the fleet are assigned or which have responsibility for maintenance of the vehicles.

~~(51)~~(rrr) "Owner/Operator" means a requirement applies to the owner and/or operator of a TRU or TRU gen set, as determined by agreement or contract between the parties if the two are separate business entities.

~~(52)~~(sss) "Parent Company" means a company that has a controlling interest in another company, usually through ownership of more than one-half the voting stock.

~~(53)~~(ttt) "Particulate Matter (PM)" means the particles found in the exhaust of CI engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(uuu) "Person" means an individual, corporation, business trust, estate, trust, partnership, limited liability company, association, joint venture, government, governmental subdivision, agency, or instrumentality, public corporation, or any other legal or commercial entity.

(vvv) "Prior-Tier Replacement Engine" means a new replacement engine manufactured under title 40 CFR, section 89.1003 and 1068.240, and title 13 CCR, section 2423(j) that meets a prior tier of the new engine emissions standards than the tier of standards currently in effect at the time of manufacture.

~~(54)~~(www) "Rated Brake Horsepower" means the power delivered, according to the statement of the engine manufacturer, at the rated speed.

~~(55)~~(xxx) "Real Emission Reductions" means that an action is taken that results in reductions in the PM emission rate of an in-use engine (e.g. a VDECS is installed that reduced the PM emissions rate by more than 50%).

~~(56)~~(yyy) "Receiver" means the person, ~~party, or entity~~ that receives shipped goods, cargo, or commodities.

~~(57)~~(zzz) "Refrigerated Trailer" means a trailer van, railcar, or shipping container equipped with a TRU or TRU gen set. Pursuant to Health and Safety Code section 39618, refrigerated trailers are mobile sources and shall be regulated by the ARB on a statewide basis.

(aaaa) "Retail Delivery Point" means facilities or businesses where perishable goods are delivered to retail businesses that sell these goods to end users. This includes, but is not limited to, grocery stores, convenience stores, drug stores, restaurants, and cafeterias.

~~(58)~~(bbbb) "Rotating Outage" means a controlled involuntary curtailment of electrical power service to consumers as ordered by the system operator - see definition in ~~subsection (d)~~2477.4.

(cccc) "Semitrailer" means a "Semitrailer" as defined in section 550 of the California Vehicle Code.

~~(59)~~(dddd) "Shipper" means the person, party, or entity who usually owns or supplies the commodities shipped/transported by a carrier, or that has possession of freight prior to its transportation. This may include, but is not limited to, owners of freight distribution centers, and temporary freight storage facilities.

~~(60)~~(eeee) "System Operator" means one of the several organizations that control energy in California. System operators include, but are not limited to, the California Independent System Operator, the Los Angeles Department of Water and Power, the Imperial Irrigation District, the Sacramento Municipal Utility District.

~~(61)~~(ffff) "Terminal" means any place where a TRU or TRU gen set equipped truck, trailer, shipping container, railcar or TRU gen set is regularly garaged, maintained, operated, or dispatched from, including a dispatch office, cross-dock facility, maintenance shop, business, or private residence.

~~(62)~~(gggg) "Tier 4 Nonroad/Off-road Emission Standards" means the emission standards and associated procedures promulgated by U.S. Environmental Protection Agency in "Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel; Final Rule" (Vol. 69, No. 124 Fed.Reg. pp. 38957-39273 (June 29, 2004)).

(hhhh) “Third Party Agreement Confirmation Form” means the form used to notify ARB that responsibility for registering a TRU in ARBER has been delegated to the lessee or to a consultant.

~~(63)~~(iiii) “Transport Refrigeration Unit (TRU)” means refrigeration systems powered by integral internal combustion engines designed to control the environment of temperature sensitive products that are transported in trucks and refrigerated trailers. TRUs may be capable of both cooling and heating.

(iii) “Tractor” means a “Truck Tractor” as defined in section 655 of the California Vehicle Code.

(kkkk) “Trailer” means a semitrailer.

~~(64)~~(llll) “TRU Generator Set (TRU gen set)” means a generator set that is designed and used to provide electric power to electrically driven refrigeration units of any kind. This includes, but is not limited to gen sets that provide electricity to electrically powered refrigeration systems for semi-trailer vans and shipping containers.

~~(65)~~(mmmm) “Ultimate Purchaser” means with respect to a new TRU, TRU gen set, or engine, the first person who in good faith purchases a new TRU, TRU gen set, or engine for purposes other than resale.

~~(66)~~(nnnn) “Ultra-Low-Aromatic Synthetic Diesel Fuel” [placeholder for possible new label and values after ultra-clean diesel August workshop] means fuel produced from natural gas, coal, or biomass by the Fischer-Tropsch gas-to-liquid chemical conversion process, or similar process that meets the following properties:

Table 12

Property	ASTM	Value
Sulfur Content (ppmw)	D5453-93	<1
Total Aromatic Content (wt %)	D5186-96	<1.5%
Polynuclear Aromatic Content (wt %)	D5186-96	<0.5%
Natural Cetane Number	D613-84	>74

~~(67)~~(oooo) “Ultra-Low Emission TRU (ULETRU or U)” means a TRU or TRU gen set that meets the performance standards described under subparagraph (e)(1)(A)1. and (e)(1)(A)2. or that uses an “alternative technology” in accordance with subparagraph (e)(1)(A)3.

~~(68)~~(pppp) “Verification Classification Level” means the classification assigned to a Diesel Emission Control Strategy by the Executive Officer as defined in the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emission from Diesel Engines (13 CCR Sections 2700*

– 2710). PM reductions correspond as follows: Level 1: $\geq 25\%$; Level 2: $\geq 50\%$; Level 3: $\geq 85\%$ or 0.01 g/hp-hr.

~~(69)(qqqq)~~ “Verified Diesel Emission Control Strategy” (VDECS) means an emission control strategy designed primarily for the reduction of diesel particulate matter emissions that has been verified per the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (13 CCR Sections 2700 – 2710)*. Examples of diesel retrofit systems that may be verified include, but are not limited to, diesel particulate filters, diesel oxidation catalysts, fuel additives (e.g. fuel-borne catalysts), alternative fuels (e.g. dual fuel), alternative diesel fuels, and combinations of the above.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(e)2477.5 Requirements for Owners.

(1) In-Use Operation:

(A)(a) In-Use Performance Standards: In accordance with the schedule set forth below in paragraph ~~(e)(1)(B)~~, no owner/operator shall operate a TRU or TRU gen set in California unless it meets the in-use emission category performance standards set forth below.

4.(1) In-Use performance standard categories for TRU and TRU gen set engines with rated brake horsepower less than 25 horsepower (<25 hp) are shown in Table 23, along with the engine certification standards or the level of Verified Diesel Emission Control Strategy (VDECS) (see definition) that is necessary to qualify for each category.

**Table 23
<25 HP TRU and TRU Gen Set In-Use PM Performance Standards**

In-Use Emission Category	Engine Certification (g/hp-hr)	Level of VDECS Equipped with
Low Emission TRU (LETRU or L)	0.30 ²	Level 2
Ultra-Low Emission TRU (ULETRU or U)	NA ³	Level 3

² The Engine Certification value for the Low Emission TRU category corresponds to the "Interim" Tier 4 Nonroad/Offroad Emission Standards that are to go into effect in 2008.

³ Not Applicable - ARB and U.S. EPA will perform a technical review in 2007 to evaluate DOC or filter-based standard for <25 hp category new engines in 2013. If a more stringent “long term” level for new tier 4 (as identified in the Tier 4 Nonroad/Offroad Emission Standards) engines is adopted by U.S. EPA for this horsepower category, the Board will

a.(A) Compliance with in-use performance standards can be achieved by:

1.1. Using a certified engine meeting the applicable nonroad/offroad emissions standards for all regulated pollutants and the in-use PM performance standard. Only engines for which certification data and deterioration factors have been provided to ARB shall be considered when determining compliance. The Executive Officer will consider such submittals, publish, and make available a list of qualifying engines.

1.2. Equipping the engine with the required Level of VDECS.

2.(2) In-Use performance standard categories for TRU and TRU gen set engines with rated brake horsepower greater than or equal to 25 horsepower (≥ 25 hp) are shown in Table 34, along with the engine certification standards or the level of VDECS that is necessary to qualify for each category.

Table 34
 ≥ 25 HP TRU and TRU Gen Set In-Use PM Performance Standards

In-Use Emission Category	Engine Certification (g/hp-hr)	Level of VDECS Equipped with
Low Emission TRU (LETRU or L)	0.22 ⁴	Level 2
Ultra-Low Emission TRU (ULETRU or U)	0.02 ⁵	Level 3

a.(A) Compliance with in-use performance standards can be achieved by:

1.1. Using a certified engine meeting the applicable nonroad/off-road emissions standards for all regulated pollutants and the in-use PM performance standard. Only engines for which certification data and deterioration factors have been provided to ARB shall be considered when determining compliance. The Executive Officer will consider such submittals, publish, and make available a list of qualifying engines.

1.2. Equipping the engine with the required Level of VDECS.

consider adopting an engine certification in-use performance standard for ULETRU for <25 hp TRUs and TRU gen sets.

⁴ The Engine Certification value for Low Emission TRU category corresponds to the "Interim" Tier 4 Nonroad/Offroad Emission Standards that are to go into effect in 2008.

⁵ The Engine Certification value for the Ultra-Low Emission TRU category corresponds to the "Long Term" Tier 4 Nonroad/Offroad Emission Standards that will go into effect in 2012 or 2013.

~~3.~~(3)As an alternative to meeting the ULETRU in-use performance standards in subsections ~~2477.5(ea)(1)(A)1.~~ and ~~(2).~~, an owner/operator may operate a TRU or TRU gen set in California meeting one of the *Alternative Technology* options listed below. Alternative Technologies qualify to meet the ULETRU in-use performance standard only if the TRU or TRU gen set is operated under the conditions included in the description listed below.

~~a.~~(A) Hybrid Electric TRU or Electric standby-equipped TRU may qualify as an Alternative Technology, provided certain conditions are met:

1. that the TRU shall not operate under diesel engine power while at a nonretail facility, except during
 - a. An emergency (as defined);
 - b. Normal ingress and egress yard maneuvering; or
 - c. Unit/engine inspections, diagnostics, and repair operations;
2. The facility or facilities that a TRU is normally based or frequents to load or unload perishable goods shall be equipped with electric power plugs located in the parking areas and loading spaces and the TRU shall be plugged into these power plugs whenever the refrigerated van or container contains perishable products;
3. All nonretail delivery and pick-up points (as defined) that the TRU frequents to load or unload perishable goods shall be equipped with electric power plugs located in the parking areas and loading spaces and the TRU shall be plugged into these power plugs whenever the refrigerated van or container contains perishable products;
4. The TRU engine run time at retail delivery points (as defined) shall not exceed 30 minutes, otherwise electric power plugs are also required at those retail delivery points;
5. The TRU shall be equipped with non-resettable engine hour meters and electric power use hour meters;
6. At least 50 percent of an owner's hybrid electric or electric standby-equipped TRUs shall be equipped with electronic tracking systems by December 31, 2011, and 100 percent of an owner's hybrid electric or electric standby-equipped TRUs shall be equipped with electronic tracking systems by December 31, 2012, to enable automatic monitoring, recordkeeping, and reporting in accordance with the requirements in subsection 2477.5(d)(3) to demonstrate that the TRU engine does not operate at facilities, as required in subparagraphs 1 through 5, above.
7. The TRU shall be registered in ARBER in accordance with section 2477.5(e) to facilitate reporting.

[The paragraph below was removed from proposal after the 6-3-10 meeting on the notice list because low-cost automated GPS

tracking and reporting systems will be available.]TRU fleet owners that load perishable goods at a base facility and deliver perishable goods on an established route, delivering to retail delivery points, may adopt an internal fleet policy to shut down the TRU whenever they are at the base facility, any nonretail delivery or pick-up point, or any retail delivery point, and thereby avoid recordkeeping requirements, provided certain conditions are met:

- a. An internal fleet policy must be formally adopted by the company's responsible official to shut down the TRU engines whenever the vehicle is stationary at the base facility, any nonretail delivery or pick-up point, or any retail delivery point. The policy must accept the company's responsibility for food safety, must include all of the elements described below. The policy must be signed to certify management's commitment to meet all of the policy's elements and management's understanding that if a TRU engine is found to be operating at any facility by an ARB inspector, a citation and penalty may result;
- b. Signs must be posted at gates and around the parking and dock areas to remind drivers and yard personnel of the policy to shut down the TRU engine at all times when the vehicle is stationary at the base facility, any other nonretail delivery or pick-up point, and at all retail delivery points.
- c. Labels are posted in the cab and near the TRU control panel to remind drivers and yard personnel of the policy to shut down the TRU engine at all times when the vehicle is stationary at a facility.
- d. Periodic training is provided to all drivers and yard personnel;
- e. The fleet has a self-monitoring enforcement program with disciplinary consequences to personnel if there are incidents of failure to comply with the policy;
- f. Periodic evaluation by management of the program's effectiveness.

- b.(B) Cryogenic temperature control systems or h Hybrid cryogenic temperature control systems may qualify as an Alternative Technology, provided certain conditions are met:
 1. that †The TRU does not operate under diesel engine power while at a nonretail facility, except during:
 - a. aAn emergency;
 - b. Normal ingress and egress yard maneuvering; or
 - c. Unit/engine inspections, diagnostics, and repair operations;

2. The TRU engine run time at retail delivery points (as defined) shall not exceed 30 minutes, otherwise electric power plugs are also required at those retail delivery points;
3. The TRU shall be equipped with non-resettable engine hour meter and cryogenic system use hour meter;
4. The TRU shall be equipped with electronic tracking systems to enable automatic monitoring, recordkeeping, and reporting in accordance with the requirements in subsection 2477.5(d)(4) to demonstrate that the TRU engine does not operate at facilities, as required in subparagraphs 1 through 4, above.
5. The TRU shall be registered in ARBER in accordance with section 2477.5(e) to facilitate reporting.

e.(C) Alternative-fueled engines (see definition in subsection ~~(d)~~2477.4). If the engine is a CI engine, a VDECS is required.

Note: If the engine is not a compression ignition diesel fueled engine, this regulation would not apply, but the engine may have to meet other emission standards (e.g. large spark-ignited engine standards if >25 hp).

d.(D) Fuel exclusively with an alternative diesel fuel (see definition in subsection ~~(d)~~2477.4) that has been verified as a VDECS, provided it is used in accordance with the requirements of subsection 2477.5(eh)(21)(A) and the alternative diesel fuel contains no conventional diesel or CARB diesel fuel.

e.(E) Power by fuel cells. If a reformer is used with diesel fuel as the source of hydrocarbons, then emissions must be evaluated and verified through the *Verification Procedure Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (13CCR section 2700 – 2710)*.

f.(F) Equip with any other system approved by the Executive Officer to not emit diesel PM or increase public health risk while at a facility.

(B)(b) In-Use Compliance Dates: In-use compliance dates are based upon the engine model year or effective model year (as defined and explained in subsection 2477.5(i)), as listed below, except as allowed in subparagraphs 2477.5(b)(5) and (6). Compliance dates may also be extended if the requirements of subparagraphs 2477.5(f), (g), (k), (l) or (m).

4.(1) No owner/operator shall operate a 2001 and older model year (MY) TRU or TRU gen set engine in California unless it meets the in-use performance criteria set forth in paragraph ~~(e)(1)(A)~~ subsection 2477.5(a) for

~~a.~~(A) LETRU on or before December 31, 2008, and

~~b.~~(B) ULETRU on or before December 31, 2015, as shown in Tables 45 and 56.

~~2.~~(2) No owner/operator shall operate a 2002 MY TRU or TRU gen set engine in California unless it meets the in-use performance criteria set forth in ~~paragraph (e)(1)(A)~~ subsection 2477.5(a) for

~~a.~~(A) LETRU on or before December 31, 2009, and

~~b.~~(B) ULETRU on or before December 31, 2016, as shown in Tables 45 and 56.

(3) No owner/operator shall operate a 2003 MY TRU or TRU gen set engine in California unless it meets the in-use performance criteria set forth in subsection 2477.5(a) for

(A) LETRU on or before December 31, 2010, and

(B) ULETRU on or before December 31, 2017, as shown in Tables 5 and 6.

~~3.~~(4) No owner/operator shall operate a ~~2003~~2004 MY and subsequent MY TRU or TRU gen set engine in California unless it meets the in-use performance criteria set forth in ~~paragraph (e)(1)(A)~~ subsection 2477.5(a) for ULETRU on or before December 31st of the seventh year past the ~~unit~~engine's model year, as shown in Tables 45⁶ and 56⁶, with the following exception:-

(A) Model year 2004 engines in the less than 25 hp category shall meet the in-use performance criteria set forth in section 2477.5 (a), as shown in Table 5, for:

1. LETRU on or before December 31, 2011, and

2. ULETRU by December 31, 2018.

⁶ Model years 2013, and subsequent (not shown in tables 5 and 6), shall meet ULETRU by December 31st of the seventh year after the MY.

**Table 45: <25 HP TRU and TRU Gen Set Engines
In-Use Compliance Dates**

MY	In-Use Compliance Year ⁷													
	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
'01 & Older		L	L	L	L	L	L	L	U	U	U	U	U	U
'02			L	L	L	L	L	L	L	U	U	U	U	U
'03 ⁸				UL	U	U	U	U						
'04					UL	U	U	U						
'05 ⁸						U	U	U	U	U	U	U	U	U
'06							U	U	U	U	U	U	U	U
'07								U	U	U	U	U	U	U
'08									U	U	U	U	U	U
'09										U	U	U	U	U
'10											U	U	U	U
'11												U	U	U
'12													U	U
'13 ⁶														U

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⁷ Compliance date is December 31st of the compliance year shown. "MY" means model year. Black shaded areas are years with no requirements since in-use compliance year precedes model year. Dark shaded areas without letter codes have no requirements, pending in-use compliance date. "L" means must meet LETRU in-use performance standards. "U" means must meet ULETRU in-use performance standards.

⁸ TRUs and TRU gen sets with MY 2003⁵ engines and subsequent MY engines shall be required to comply with ULETRU requirements by the end of the seventh year after the model year. The exception to this is ~~>25 hp 2013 and subsequent model years, since these model years would meet ULETRU in-use performance standards as new engines.~~

**Table 56: \geq 25 HP TRU and TRU Gen Set Engines
In-Use Compliance Dates**

MY	In-Use Compliance Year ⁹													
	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
'01 & Older		L	L	L	L	L	L	L	U	U	U	U	U	U
'02			L	L	L	L	L	L	U	U	U	U	U	U
'03 ⁹				UL	UL	UL	UL	UL	UL	U	U	U	U	U
'04 ¹⁰					U	U	U	U	U	U	U	U	U	U
'05						U	U	U	U	U	U	U	U	U
'06							U	U	U	U	U	U	U	U
'07								U	U	U	U	U	U	U
'08									U	U	U	U	U	U
'09										U	U	U	U	U
'10											U	U	U	U
'11												U	U	U
'12													U	U
'13														<u>U</u>

(5) The manufacture year of the TRU unit may be used instead of the TRU engine model year to determine the TRU ATCM in-use performance standards that must be met and the related compliance dates; however, this exception only applies if the unit manufacture year shown on the TRU unit label is no more than one year later than the engine model year shown on the TRU engine emissions label. If the difference between the engine model year on the engine emissions label and the unit manufacture year is greater than one year, then the engine model year shall be used in accordance with subsection 2477.5(b)(1), (2), (3), and (4). Clarifications related to this exception follow:

(A) If the owner complies with the TRU ATCM in-use performance standard by retrofitting with a VDECS, the engine model year shown on the engine emissions label shall be used to determine engine compatibility with the VDECS, in accordance with the Executive Order for that VDECS.

⁹ Compliance date is December 31st of the compliance year shown. "MY" means model year. Black shaded areas are years with no requirements since in-use compliance year precedes model year. Dark shaded areas without letter codes have no requirements, pending in-use compliance date. "L" means must meet LETRU in-use performance standards. "U" means must meet ULETRU in-use performance standards.

¹⁰ TRUs and TRU gen sets with MY 2003~~4~~ engines and subsequent MY engines shall be required to comply with ULETRU requirements by the end of the seventh year after the model year. ~~The exception to this is \geq 25 hp Tier 4 final standards go into effect in 2013 and subsequent model years, since these model years which would meet ULETRU in-use performance standards as new engines in the 25 to less than 50 hp category. If the engines installed by original equipment manufacturers do not meet ULETRU, then subsection 2477.5(b)(6) applies.~~

(B) If the owner of a TRU is required to apply for an ARB Identification Number (IDN), in accordance with section 2477.5(e), the engine model year that is shown on the engine emissions label shall be entered on the IDN application in the engine model year space.

(6) If an original equipment manufacturer equips TRUs or TRU gen sets with flexibility engines (see definition) under the Transitional Program for Equipment Manufacturers, as allowed by 40 CFR sections 89.102 and 1068.625, and 13 CCR 2423(d), the following requirements shall be followed:

(A) Flexibility engines installed in TRUs and TRU gen sets manufactured prior to January 1, 2011, shall meet the in-use performance standards of subsection 2477.5(a) by the December 31st of the seventh year after the TRU or TRU gen set engine's manufacture year, provided:

1. The original equipment manufacturer reports unit and flexibility engine information to ARB; and
2. The owner registers the TRU in ARBER in accordance with subsection 2477.5(e) by December 31, 2010.

(B) Flexibility engines installed in TRUs or TRU gen sets manufactured after December 31, 2010, shall meet the in-use performance standards of subsection 2477.5(a) by December 31st of the seventh year after the engine's effective model year (see definition).

(C)(c) Replacements Due to Failures.

~~1.~~(1) If a VDECS fails within its warranty period, the owner/operator of the TRU or TRU gen set must replace it with the same VDECS or a higher verification classification level, if available.

~~2.~~(2) If a VDECS fails outside its warranty period and a higher verification classification level VDECS is available, then the owner/operator of the TRU or TRU gen set shall upgrade to the highest level VDECS required under paragraphs (e)(1)(A)1. and (e)(1)(A)2. that is determined to be cost-effective by the Executive Officer.

(D)(d) In-Use Recordkeeping and Reporting. In-use recordkeeping and reporting shall be completed by the owner or operator in accordance with the requirements of subsection (f)(1) in accordance with the following:-

(1) If the owner is also an operator, they shall complete and maintain the operator report in accordance with section 2477.6(a)

(2) If the owner has chosen to comply by using a verified alternative diesel fuel, the they shall comply with the recordkeeping requirements in subsection 2477.5(h)(1).

(3) If the owner has chosen to comply by using a hybrid electric TRU or electric standby-equipped TRU, recordkeeping, and reporting is required for each unit to demonstrate that the TRU engine is not operated at a nonretail delivery or pick-up point and only operated within the 30 minute limit for retail delivery points.

(A) Manual recordkeeping is required for all such units until automated monitoring, recordkeeping, and reporting is required under the phased compliance schedule in subparagraph (B), below. Manual records shall include the following, for each TRU that is equipped with electric standby or hybrid electric:

(1) ARB Identification Number;

(2) Date;

(3) Address of each stationary location lasting more than 5 minutes.

This record may be a location code for each stationary location, provided the owner or operator also provides a cross-reference of location codes with the corresponding full addresses;

(4) Time of arrival and departure, and the elapsed time calculated from those readings to show the duration of the stationary position;

(5) Engine hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the TRU engine run time while the vehicle is at the stationary location; and

(6) Electric motor hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the electric motor run time while the vehicle is at the stationary location.

(B) Automated monitoring, recordkeeping, and reporting is required for at least 50 percent of an owner's TRUs by December 31, 2011 and 100 percent of an owners TRUs by December 31, 2012.

Automated monitoring, recordkeeping and reporting is required with an electronic tracking system (as defined) and shall include data that includes the following for each stationary location lasting more than 5 minutes (300 seconds):

(1) ARB Identification Number;

(2) Date;

(3) Address of each stationary location lasting more than 5 minutes (300 seconds). This record may be the GPS coordinates and a location code for each stationary location, provided the owner or

operator also provides a cross-reference of location codes with the corresponding full addresses;

- (4) Time of arrival and departure, and the elapsed time calculated from those readings to show the duration of the stationary position;
- (5) Engine hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the TRU engine run time while the vehicle is at the stationary location; and
- (6) Electric motor hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the electric motor run time while the vehicle is at the stationary location.
- (7) The server system shall generate a report that lists all stationary locations lasting more than 5 minutes where the TRU engine operated for more than 30 minutes, resulting in a violation.

(C)[Consider annual reporting (at least for manual reporting).]

(4) Hybrid cryogenic temperature control recordkeeping. If the owner has chosen to comply by using a hybrid cryogenic temperature control system, automatic monitoring, recordkeeping, and reporting is required with an electronic tracking system (as defined) to demonstrate that the TRU engine is not operated at a nonretail delivery or pick-up point and only operated within the 30 minute limit for retail delivery points. Automated recordkeeping shall include data that includes the following for each stationary location lasting more than 300 seconds (5 minutes):

- (A) ARB Identification Number of the unit;
- (B) Date;
- (C) Location: GPS coordinates or coded, with full address in code look-up table;
- (D) Time of arrival and departure, and the elapsed time calculated from those readings to show the duration of the stationary position;
- (E) Engine hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the TRU engine run time while the vehicle is stationary;
- (F) Cryogenic system use hour meter readings taken at arrival and departure and the elapsed time calculated from those readings to show the cryogenic system run time while the vehicle is stationary.
- (G) The server system shall generate a report that lists all stationary locations lasting more than 5 minutes where the TRU engine operated for more than 30 minutes, resulting in a violation.

(5) Low-Use TRUs.

For TRUs that are designated as low-use, the owner must meet the qualification for exemption under subsection 2477.3(e) and complete

recordkeeping and reporting for as long as the owner owns or operates the TRU under the low-use exemption:

(A) The owner shall update the registration information required under section 2477.5(e) within 30 days of any changes, must check to ensure that the “Low-use exemption” is indicated, and notify the ARBER Administrator if a correction is needed;

(B) For low-use TRUs operating only in California, the owner or operator must complete the following:

1. Recordkeeping is required using an electronic tracking system, as defined in section 2477.4(jj), and must be maintained for all operations in California, covering the 12 month period from January 1 to December 31 of each calendar year, including the following data:

a. The date, time, location, and TRU engine hour meter reading at start-up and shut-down for each day that the TRU is operated in California; and

b. The total accrued annual TRU engine run time for the calendar year.

2. Annual reporting shall be submitted to the Executive Officer by January 10th of each year requesting approval of the low-use exemption for each TRU for the calendar year just beginning, including an annual report print-out for the previous calendar year, downloaded from the independent tracking service provider, which shall include the following:

a. The TRU owner’s company name, address, and contact information;

b. The TRU’s ARB Identification Number;

c. TRU engine hour meter readings from a properly functioning electronic hour meter taken on January 1 and December 31 of the compliance year;

d. A listing of the dates that the TRU operated and TRU engine hour meter readings at start-up and shut-down, recorded under subparagraph 2477.5(d)(5)(B)1.a., above;

e. The total annual engine run time for the calendar year; and

f. In the event that the hour meter is replaced, the original hour meter reading and the new hour meter reading and the date of replacement must be reported.

(C) For Low-use TRUs operating both inside and outside of California, the owner or operator must complete the following:

1. Recordkeeping is required using an electronic tracking system, as defined in subsection 2477.4(jj), and must be maintained for all operations in California, covering the 12 month period from January 1 to December 31 of each calendar year, including the following data:

- a. The date, time, location, and TRU engine hour meter reading upon each entry into California;
 - b. The date, time, location, and TRU engine hour meter reading upon each exit from California;
 - c. The total TRU engine run time duration for each trip into California, from entry to exit; and
 - d. The total TRU engine run time for all trips into California, from entries to exits, for the calendar year.
2. Annual reporting shall be submitted to the Executive Officer by January 10th of each year requesting approval of the low-use exemption for each TRU for the calendar year just beginning, including an annual report print-out for the previous calendar year, downloaded from the independent tracking service provider, which shall include the following:
- a. The TRU owner's company name, address, and contact information;
 - b. The TRU's ARB Identification Number;
 - c. A listing of the dates that the TRU operated in California, engine hour meter readings from a properly functioning electronic hour meter at unit start-up and shut-down, recorded under subparagraph 2477.5(d)(5)(C)1.a. and b., above, and the total engine run time for each date that the TRU operated in California;
 - d. The total annual engine run time for the calendar year; and
 - e. In the event that the hour meter is replaced, the original hour meter reading and the new hour meter reading and the date of replacement must be reported.

(E)(e) ARB Identification Numbering Requirements. Identification numbers (IDN) will be issued to help expedite the inspection procedure and prevent shipping delays. IDNs are obtained by registering a TRU or TRU gen set in the ARB's Equipment Registration (ARBER) system.

[Evaluate what additional registration information is needed to facilitate proposed amendments:

- **Add 1 yr until step 2 if step 1 compliance was "on time"**
- **8 yrs between step 1 to step 2 only if T4i replacement engine or L2 retrofit**
- **Low-use exemption indicator that is approved and maintained by staff to suspend certain business rules and allow IDN to be issued for noncompliant unit. Provide information necessary to access electronic tracking reports.**
 - **California-only: Annual report entries for beginning and ending hour meter readings and total annual hours California operation**
 - **California and outside-California: Similar to above, but details may vary**
 - **Report entries for hour meter replacement with reading entries for old and new meters**

➤ **Add other indicators that we've been considering to facilitate compliance determination and enforcement.]**

4-(1) California-based TRUs and TRU gen sets:

a-(A) On or before January 31, 2009, owner/operators of all California-based TRUs and TRU gen sets subject to this regulation shall apply for an ARB IDN for all California-based TRUs or TRU gen sets operated by the owner or operator by submitting an application that includes the information listed below.

I. Company Information

- a. ~~Operator~~ Company/business name, address, and contact information for the responsible official (e.g. phone number, email address, ~~fax number~~).
- b. Company/business tax identification number/federal employer identification number (EIN) or equivalent for other country (e.g. Canadian Business Number).

~~II. Owner name, address, and contact information (if other than operator).~~

2. Rental or lease status. Indicate if the unit is a rental unit (no contract term) or a lease unit (under contract term, typically more than one year)

3. Applicant identity indication. Indicate who is filling out application, either:

- a. The owner (or an employee of owner), or
- b. A third party entering the application information under a Third Party Agreement (e.g. consultant or lessee/operator).

III. TRU or TRU gen set unit information:

- a. Unit Type, either:
 - I. TRU, or
 - II. TRU generator set
- b. make Unit manufacturer,
- c. Unit model,
- d. Unit model year, and
- e. Unit serial number.

5. Other TRU or TRU generator set identifying numbers. Provide all that apply:

- a. Indicate if unit is installed on a truck or trailer, and if so, provide:
 - I. Vehicle Identification Number (VIN), and
 - II. Vehicle license number, country of issuance, and state or province of issuance;

- III. Unique Bureau International de Container (BIC) Code, if trailer is multimodal
- b. Indicate if unit is installed on refrigerated railcar, and if so, provide railcar reporting mark;
 - c. Indicate if unit is installed on domestic refrigerated shipping container, and if so provide unique BIC Code;
 - d. If unit is a TRU gen set under subparagraph (1)(A)4.a., above, provide unique BIC Code;
 - e. Provide company equipment number if company has labeled the equipment.
6. TRU Status Information. Indicate if the unit is:
- a. Active (unit is operational);
 - b. Removed from service (unit is scrapped or inactive for foreseeable future); or
 - c. Sold. If last registered owner sold unit, then they must provide:
 - I. Date of sale, and
 - II. New owner's company name, address, and contact information
- IV7. TRU engine information. Provide the following:
- a. Engine make/manufacture;
 - b. Engine model;
 - c. Engine model year, or "M.Y."; and
 - d. Engine serial number;
 - e. Engine power rating. Indicate either:
 - I. Under 25 hp (under 19 kW), or
 - II. 25 hp or greater (19 Kw or greater);
 - f. Engine family; and
 - g. Emissions standard tier that engine meets.
- V. Terminal or terminals that the TRU-equipped truck or trailer is assigned to, with address and contact information.
- VI. Other associated identification numbers, which may include (as applicable):
- i. Vehicle Identification Number (VIN) of the TRU-equipped truck or trailer.
 - ii. Vehicle license number of the TRU-equipped truck or trailer.
 - iii. Railcar recording mark and car number.
 - iv. Shipping container number (for TRU-equipped shipping containers only).
 - v. Company equipment number (if any).
- VII8. Compliance status with in-use performance standards, under paragraph (e)(1)(A) requirements subsections 2477.5(a) and (b). If compliance not as yet required, mark N/A.

- ~~i. Date when compliance was achieved.~~
- ~~ii. What performance standard was met (e.g. LETRU or ULETRU).~~
- ~~iii. How compliance was achieved (e.g. new compliant TRU, TRU engine replacement, or description of VDECS that was used).~~
- ~~iv. Identify who did the installation work (if applicable).~~

- a. Indicate if the ULETRU Early Compliance Extension has been granted
- b. Indicate if compliance was achieved with an engine option:
 - I. Indicate if the engine now in the unit is an original engine;
 - II. Indicate if the engine now in the unit is a new replacement engine and if so, provide the emissions standard tier that the engine meets;
 - III. Indicate if the engine now in the unit is a rebuilt replacement engine installed to comply with the in-use requirements and if so, provide:
 - i. Emissions standard tier that the engine meets;
 - ii. Rebuild year
 - iii. Installation date
- c. Indicate if compliance was achieved with VDECS retrofit, and if so:
 - I. Indicate if retrofitted engine is a flexibility engine; and
 - II. Provide the following from the VDECS label:
 - i. VDECS manufacturer name;
 - ii. VDECS Family Name;
 - iii. VDECS serial number;
 - iv. VDECS manufacture year; and
 - III. Provide the VDECS installation date;
- d. Indicate if compliance was achieved by using an Alternative Technology option under subsection 2477.5(a)(3), and if so provide the type used and the date installed or employed:
 - I. Electric standby-equipped TRU or hybrid electric TRU;
 - II. Hybrid cryogenic temperature controlled system;
 - III. Alternative-fueled engine;
 - IV. Fueled exclusively with pure alternative diesel fuel;
 - V. Powered by fuel cells; or
 - VI. Other system approved by the Executive Officer.
- e. If compliance was achieved by replacing an engine or retrofitting with a VDECS, provide the installer's company name, their physical address, and contact information.

- 9. Indicate what state or province that the TRU or TRU gen set is based in.

a. California-based

b. Identify the U.S. state, Mexican state, or Canadian province that the unit is based in.

~~b.~~(B) Applications shall be submitted by one of the following methods:

~~h.~~1 Mail or deliver a physical report to ARB at the address listed immediately below:

California Air Resources Board
Stationary Source Division (~~TRUSSD/ARBER~~)
P.O. Box 2815
Sacramento, CA 95812

~~h.~~2. Electronically submit through ~~ARB's~~ the ARBER web site. ~~The web address will be identified in an advisory at:~~
<http://www.arb.ca.gov/arber/arber.htm>

~~e.~~(C) TRUs and TRU gen sets added to an operator's TRU operations after January 31, 2009 shall be brought into compliance with ~~subsection 2477.5(e)(1)(E).~~ An application shall be submitted to ARB within 30 days of the unit entering the operator's control:

~~h.~~1. Requesting an ARB I.D. number for a new TRU or TRU gen set that was not previously numbered, or

~~h.~~2. Requesting a change in owner or operator (or other pertinent application information) for used equipment that already has an ARB I.D. number.

~~d.~~(D) Failure to apply or submittal of false information is a violation of state law subject to civil penalty.

~~e.~~(E) On or before February 1, 2009, the Executive Officer shall begin issuing identification numbers to TRU and TRU gen set operators for each unit based in California for which a complete application has been filed. The number will include ~~a 2-digit prefix for model year (e.g. 2001 model year would have a prefix 01); a 6-digit serial number; and a check-digit, and a letter indicating compliance status with in-use performance standards (either "L" or "U").~~ In the event that an operator applies for an early compliance certificate in accordance with subsection ~~(e)(1)(F)~~2477.5(f), ARB will also issue a certificate which acknowledges early compliance per ~~(e)(1)(F)~~3subparagraph 2477.5(f)(3).

- f.(F) Within 30 days of receipt of the ARB-issued identification number, owner/operators shall permanently affix or paint the identification number on the TRU or TRU gen set chassis housing in clear view according to the following specification:
 - I.1. The ARB identification number shall be preceded by the letters “**ARB**”.
 - II.2. Letters and numbers shall contrast sharply in color with the color of the background surface on which the letters are placed.
 - III.3. The location of the I.D. number shall be as follows:
 - i.a. Truck and trailer TRUs - both sides of TRU chassis housing.
 - ii.b. Rail car and shipping container TRUs– both sides of the TRU.
 - iii.c. TRU gen sets – both sides of gen set housing.
 - IV.4. Letters and numbers shall be readily legible during daylight hours, from a distance of 50 feet (15.24 meters) while unit is stationary.
 - V.5. Marking shall be kept maintained in a manner that retains the legibility required by the subparagraph immediately above.

2.(2) Non-California-based TRUs and TRU Gen Sets:

- a.(A) Operators of non-California-based TRUs and TRU gen sets may voluntarily apply for ARB identification numbers for TRUs that are based outside of California but operate within California during the normal course of business. Non-California-based operators may voluntarily submit the same application information listed above in subparagraph (e)(1)(E)1.a., above, using the same methods of submittal listed in subparagraph (e)(1)(e)1.b., above. Upon application approval, ARB would issue identification numbers to the operator in accordance with subparagraph (e)(1)(E)1.e., above. The non-California-based operator would then permanently affix or paint the identification number on the TRU or TRU gen set chassis in clear view, in accordance with (e)(1)(E)1.f., above.

- (3) Owners may use alternative unique equipment identification markings instead of affixing an ARB IDN, provided certain conditions are met:
 - (A) The owner must still register the TRU or TRU gen set in ARBER and must enter the unique equipment number in ARBER;

- (B) The alternative identification number shall be truly unique. Unique equipment identification numbers typically begin with a three to four digit company identifier that is issued by an international organization. This is followed by a five to six digit serialized number that is assigned to the equipment. Examples are the Reporting Marks that are issued by the American Association of Railroads for their UMLER system and the BIC Codes issued by Bureau International de Containers. Company equipment numbers that are not truly unique, worldwide, do not qualify.
- (C) These alternative identification numbers must be affixed or attached to both side of the TRU gen set, shipping container (if the TRU is permanently attached), semitrailer, or railcar and meet all of the requirements of subparagraph 2477.5.(e)(1)(F).
- (D) The ARB IDN shall be used in the operator report under subsection 2477.6(a).

(F)(f) Early Compliance with LETRU In-Use Performance Standards.

- 4-(1) For 2002 and older MY TRU and TRU gen set engines, operators or owners that meet the LETRU in-use performance standard earlier than required in paragraph (e)(1)(B) may apply to the Executive Officer for a delay in the ULETRU in-use performance standard. Except as provided below, early compliance would be achieved through any of the options available in paragraph (e)(1)(A).
- a-(A) This delay would not be available to the operator or owner if the engine manufacturer of the replacement engine is using the early compliance with engine emissions standards in U.S. EPA's Averaging, Banking, and Trading Program (or California's equivalent program).
- b-(B) Early compliance is conditioned upon real emission reductions (refer to definition in ~~sub-section (d)~~2477.4) occurring earlier than the applicable compliance deadline.
- e-(C) This delay may not be available to the operator or owner if public funds were used for early compliance. The applicant shall disclose whether public funds were used for any portion of early compliance and what program the funding came from.
- 2-(2) Early LETRU compliance with real emission reductions would allow specific units to delay compliance with ULETRU in-use performance standards by up to three years, according to the rounding conventions and examples listed below.

~~a.~~(A) Each year of early compliance with the LETRU in-use performance standards would be rewarded with 1 year delay in the ULETRU in-use performance standard.

~~i.~~1. One full year early compliance qualifies for one full year delay in meeting ULETRU compliance.

~~ii.~~2. Two full years early compliance qualifies for two full years delay in meeting ULETRU compliance.

~~iii.~~3. Three full years early compliance qualifies for three full years delay in meeting ULETRU compliance.

~~b.~~(B) A partial year of early LETRU compliance would be rounded to the nearest full year for the delayed ULETRU requirements.

~~i.~~1. Early LETRU compliance of 183 days or more in a calendar year would count toward a one year ULETRU delay.

~~ii.~~2. Early LETRU compliance of 182 days or less in a calendar year would not count toward a ULETRU delay.

~~3.~~(3) Upon receipt of an application to delay ULETRU compliance, the Executive Officer shall determine if the application demonstrates early compliance with LETRU in-use performance standards in accordance with subsection ~~(e)(1)(F)1.~~2477.5(f)(1), and if the application is approved, shall delay the in-use ULETRU compliance date for specific TRUs and TRU gen sets operating in California in accordance with subparagraph ~~(e)(1)(F)2.~~

~~4.~~(4) Upon approval of the application, ARB shall issue a certificate and ARB identification number in accordance with subsection ~~(e)(1)(E)1.e.~~2477.5(e)(1)(E) which acknowledges early compliance with LETRU requirements and discloses the number of years delay granted, and resulting ULETRU compliance date.

~~5.~~(5) The operator shall maintain a legible copy of the certificate in a water-tight sleeve mounted inside the TRU or TRU gen set chassis housing. The operator shall paint the identification number in clear view in accordance with subsection ~~(e)(1)(E)1.f.~~2477(e)(1)(F) on the specific TRU or TRU gen set that was granted the compliance extension.

(g) ULETRU Extension for Compliance by Original Compliance Date

- (1) Owners of model year 2001 and older TRUs or TRU gen sets that complied by the original December 31, 2008, compliance date, or owners of model year 2002 TRUs or TRU gen sets that complied by the original December 31, 2009, compliance date may qualify for a one year extension to the ULETRU compliance date, provided certain conditions are met:
- (A) The original engine was retrofit with a Level 2 VDECS, or
- (B) The original TRU was repowered with a replacement engine meeting:
1. Tier 4 final Non-Road/Off-Road Emission Standards, if the engine is rated at less than 25 hp, or
 2. Tier 4 interim Non-Road/Off-Road Emission Standards, if the engine is rated between 25 hp and less than 50 hp, or
- (C) The original TRU was replaced with a new unit equipped with an engine meeting:
1. Tier 4 final Non-Road/Off-Road Emission Standards, if the engine is rated at less than 25 hp, or
 2. Tier 4 interim Non-Road/Off-Road Emission Standards, if the engine is rated between 25 hp and less than 50 hp, and
- (D) The TRU or TRU gen set is registered in ARBER, the compliance information is complete and correct, and the IDN has been affixed to both sides of the TRU or TRU gen set housing.
- (2) Owners may apply for the ULETRU extension by submitting an ARB application form which includes the following information:
- (A) Owner name and Owner-Operator Number (OON);
- (B) The affected unit's IDN; and
- (C) Owner's signature, certifying under penalty of perjury that:
1. The unit was in compliance on or before December 31, 2008;
 2. All of the registration information is true and correct, and
 3. The IDN has been affixed to both sides of the TRU or TRU gen set.
- (3) Upon receipt of application for ULETRU extension, the Executive Officer shall determine if the application demonstrates the unit qualifies for ULETRU extension.
- (4) Upon approval of the application, the Executive Officer shall:

(A) Change the “Compliant Through” date in ARBER;

(B) Add a notation in ARBER explaining the reason for the change; and

(C) Notify the owner with a revised ARBER TRU Certification showing the new “Compliant Through” date.

(2)(h) Fuel Requirements.

(A)(1) OperatorsOwners Choosing to Use Alternative Diesel Fuels.

OperatorsOwners choosing to use alternative diesel fuels in compression ignition TRU and TRU gen set engines to meet the requirements of subsection ~~(e)(1)~~2477.5 shall:

1.(A) Maintain records in accordance with subsection ~~(f)(1)(B)~~2477.6(b) of this regulation.

2.(B) Use only fuel that is a VDECS alternative diesel fuel that contains no conventional diesel or CARB diesel fuel in TRUs or TRU gen sets operated in California.

3.(C) Permanently affix a label in clear view near the fill spout that identifies the proper fuel that is required to be in compliance.

4.(D) In the event that the operator decides to revert to using conventional diesel or CARB diesel fuel, the operator shall comply with the requirements of subsection ~~(e)(1)~~2477.5(a) within 10 days of discontinuation of alternative diesel fuel use. Within 10 days of discontinuation, the operator shall notify the Executive Officer in writing of this change in fuel use and shall include an update to any ARB I.D. number application the compliance information submitted to ARBER or annual report submitted to comply with subsections (e)(1)(E), (e)(1)(F), or (f)(1).

(B)(2) OperatorsOwners that Retrofit TRUs or TRU Gen Sets with a VDECS.

OperatorsOwners that retrofit TRUs or TRU gen sets with a VDECS that requires certain fuel properties to be met in order to achieve the required PM reduction or PM emissions shall only fuel the subject TRU or TRU gen set with fuel that meets these specifications when operating in the state of California. In addition, operatorsowners that choose a VDECS that requires certain fuel properties to be met in order to prevent damage to the VDECS or an increase in toxic air contaminants, other harmful compounds, or in the nature of the emitted PM shall only fuel the subject TRU or TRU gen set with fuel that meets these specifications.

(i) Compliance by Replacing Engines

Repowering a TRU or TRU gen set with a new replacement engine or a rebuilt replacement engine is a way to keep a TRU or TRU gen set in compliance with subsection 2477.5(a) and (b). However, if compliance with the TRU ATCM is the reason for repowering the equipment, the new or rebuilt replacement engine shall meet more stringent emissions standards than the original engine or the old engine shall be retrofit with the highest level of VDECS that is available, if a cleaner engine is not available. The new or rebuilt replacement engine must subsequently meet the in-use performance standard requirements of subsection 2477.5(a) by the compliance dates of subsection 2477.5(b), which are based on the new or rebuilt replacement engine's model year or effective model year (see definition).

(1) Current tier new replacement engines. Current tier new replacement engines shall use the engine model year to determine requirements and compliance dates. The engine model year is shown on the engine emissions label if the engine is manufactured when an emissions standard tier is in effect.

Emissions label language examples include, but are not limited to:

(A) "THIS ENGINE MEETS 2008 INT. TIER 4 EMISSION REGULATIONS FOR U.S. EPA AND CALIFORNIA NONROAD CI ENGINES." This is a current-tier 2008 model year engine for the purposes of in-use requirements and registration.

(B) "THIS ENGINE COMPLIES WITH U.S. EPA AND CALIFORNIA REGULATIONS FOR 2009 M.Y. NONROAD AND STATIONARY/OFF-ROAD DIESEL ENGINES." This is a current-tier 2009 model year engine for the purposes of in-use requirements and registration.

(2) Prior tier new replacement engines. Prior-tier new replacement engines shall use the effective model year (see definition) to determine requirements and compliance dates. The manufacture year and the installation year of a prior tier replacement engine are not relevant to determining the in-use requirements and the compliance dates. Prior-tier new replacement engine emissions labels typically do not clearly show the effective model year, but provide dates that indicate the prior-tier emissions standard that the engine meets. The year in the first sentence of the replacement engine emission label is the first year of the tier met. The date in the second sentence of the replacement engine label is the first day of the next tier standard. Table 6 and the following example of replacement engine emissions label language show how these labels shall be interpreted for this subarticle:

(A) "THIS ENGINE COMPLIES WITH CALIFORNIA OFF-ROAD AND U.S. EPA NONROAD EMISSION REQUIREMENTS FOR 2004 ENGINES UNDER 13 CCR 2423(j) AND 40 CFR 89.1003(b)(7). SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE AN OFF-ROAD ENGINE BUILT BEFORE JANUARY 1, 2008 MAY BE A VIOLATION OF CALIFORNIA AND FEDERAL LAW SUBJECT TO CIVIL PENALTY." The first sentence includes the year 2004 (the first year of the tier). The second sentence indicates the next tier started on

January 1, 2008, so the last year of the tier the engine met would be 2007. The center column of Table 6 shows the effective years 2004 to 2007 matches a Tier 2 engine in the 25-50 hp (trailer) category.

(3) Rebuilt replacement engines. Rebuilt replacement engines must meet the requirements of section 2477.16.

(A) Prior tier rebuilt replacement engines. If the rebuilt engine meets a prior tier emissions standard, then the effective model year (see definition) shall be used to determine the requirements and compliance dates. The rebuild year and the installation year of a prior tier replacement engine are not relevant to determining the in-use requirements and the compliance dates.

(B) Current tier rebuilt replacement engines. If the rebuilt engine meets the tier standard that is currently in effect, then the model year is the year that the rebuild is completed and this year shall be used to determine the requirements and compliance dates.

(j) In-Use Engines that do not have Serial Numbers

In-use engines that do not have serial number shall be replaced by December 31, 2008. Engines that do not have serial numbers are typically uncertified pre-Tier 1 engines produced well before 1999. Because these engines cannot be tracked reliably, they shall be replaced. Retrofitting these engines is not allowed because the emissions levels are not known and they are not included in any emission control group.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(k) Compliance Extension for In-Use Performance Standards Based on Unavailability of Compliance Technology

(1) If there is no compliance technology available for a TRU or TRU gen set within six months of a compliance date, the Executive Officer (E.O.) may grant a one year extension of the compliance deadline, provided certain conditions are met:

(A) A person or applicant must submit a written application to the E.O. that demonstrates to the E.O.'s written satisfaction that there is no suitable compliance option available that can be used on the specific equipment and the owner cannot otherwise meet the requirements of subsection 2477.5(a) by the compliance dates of subsection 2477.5(b). The E.O. may use his/her sole discretion and any information available to disprove the person's demonstration and/or deny the request. The cost of compliance shall not be a valid basis for availability. The application for and issuance of an initial

extension and subsequent extensions pursuant to this subsection shall be subject to the following requirements:

1. Except for the units for which the extension is sought, the applicant shall demonstrate that all other units subject to the owner or operator's direct control meet the requirements of subsections 2477.5(a) and (b);
2. The application shall be submitted to and received by the E.O. no later than six months before the compliance date of the engine for which the extension is requested;
3. The application shall identify each unit and engine for which the extension is requested;
4. For each engine identified in paragraph 2477.5(k)(1)(A)3., immediately above, the applicant shall provide a detailed description of the reasons and factors that serve as the basis for the applicant's claim that no suitable control technologies are available. The description shall include, but not be limited to, detailed engineering diagrams, calculations, and citations to applicable regulations that support the applicants claim that there are no suitable control technologies available.
 - a. For a replacement engine to be determined to be suitable or unsuitable, the concerns that will be considered are if the engine will physically fit and functionally perform in the equipment.

(2) The E.O. may grant additional one year extensions provided the same procedures are followed, as described in subsection 2477.5(k)(1), immediately above.

(I) Compliance Extension for In-Use Performance Standards Based on Delays Due to Private Financing, Equipment Manufacture Delays, or Installer Delays

(1) The Executive Officer (E.O.) may grant a one-time, maximum four month extension to the normal compliance date set forth in subsection 2477.5(b) for meeting the in-use performance standards set forth in subsection 2477.5(a), provided certain conditions are met:

(A) The TRU or TRU gen set is registered in ARBER;

(B) An extension request is submitted on or before the compliance deadline;

(C) An extension request is completed that provides details of the reason for the delay and compliance plan, as follows:

1. The owner must have ordered the compliance technology from the manufacturer no later than four months before the compliance date and the purchase order shows the order was placed no later than four months prior to the compliance date (failure to order the compliance equipment at

least four months before the compliance deadline would not be a valid reason and would disqualify the applicant); and

2. The control technology has not been received or installed since it was ordered due to manufacturer delays or excessive installation difficulties encountered by the installer; and
3. The applicant for the extension provides documentation to the E.O.'s satisfaction that demonstrates the criteria in subparts 1. and 2. above have been met. The E.O. may, in his/her sole discretion, use any information available to disprove any of the documentation submitted pursuant to subparts 1. and 2., above, or deny the application.

(2) Mitigations are required if the compliance extension is for more than 4 months and the conditions in subparagraph (l)(1), immediately above, are met.

(m) ULETRU Extension for Compliance with LETRU

- (1) The ULETRU compliance dates required under subparagraphs 2477.5(b)(1) through (4) may be extended one year for units equipped with model year 2003 or older engines if they complied by meeting the LETRU In-Use Performance Standard and the following qualifications are met:
 - (A) The original engine was retrofitted with a Level 2 VDECS; or
 - (B) The unit was repowered with a replacement engine that meets the LETRU in-use performance standard certification values in Tables 3 or 4; or
 - (C) The original unit was replaced with a unit that is equipped with an engine that meets the LETRU in-use performance standard certification values in Tables 3 or 4; and
 - (D) The unit is registered in ARBER under subparagraph 2477.5(e)

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(f) Monitoring, Recordkeeping, and Reporting Requirements.

TRU and TRU Gen Set Operator Recordkeeping and Reporting.

2477.6 Requirements for Operators

(A)(a) Operator Reporting.

- 4-(1) All operators subject to this regulation shall submit an Operator Report to ARB by January 31, 2009 that shall include the following information:

- ~~a.~~(A) Operator name, address, and contact information for the responsible official (phone number, email address, fax number).
- ~~b.~~(B) List of all terminals owned or leased by the operator located within California, with address, phone number, and terminal contact name.
- ~~c.~~(C) TRU and TRU gen set inventory information for each TRU and TRU gen set based in California that is owned or leased by the operator:
 - ~~i.~~1. TRU or gen set make, model, model year, and serial number.
 - ~~ii.~~2. TRU owner, and if other than operator, owner name, address, and contact.
 - ~~iii.~~3. Engine make, model, model year, and serial number.
 - ~~iv.~~4. Terminal(s) that the TRU is assigned to.
 - ~~v.~~5. ARB TRU or TRU gen set identification number, if already issued. If the ARB identification number has not been issued or there has been a change in the other identification numbers listed below since the prior annual report, then provide the following identification numbers (as applicable):
 - ~~i.~~a. Vehicle Identification Number.
 - ~~ii.~~b. Vehicle license number.
 - ~~iii.~~c. Railcar recording mark and car number.
 - ~~iv.~~d. Shipping container number (for TRU-equipped shipping containers only).
 - ~~v.~~e. Company equipment number.
 - ~~vi.~~6. Compliance status with paragraph (e)(1)(A) requirements.

~~2.~~(2) The Operator Report shall be updated within 30 days when changes to any of the above operator information occur.

~~a.~~(A) Operator Reports shall be submitted by one of the following methods:

- ~~i.~~1. Mail or deliver a physical report to ARB at the address listed immediately below:

California Air Resources Board
Stationary Source Division (TRU)
P.O. Box 2815
Sacramento, CA 95812

~~4.2.~~ Electronically submit through ARB's web site. The web address will be identified in an advisory.

~~3.(3)~~ Failure to report or submittal of false information is a violation of state law subject to civil penalty.

(B)(b) Alternative Diesel Fuel Use and Fuel Additive Recordkeeping and Reporting.

~~1.(1)~~ Operators that choose a compliance pathway that involves the use of alternative diesel fuel in accordance with ~~subparagraph (e)(1)(A)3.d.~~ subsection 2477.5(a)(3) (e.g. B100 biodiesel fuel or ultra-low-aromatic synthetic diesel fuel) and/or a VDECS that includes the use of a fuel additive (e.g. fuel-borne catalyst) shall maintain records that document exclusive use of the chosen fuel or additive for each affected CI engine and hours of operation. Appropriate records would be copies of receipts or invoices of appropriate fuel and/or fuel additive and daily operating hour logs.

~~2.(2)~~ Records shall be kept available for a minimum of three (3) years and shall be compiled and made available to the ARB upon request.

~~3.(3)~~ Failure to keep records or submittal of false information is a violation of state law subject to civil penalty.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.7 Requirements for Drivers

(a) After January 1, 2012, a driver shall not operate a TRU-equipped truck or tractor-trailer equipped with a TRU or TRU gen set on a highway within California unless the TRU or TRU gen set complies with section 2477.5(a).

(b) A driver must, upon demand, provide the following available information to authorized enforcement personnel:

- (1) Driver's license;
- (2) Truck or tractor registration;
- (3) Trailer registration;

- (4) Bill of lading or freight bill with origin and destination of freight being transported, the consignor (shipper) and consignee (receiver);
- (5) If dispatched by a freight broker, the freight broker information set forth in section 2477.8
- (6) If dispatched by a carrier, the carrier information set forth in section 2477.9;
- (7) If dispatched by a shipper, the shipper information set forth in 2477.10;
- (8) If dispatched by a receiver, the receiver information set forth in section 2477.11

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.8 Requirements for California-Based Freight Brokers

- (a) After January 1, 2012, California-based freight brokers that arrange the transport of perishable goods in TRU-equipped or TRU gen set-equipped trucks, tractor-trailers, shipping containers, or railcars on highways or rails within California must:
 - (1) Only dispatch TRUs or TRU gen sets that comply with section 2477.5.
 - (2) Provide the following information to a dispatched driver who will be traveling on a highway within California:
 - (A) Freight broker's business name;
 - (B) Freight broker's street address, state, zip code;
 - (C) Freight broker contact person's name; and
 - (D) Freight broker contact person's business phone number.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.9 Requirements for Carriers

- (a) After January 1, 2012, carriers that dispatch TRU-equipped trucks or tractor-trailers equipped with a TRU or TRU gen set on a highway within California must:
 - (1) Only dispatch TRUs or TRU gen sets that comply with section 2477.5.
 - (2) Provide the following information to a dispatched driver who will be traveling on a highway within California:
 - (A) Carrier's business name;
 - (B) Carrier's street address, state, zip code;
 - (C) Carrier contact person's name; and
 - (D) Carrier contact person's business phone number.
- (b) Carriers may also have to comply with operator requirements, under section 2477.6, if they have terminals located in California.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.10 Requirements for California-Based Shippers

(a) After January 1, 2012, California-based shippers that that arrange transport of perishable goods in TRU-equipped or TRU gen set-equipped trucks, tractor-trailers, shipping containers, or railcars on highways or rails within California must:

(1) Only dispatch TRUs or TRU gen sets that comply with section 2477.5.

(2) Provide the following information to a dispatched driver who will be traveling on a highway within California:

(A) Shipper's business name;

(B) Shipper's street address, state, zip code;

(C) Shipper contact person's name; and

(D) Shipper contact person's business phone number.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.11 Requirements for California-based receivers

(a) After January 1, 2012, California-based receivers that that arrange transport of perishable goods in TRU-equipped or TRU gen set-equipped trucks, tractor-trailers, shipping containers, or railcars on highways or rails within California must:

(1) Only dispatch TRUs or TRU gen sets that comply with section 2477.5.

(2) Provide the following information to a dispatched driver who will be traveling on a highway within California:

(A) Receiver's business name;

(B) Receiver's street address, state, zip code;

(C) Receiver contact person's name; and

(D) Receiver contact person's business phone number.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.12 Requirements for Lessors and Lessees

(a) For purposes of this subarticle, the terms "lease," "leased," "lessor," and "lessee" mean the same as "rental agreement," "rented," "owner of the rented vehicle," and "renter," respectively.

(b) Lessors shall be subject to all of the following:

- (1) The owner requirements set forth in subsection 2477.5, except when the lessee is delegated the registration and IDN affixing responsibilities of subparagraph 2477.5(e) as follows:
 - (A) The lease contract must show clear delegation of the registration requirements to the lessee;
 - (B) The lessor must submit a Third Party Agreement Confirmation Form for Leased Units to ARB, along with copies of the contract pages of the lease contract with the language highlighted that identifies the lessee as the responsible party for registration, and
 - (C) The lessor must notify the lessee in writing of this delegation.
- (2) When TRUs or TRU gen sets are at the lessor's California terminal for 30 or more days, the lessor shall be subject to the operator requirements set forth in subsection 2477.6.

(c) Lessees shall be subject to:

- (1) The operator requirements set forth in subsection 2477.6 if they have assigned a leased or rented TRU or TRU generator set to their California terminal for 30 or more days.
- (2) If delegated by contract and the lessor has submitted a Third Party Agreement Confirmation Form for Leased Units to ARB and notified the lessee of delegation, the lessee is responsible for the registration requirements of subsection 2477.5(e) and shall complete all of the following:
 - (A) Submit a registration application for an IDN after at least 10 days of the lessor submitting the third Party Agreement Confirmation form for Leased Units, but no more than 30 days after the lessor's notice;
 - (B) Submit a copy of the ARBER TRU Certification to the lessor within 30 days after registration in ARBER is completed and an ARBER TRU Certification is issued.
 - (C) Affix (attach) the IDN to the TRU or TRU gen set housing within 30 days in accordance with subparagraph 2477.5(e)(1)(F).

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.13 Requirements for TRU and TRU Gen Set Original Equipment Manufacturers

(a) TRU and TRU original equipment manufacturers that equip TRUs or TRU gen sets with flexibility engines shall:

- (1) Provide supplemental labels that list all of the engine information needed to register the unit in ARBER, if the engine manufacturer's emissions label does not provide this information.
- (2) The supplemental label shall be permanently affixed to the replacement engine in an easily accessible place, in accordance with 40 CFR 89.110 (for Tier 1 or Tier 2) or 40 CFR 1039.135 (for Tier 4).
- (3) Notify all prospective buyers prior to sale of the TRU or TRU generator set that the engine is a flexibility engine, the effective model year of the engine, and the resulting in-use performance standard compliance date for that engine.

(b) TRU and TRU gen set original equipment manufacturers (OEM) that sell TRUs, TRU gen sets, or replacement engines in California shall:

- (1) Provide a supplemental label with all new and rebuilt replacement engines that provides the information that is required to register the unit in ARBER, if the engine manufacturer's emissions label does not provide this information. Subparagraph 2477.5(e)(1)(A)7. lists the required engine information. If a prior-tier replacement engine is used, the effective model year shall be listed on the supplemental label, in addition to the information that is not included on the replacement engine label that is needed to register in ARBER.

(A) The supplemental label shall be permanently affixed to the replacement engine in an easily accessible place, in accordance with 40 CFR 89.110 (for Tier 1 or Tier 2) or 40 CFR 1039.135 (for Tier 4).

- (2) Provide a registration information document to dealers that would be given to owners upon sale of every new TRU or TRU gen set, new replacement engine, or rebuilt replacement engine that includes:

(A) All of the TRU or TRU gen set unit information that is needed to register in ARBER. This information must be the same as the information on the unit label that is attached to the unit. In the case of engine replacement sales, the registration information document would include entry spaces and instructions for the dealer or installer to fill in the unit information that is needed to register a unit in ARBER. The unit information that is required is listed in subparagraph 2477.5(e)(1)(A)4. The registration information document would include a certification statement by the TRU OEM stating that the unit registration information provided is exactly the same as listed on the TRU or TRU gen set unit label.

(B) In a separate section of the registration information document, all of the TRU or TRU gen set engine information needed to register in ARBER. This information must be the same as the information on the engine emissions label that is attached to the engine. The engine information that is required is

listed in subparagraph 2477.5(e)(1)(A)7. The registration information document would include a certification statement by the TRU OEM, dealer, or third party installer stating that the engine information provided is exactly the same as listed on the engine emissions label.

(c) Provide current production information to ARB by January 1st of each calendar year, as follows:

(1) Model name of each TRU or TRU gen set, as it appears on the unit label, that will be sold in California for the current production year; and

(2) For each unit model, provide the following engine information for the current production year:

(A) Engine manufacturer;

(B) Engine model, as it appears on the engine emissions label;

(C) Engine model, as it appears on the serial number label, if different;

(D) Engine Family;

(E) Rated horsepower and rated speed;

(F) Displacement (liters);

(G) Exhaust Emissions Control System

(H) Tier standard met

(I) Executive Order that the engines are manufactured under

(3) Current Production Information Reports shall be submitted by one of the following methods:

(A) Mail or deliver a physical report to ARB at the address listed immediately below:

California Air Resources Board
Stationary Source Division (TRU)
1001 I Street
Sacramento, CA 95814

(B) Electronically submit to ARB's TRU contact person via email.

(d) Provide Prior-year production information to ARB by January 31st of each calendar year, as follows:

(1) Provide the number of units produced for each category listed below:

(A) TRUs produced with less than 11 hp diesel engines for:

1. North American-directed sales

2. U.S.-directed sales

3. California-directed sales

(B) TRUs produced with 11 hp to less-than 25 hp diesel engines for:

- 1. North American-directed sales
- 2. U.S.-directed sales
- 3. California-directed sales
- (C) TRUs produced with 25 hp to less than 50 hp diesel engines for:
 - 1. North American-directed sales
 - 2. U.S.-directed sales
 - 3. California-directed sales
- (D) Of those TRUs produced for subparagraph 2477.13(a)(3)(C), above, provide the number of TRUs produced for use on refrigerated railcars
- (E) TRU gen sets produced for:
 - 1. North American-directed sales
 - 2. U.S.-directed sales
 - 3. California-directed sales

(3) Prior-Year Production Information Reports shall be submitted by one of the following methods:

(A) Mail or deliver a physical report to ARB at the address listed immediately below:

California Air Resources Board
Stationary Source Division (TRU)
1001 I Street
Sacramento, CA 95814

(B) Electronically submit to ARB's TRU contact person via email.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.14 Requirements for TRU, TRU Gen Set, and TRU-Equipped Truck and Trailer Dealers

(a) Dealers that sell and/or install TRUs, TRU gen sets, or replacement engines in California shall:

- (1) Pass the registration information document provided by the TRU or TRU gen set OEM to owners upon sale of every new TRU or TRU gen set that includes:
 - (A) TRU or TRU gen set unit information;
 - (B) Engine information
- (2) Pass the registration information document provided by the TRU or TRU gen set OEM or engine rebuilder to owners upon sale of every new replacement engine,

or rebuilt replacement engine that includes engine information, if supplied by the TRU OEM or engine rebuilder.

(3) If an engine is not supplied by a TRU OEM, the dealer shall provide a registration information document that lists all of the TRU or TRU gen set engine information needed to register in ARBER. This information must be exactly the same as the information on the engine emissions label that is attached to the engine. The engine information that is required is listed in subparagraph 2477.5(e)(1)(A)7. The registration information document would include a certification statement by the TRU dealer stating that the engine information provided is exactly the same as listed on the engine emissions label.

(b) Dealers that sell TRUs or TRU gen sets from businesses located in California may have in their possession, TRUs or TRU gen sets that are noncompliant with the in-use performance standards of subsections 2477.5(a) and 2477.5(b), and the registration requirements of subsections 2477.5(e), provided the following conditions are met:

(1) The noncompliant TRUs or TRU gen sets are not sold for use in California prior to being brought into compliance with these requirements;

(2) The noncompliant TRU or TRU gen set is sold to a person that would not be reasonably expected to do business in California;

(3) The noncompliant TRUs or TRU gen sets are not rented or leased prior to being brought into compliance with these requirements;

(4) The noncompliant TRUs or TRU gen sets are not operated at the dealers place of business or on California highways for the purposes of controlling the environment of temperature sensitive products while in California.

(5) If a noncompliant TRU or TRU gen set is to be in transit on California highways:

(A) The TRU or TRU gen set shall not be operating;

(B) The dealer shall be responsible for ensuring that no temperature-sensitive products are transported in the vehicle;

(C) The dealer shall provide to driver with written evidence that the noncompliant TRU or TRU gen set is under the control of the dealer, including the following information:

1. Dealer's business name;

2. Dealer's street address, state, zip code;

3. Dealer contact person's name;

4. Dealer contact person's business phone number;

5. Date(s) transport will take place;

6. Statement of the reason for transporting the noncompliant equipment

7. TRU or TRU gen set serial number

8. Physical address of starting location;

- 9. Physical address of ending location; and
- 10. Dealer management signature, under penalty of perjury, that all of the information is true and correct.
- (D) All circumstances at the time of inspection shall be consistent with the purpose of transit, otherwise a citation shall be issued.

(6) During transit on California highways, the driver, upon request, must show an inspector that no temperature-sensitive products are being transported, must present written evidence that the noncompliant TRU or TRU gen set is under the control of a dealer, including the following information:

- (A) Dealer's business name;
- (B) Dealer's street address, state, zip code;
- (C) Dealer contact person's name;
- (D) Dealer contact person's business phone number;
- (E) Date(s) transport will take place;
- (F) Statement of the reason for transporting the noncompliant equipment
- (G) TRU or TRU gen set serial number
- (H) Physical address of starting location;
- (I) Physical address of ending location; and
- (J) Dealer management signature, under penalty of perjury, that all of the information is true and correct.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.15 Requirements for Repair Shops Located in California that Work on TRUs or TRU Gen Sets

(a) Repair shops that sell and/or install new or rebuilt TRU replacement engines in California shall:

- (1) Pass the registration information document provided by the TRU or TRU gen set OEM or engine rebuilder to owners upon sale of every new TRU replacement engine or rebuilt replacement engine that includes the engine information needed to register in ARBER, as listed in subsection 2477.5(e)(1)(A)7.
- (2) If an engine is not supplied by a TRU OEM, the installer shall provide a registration information document that lists all of the TRU or TRU gen set engine information needed to register in ARBER:
 - (A) This information must be exactly the same as the information on the engine emissions label that is attached to the engine.
 - (B) The engine information that is required is listed in subsection 2477.5(e)(1)(A)7.

(C) The registration information document would include a certification statement by the repair shop responsible official stating that the engine information provided is exactly the same as listed on the engine emissions label.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.16 Requirements for Engine Rebuilders

(a) When a TRU engine is being rebuilt to remain in compliance with the in-use standards of subsections 2477.5(a) and 2477.5(b), it must be rebuilt in accordance with the 40 CFR, sections 89.130 and 1068.120, and 13 CCR, section 2423(l). This means that:

(1) To remain in compliance with the in-use performance standards, the rebuilt engine cannot be rebuilt to the same tier as the original engine. The engine must be rebuilt to a configuration of a later, more stringent emissions standard tier than the original engine;

(2) The engine must be rebuilt to a certified configuration of matched components. "Matched components" means a complete set of components corresponding to the certified emissions configuration (tier) of the engine that is being used as the reference for the rebuilt engine.

(b) Engine rebuilders shall provide a supplemental label with each rebuilt engine that includes the following information:

(1) Name of the engine rebuilder;

(2) Engine manufacturer of the original engine

(3) Engine model;

(4) Engine model year:

(A) Prior tier engines. If the rebuilt engine meets a prior-tier emissions standard, then the effective model year is required (see definition of effective model year);

(B) Current tier engines. If the rebuilt engine meets the tier standard that is currently in effect, then the model year is the year that the rebuild is completed.

(5) Horsepower rating of the certified configuration of the rebuilt engine;

(6) Engine Family: This may be omitted for rebuilt engines.

(7) Emissions standard tier met by the certified configuration (e.g. Tier 2, Tier 4i, etc.):

(8) Year that the rebuild was completed:

(c) Supplemental labels shall be permanently affixed to the replacement engine in an easily accessible place, in accordance with 40 CFR, section 89.110 (for Tier 1 or Tier 2) or 40 CFR, section 1039.135 (for Tier 4).

(d) Engine rebuilders shall provide, upon request, documentation that demonstrates they have complied with the engine rebuilding practices of 40 CFR, sections 89.130 and 1068.120, and 13 CCR, section 2423(l) . Specifically, that:

(1) There is a reasonable technical basis for knowing that the resultant engine is equivalent, from an emissions standpoint, to a certified configuration (i.e. tolerances, calibrations, specifications). A reasonable technical basis would exist if (a) parts installed, whether the parts are new, used, or rebuilt, are such that a person familiar with the design and function of engines would reasonably believe that the parts perform the same function with respect to emission control as the original parts; and (b) any parameter adjustment or design element change is made only in accordance with the original engine manufacturer's instructions or where data or other reasonable technical basis exists that such parameter adjustment or design element change, when performed on the engine or similar engines, is not expected to adversely affect in-use emissions.

(2) Such a technical demonstration must be signed and stamped by a licensed professional engineer.

(e) Engine rebuilders shall provide a registration information document to dealers or installers that shall be given to owners upon sale of every rebuilt replacement engine that includes:

(1) All of the TRU or TRU gen set engine information needed to register in ARBER. Engine family may be omitted for rebuilt engines. This information must be the same as the information on the rebuilt engine's re-label and supplemental emissions label that is attached to the engine. The engine information that is required is listed in subsection 2477.5(e)(1)(A)7. The registration information document would include a certification statement by the engine rebuilder, or third party installer stating that the engine information provided is exactly the same as listed on the engine emissions label.

(2) A separate section of the registration information document shall include entry labels and spaces for all of the TRU or TRU gen set unit information that is required to register the unit in ARBER. The unit labels required are listed in subparagraphs 2477.5(e)(1)(A)4 and 5. The registration information document

would include a certification statement, with a signature space for the third party installer, stating that the unit information provided is exactly the same as listed on the unit label.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(2) Facility Monitoring, Recordkeeping, and Reporting.

(A)2477.17 Requirements for Facilities Facility Reporting.

(A)(a) All facilities subject to this subsection shall submit a Facility Report to ARB by January 31, 2006, containing the following information, as of December 31, 2005:

- 1-(1) Contact information for the facility's responsible official.
- 2-(2) Provide all North American Industrial Classification System codes (NAICS) applicable to the facility.
- 3-(3) The number of loading dock doors serving refrigerated storage space.
- 4-(4) The number of square feet of refrigerated storage space.
- 5-(5) The number of TRUs or TRU gen sets under facility control by model year and horsepower category.
- 6-(6) The number of refrigerated trucks, trailers, shipping containers, or railcars leased or rented.
- 7-(7) The total annual TRU engine operating hours for all TRUs or TRU gen sets under facility control during 2005 (e.g. total TRU engine operating time for both on-road and off-road operations).
- 8-(8) The average weekly number of inbound refrigerated trucks, trailers, shipping containers, and railcars delivering goods to the facility during 2005, calculated by dividing the annual total inbound refrigerated loads by 52.
- 9-(9) The average weekly number of outbound refrigerated trucks, trailers, shipping containers and railcars delivering goods from the facility during 2005, calculated by dividing the annual total outbound refrigerated loads by 52.
- 10-(10) The average total number of hours per week that outbound TRU or TRU gen set engines operate while at the facility during 2005. Average TRU or TRU gen set engine operating time at facility for outbound

refrigerated loads may be used if the result is representative of the outbound TRU or TRU gen set operations at facilities, as determined by the Executive Officer. Average values would be determined for outbound loads based on recordkeeping, conducted in accordance with subparagraph (f)(2)(B)2., and applied to the total annual number of refrigerated outbound loads, and then weekly averages calculated as follows: Average TRU or TRU gen set engine operating time per outbound refrigerated load multiplied by the total annual number of outbound loads, divided by 52 weeks equals the average total number of hours per week that outbound TRU or TRU gen set engines operate while at the facility.

~~14.~~(11) The average total number of hours per week that inbound TRU or TRU gen set engines operate while at the facility during 2005. Average TRU or TRU gen set engine operating time at facility for inbound refrigerated loads may be used if the result is representative of the inbound TRU or TRU gen set operations at facilities, as determined by the Executive Officer. Average values would be determined for inbound loads based on recordkeeping, conducted in accordance with subparagraph (f)(2)(B)2., and applied to the total annual number of refrigerated inbound loads, and then weekly averages calculated as follows: Average TRU or TRU gen set engine operating time per inbound refrigerated load multiplied by the total annual number of inbound loads, divided by 52 weeks equals the average total number of hours per week that inbound TRU or TRU gen set engines operate while at the facility.

~~12.~~(12) The number of refrigerated trailers (as defined) that are used at the facility for cold storage, the total annual number of hours of TRU engine operation associated with these refrigerated trailers, and the total annual number of hours of operation using electric standby associated with these refrigerated trailers.

~~(B)~~(b) Recordkeeping.

~~1.~~(1) Recordkeeping that substantiates the information reported in the Facility Report shall be maintained and shall be compiled and made available to State inspectors upon request for a minimum of three (3) years.

~~2.~~(2) The Executive Officer may approve alternative recordkeeping and calculation procedures for determining the average weekly hours of TRU engine operation at a facility for inbound and outbound refrigerated loads, provided the Executive Officer finds that the alternative procedures meet the intent of subparagraph (f)(2).

~~(C)~~(c) Facility Report Submittals. Facility Reports shall be submitted by one of the following methods:

- 4-(1) Mail or deliver a physical report to ARB at the address listed immediately below:

California Air Resources Board
Stationary Source Division (TRU)
P.O. Box 2815
Sacramento, CA 95812

- 2-(2) Electronically submit through ARB's web site. The web address will be identified in an advisory.

(D)(d) Failure to Report or Submittal of False Information. Failure to report or submittal of false information is a violation of state law subject to civil penalty.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

(g) 2477.18 Prohibitions.

- (1)(a) Except as allowed under subsection 2477.14(b), No person who is engaged in this State in the business of selling to an ultimate purchaser, or renting or leasing new or used TRUs or TRU gen sets, including, but not limited to, manufacturers, distributors, and dealers, auctioneers, carriers, private fleets, and independent owner-operators shall intentionally or negligently import, deliver, purchase, receive, or otherwise acquire a new or used TRU or TRU gen set engine that does not meet the performance requirements or alternatives set forth in subsection 2477.5(ea)(1) above.
- (2)(b) Except as allowed under subsection 2477.14(b), No person who is engaged in this State in the business of selling to an ultimate purchaser new or used TRU or TRU gen set engines, including, but not limited to, manufacturers, distributors, and dealers, auctioneers, carriers, private fleets, and independent owner-operators, shall sell, or offer to sell, to an ultimate purchaser who is a resident of this State or a person that could reasonably be expected to do business in this State a new or used TRU or TRU gen set engine that does not meet the performance requirements or alternatives set forth in subsection 2477.5(ea)(1) above. If a noncompliant TRU or TRU gen set is sold to a person who is a resident outside this State, then the bill of sale shall disclose to the buyer that the TRU or TRU gen set is not compliant for use in California and the TRU or TRU gen set must meet the in-use performance standards of section 2477.5 before operating in the State, and if the TRU is based in the State, then it must be registered in ARBER. The following statement must be included in the bill of sale of any noncompliant TRU or TRU gen set: "This TRU does not currently meet

the TRU ATCM's in-use performance standards under title 13, California Code of Regulations, section 2477.5, and is therefore not compliant for use in California."

~~(3)(c)~~ No person who is engaged in this State in the business of renting or leasing new or used TRU or TRU gen set engines, including, but not limited to, manufacturers, distributors, and dealers, carriers, private fleets, and independent owner-operators shall lease, offer to lease, rent, or offer to rent, in this state any new or used TRU or TRU gen set engine that does not meet the performance requirements or alternatives set forth in section 2477.5(ea)(4) above.

~~(4)(d)~~ Operators of affected facilities and operators of affected TRUs and TRU gen sets are prohibited from taking action to divert affected TRUs to alternative staging areas in order to circumvent the requirements of this section.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

~~(h)~~**2477.19 Penalties.**

~~(4)(a)~~ All persons, as defined in section 19 of the Health and Safety Code, found to be in violation of title 13, CCR, section 2477 may be cited and subject to the penalty provisions set forth in Health and Safety Code sections 39674, 39675, 42400 et seq., 42402 et seq., and 42410.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.

2477.20 Severability. If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulations is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.