



Transport Refrigeration Unit ATCM Tutorial

Revised 1-11-2011

California Environmental Protection Agency
 Air Resources Board

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- These tutorial slides cover the California Air Resources Board's (ARB) Transport Refrigeration Unit (TRU) Airborne Toxic control Measure (ATCM). They were last updated on or about November 18, 2010. These slides may be updated in the future, with or without notice.

Overview

- ◆ Terminology
- ◆ Background
- ◆ TRU ATCM Overview
- ◆ Owner/Operator Requirements
- ◆ Verified Diesel Emission Control Strategies (VDECS)
- ◆ Registering TRUs with ARB and Operator Reports
- ◆ Enforcement – what to expect
- ◆ Further Information/Advisories/TRU Help Line



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- Here's an overview of what is covered in this slide tutorial.
- First, some terminology and background or history related to this regulation is provided.
- Then, an overview of the TRU ATCM is provided, including owner/operator requirements.
- Some information is included about verified diesel emission control devices, or VDECS, that can be used to retrofit TRUs.
- TRU registration and Operator reports are discussed.
- Several slides discuss what affected parties can expect in the enforcement of this regulation.
- The last slide covers where you can find further information, such as compliance assistance materials and TRU Advisories, and the TRU Help Line, in case you have questions.

What is a TRU/TRU Generator Set?

- ◆ TRU stands for transport refrigeration unit
- ◆ A TRU is a refrigeration system that is powered by an integral diesel engine that is used in the transport of perishable goods
- ◆ TRU generator sets that provide electric power to refrigerated shipping containers are also affected by this regulation
- ◆ Unless otherwise noted, all references to TRUs also include TRU generator sets

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Before we get started, let's cover some terminology and make sure we understand what a TRU is and isn't.

TRU is an abbreviation for transport refrigeration unit.

For the purposes of this regulation, a TRU is a refrigeration system that is powered by an integral diesel engine used in the transport of perishable goods.

TRU generator sets are 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 ocean-going shipping containers.

The TRU ATCM applies to both TRUs and TRU generator sets, so unless otherwise noted, all references to TRUs will also include TRU generator sets.

What is a TRU/TRU Genset?



Trailer TRU



Pin-On
TRU Gen Set



Under-Slung
TRU Gen Set

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The picture on the left is a TRU with the housing skin removed. Note the engine on the lower right and the refrigeration unit on the lower left of this picture.

The picture in the middle shows a TRU generator set mounted on an ocean-going shipping container.

The picture on the right shows a white under-slung TRU generator set mounted under the yellow frame of a trailer chassis (just to the right of the trailer wheels).

What is NOT a TRU?

- ◆ Refrigeration systems that do not have an integral diesel internal combustion engine are not TRUs:
 - Small delivery vans where the refrigeration compressor is belt-driven off the vehicle's engine
 - Electrically driven refrigeration systems on ocean-going shipping containers

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If a refrigeration system is powered off the vehicle engine, it is not a TRU, as defined in the TRU ATCM. This type of system does not have its own integral engine powering the refrigeration system, so it would not be a TRU. An example of this is small delivery van.

Similarly, an ocean-going shipping container with no integral internal combustion engine – one that is electrically powered by ship-power when at sea and shore-power when at the port – would not be a TRU.

What is NOT a TRU?



Ocean-Going Shipping Container



Shipping Container with TRU Gen Set 6

The picture on the left shows an ocean-going refrigerated shipping container with no generator set.

The picture on the right shows an ocean-going shipping container with a generator set pinned on above the refrigeration system. Again, the refrigerated shipping container itself is not subject to the TRU ATCM, but the TRU gen set is subject to the regulation.

Background



- ◆ Diesel PM identified as a toxic air contaminant in 1998
- ◆ Diesel Risk Reduction Plan approved 2000
- ◆ TRU ATCM adopted February 2004
- ◆ Effective December 2004
- ◆ U.S. EPA authorized ARB to enforce, January 16, 2009

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This slide provides some background information:

- State law requires ARB to assess the need for, and the appropriate degree of control to reduce the public's exposure to toxic air contaminants (TAC).
- In 1998, diesel particulate matter (or PM) was identified as a TAC. If you are interested in the process that was used in making this determination and the science behind the public health risk due to diesel PM, a website you can visit is: <http://www.arb.ca.gov/toxics/dieseltac/dieseltac.htm>.
- Because of its potency and the large amount of diesel emissions in California's air, diesel PM is the number one contributor to adverse health effects of any TACs known today.
- The ARB adopted the Diesel Risk Reduction Plan in 2000, which included an element to develop a regulation to reduce diesel PM from TRUs.
- The TRU ATCM was adopted by the Board in February 2004, and became effective December 2004.
- The U.S. Environmental Protection Agency (EPA) authorized ARB to enforce the TRU ATCM on January 16, 2009.

Owner/Operator Applicability

- Any reference to TRUs also applies to TRU generator set (gen set) engines
- In-use performance standards
 - Applies to owners and operators of ALL TRUs that operate in California
 - Includes TRUs based out-of-state, that operate in California (including those coming in from other U.S. states, Canada and Mexico)
- Registration in ARBER to get ARB I.D. Number (IDN) for each TRU
 - Applies to TRU owners/operators of California-based TRUs
 - Out-of-state TRUs – IDN is voluntary
- Operator reports
 - Applies to operators of California-based TRUs

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The TRU owner/operator requirements apply to both TRUs and TRU generator sets (or “gen sets”), so any reference to TRUs includes TRU gen sets, unless otherwise specified.

- In-use performance standards apply to ALL TRU engines that operate in California. Owners and operators of TRUs are responsible for compliance with the in-use standards.
 - Even the TRUs that are based outside of California must meet these in-use performance standards if they operate in California

In-Use performance standards apply to TRUs coming into California from out-of-state (e.g. TRUs coming from other U.S. states, Canada, and Mexico).

- Owners are also required to register all California-based TRUs. This is done by applying for ARB Identification Numbers (IDN) for each California-based TRU:
 - IDNs are voluntary for TRUs that are based outside of California. Operators with TRUs that are based out-of-state, but come into California regularly, may choose to register their TRUs with ARB to pre-screen the TRU’s compliance status and thus reduce inspection times at border crossings, scales, distribution centers, and truck stops.
- Operators of California-based TRUs are required to submit Operator Reports for each terminal located in California where TRUs are garaged, maintained, operated or dispatched from.

Key Definitions

- ◆ “**California-Based TRUs**” means TRUs equipped on trucks, trailers, shipping containers, or railcars that a reasonable person would find to be regularly assigned to terminals within California.
- ◆ “**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.
- ◆ “**Operator**” means any person, 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.
- ◆ “**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.

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- Please review the key definitions related to the Owner/Operator requirements, listed in this slide:
 - California-Based TRUs
 - Owner
 - Operator
 - Operate

Key Definitions (cont'd)

- ◆ “**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.
- ◆ “**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.

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- Please review the key definitions related to the Owner/Operator requirements, listed in this slide:
 - Owner/Operator
 - Terminal

Owner/Operator Requirements

Requirements apply to TRU engines and TRU generator set engines

- ◆ Engines must meet in-use performance standards
 - Standards vary by model year and horsepower (see later slide)
- ◆ Registration to get ARB I.D. number (IDN)
 - Register each TRU by applying for IDN
 - Register on ARB's Equipment Registration (ARBER) system
 - ARB issues unique IDN for each TRU
 - Applications include owner information, TRU (unit) and engine information, compliance status, and how compliance was achieved
 - See Advisory 08-06
 - Owner must affix IDN on both sides of TRU housing within 30 days
 - See TRU Advisory 08-10
 - Updates within 30 days of information changes
- ◆ Operator reports
 - Report California terminal address, contact information, and all IDNs assigned to terminal
 - Updates within 30 days of information changes

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The owner/operator requirements include:

- TRU engines must meet in-use performance standards (subsequent slides provide more detail).
- Registration is required to get an ARB ID number (or IDN) for each TRU.
- Owners must register TRUs in ARB's Equipment Registration (ARBER) system.
 - ARB will issue a unique IDN for each TRU.
- IDN applications include TRU owner information, TRU unit information, TRU engine information, compliance status with the in-use performance standards, and how compliance was achieved. TRU Advisory 08-06 explains what information is needed.
- IDNs must be painted or affixed to the TRU housing within 30 days of being issued by ARB. TRU Advisory 08-10 explains this in more detail.
- Operators of California-based TRUs must report where their California terminals are located, provide contact information, and list all of the TRU IDNs that are assigned to these terminals.
- Updates are required for both registration information and Operator Reports within 30 days of any changes in the information that was submitted.

Electronic Submittals - ARBER

- ◆ Go to the ARBER website:
<http://www.arb.ca.gov/arber/arber.htm>
- ◆ Help pages describe each entry and provide instructions (see links on the left navigation bar)
- ◆ Make sure your computer and internet browser meet the ARBER system requirements
- ◆ Click on the “ARBER Login” link
- ◆ Fill out electronic forms
 - Company Profile
 - Model Information
 - Compliance Information
- ◆ Submit
- ◆ Certify the submittal
 - Sign and mail to ARB
- ◆ Operator Report

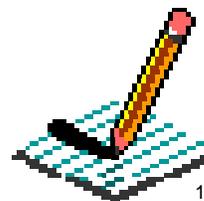


Owners can apply for ARB IDNs and submit Operator Reports on-line, via the Internet:

- Go to the ARBER website: <http://www.arb.ca.gov/arber/arber.htm>
- Instructions are included in the **TRU Help Pages** (see links in the left navigation bar):
 - Company Profile
 - Model Information
 - Compliance Information
 - Operator Reports
- Review the ARBER system requirements and make sure your computer and Internet browser meet these requirements: <http://www.arb.ca.gov/arber/registration.htm>.
(Hint: make sure your browser is updated to the latest version.)
- Click on the “ARBER Login” link and establish your user profile.
- Fill out electronic forms for the IDN application:
 - Company Profile
 - Model Information
 - Compliance Information
- Submit each of these electronic forms.
- Check your inputs on the Certification Page.
 - Print out the Certification Page.
 - Sign the Certification Page.
 - Make a copy for your records.
 - Mail the signed Certification Page to ARB (address shown on the page).
- Fill out the electronic form for the Operator Report

Manual Form Submittal

- ◆ Call the TRU Help Line at 1-888-878-2826 and request manual forms be mailed to the applicant.
- ◆ Alternatively, download manual forms from the TRU website at: <http://www.arb.ca.gov/diesel/tru/tru.htm>
 - Click on the link for “ARBER TRU IDN Manual Application”
 - Print out and review the instructions
 - Click on the links for the two forms:
 - Equipment Registration Form: TRU-REG (#29)
 - Model-Engine-Compliance Form: TRU-MEC (#30)
 - Fill out the forms and mail to ARB (address on forms)
 - It may take up to 60 days to get IDNs using the manual forms
 - Click on the link for “TRU Operator Report and Terminal Information Help Page”
 - Print out and review the instructions
 - Click on the links for the two forms:
 - Operator Report Form: TRU-OR (#33)
 - Terminal Information Form: TRU-TI (#34)
 - Fill out the forms and mail to ARB (address on forms)



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- Owners/operators that do not have Internet access may call the TRU Help Line and request these forms and instructions to be mailed to them.
- Manual forms for IDN applications and Operator Reports may also be downloaded from the TRU website at: <http://www.arb.ca.gov/diesel/tru/tru.htm>. Owners need to be aware that it may take at least several weeks to get IDNs using the manual form method if all of the registration information is submitted correctly. It may also take several months, if the registration information is not correct and ARB staff has to contact the applicant to resolve issues. Manual applications may therefore delay the owner's ability to submit the Operator Report or update within the 30 day deadline. Therefore, electronic submittals through the ARBER website (see previous slide) are preferred, since IDNs can be issued instantaneously if the application is complete.
- At the TRU website, click on the link for “ARBER TRU IDN Manual Application” (includes detailed instructions)
 - Print out and review the step-by-step instructions.
 - Table 1 of the instructions describes each of the entries on the forms.
 - Click on the links in the instructions for the two forms that must be submitted:
 1. “Equipment Registration Form”: TRU-REG (#29)
 2. “Model-Engine-Compliance Information Form”: TRU-MEC (#30) – one for each TRU
 - Fill out the forms per the instructions and mail them to ARB at the address provided on the forms.
- At the TRU website, click on the link for “TRU Operator Report and Terminal Information Help Page” (includes detailed instructions)
 - Print out and review the step-by-step instructions.
 - Tables 1 and 2 of the instructions describe each of the entries on the forms.
 - Click on the links in the instructions for the two forms that must be submitted:
 1. “Operator Report Form”: TRU-OR (#33)
 2. “Terminal Information Form”: TRU-TI (#34) – one for each terminal
 - Fill out the forms per the instructions and mail them to ARB at the address provided on the forms.

Owner/Operator Requirements

- ◆ Unique IDNs are issued to the owner by ARB for each TRU
- ◆ The owner is responsible for permanently painting or affixing IDNs to each side of the TRU housing within 30 days of the IDN being issued:
 - Two exceptions are refrigerated railcars and TRU gensets (see TRU Advisory 80-03).
 - The IDN numbers must be preceded by the letters “ARB” (e.g. ARB 012345678)
 - The color of the letters and numbers must contrast sharply with the background color
 - The size of the letters and numbers must be such that they can be read during daylight hours from a distance of 50 feet while the unit is stationary
 - Markings shall be maintained in a legible condition

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As mentioned earlier, IDNs are issued to the owner by ARB and each TRU has a unique IDN.

- The owner is then required to permanently affix the IDN to both sides of the TRU housing within 30 days of the IDN being issued.
 - There are two exceptions to this: unique railcar reporting marks and TRU generator set BIC codes may be used instead of the ARB-issued IDN. The TRU owner must still apply to ARB for an IDN and must still use the IDN in their Operator Report. See TRU Advisory 08-03.
- The regulation includes lettering specifications for painting or affixing IDN labels to the TRU housing:
 - The nine-digit IDN must be preceded by the letters “ARB”.
 - For example: ARB 012345678
 - The numbers and letters must contrast sharply in color with the color of the background surface.
 - Letters and numbers must be legible and of sufficient size to be read from a distance of 50 feet during daylight hours while the unit is stationary. This can be accomplished with at least 2 inch high letter/number with ¼ inch thick character outlines.
 - Markings must be maintained in a legible condition to meet the above requirements.

In-Use Performance Standards

Less than 25 hp TRU/TRU Generator Set Engines

| In-Use Performance Standard | Requirement |
|-----------------------------|---|
| LETRU | Level 2 VDECS retrofit |
| ULETRU | Level 3 VDECS retrofit or Alternative Technology |

Greater than 25 HP TRU/TRU Generator Set Engines

| In-Use Performance Standard | Requirement |
|-----------------------------|--|
| LETRU | Level 2 VDECS retrofit |
| ULETRU | Use 0.02 g/hp-hr engine, Level 3 VDECS retrofit, or Alternative Technology |

LETRU = Low-Emission TRU In-Use Performance Standard

ULETRU = Ultra-Low-Emission TRU In-Use Performance Standard

VDECS = Verified Diesel Emission Control Strategy

Alternative Technology = ULETRU (and LETRU) if diesel PM emissions are eliminated at distribution centers and limited at delivery point facilities.

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- The important points to take from this slide are:
- In-use performance standards vary by horsepower,
 - The top table shows the in-use performance standards for less than 25 hp TRU engines.
 - The lower table shows the in-use performance standards for 25 hp and greater TRU engines.
- There are two levels of stringency:
 - LETRU (Low-Emission TRU) in-use standard
 - ULETRU (Ultra-Low-Emission TRU) in-use standard
- There are compliance options for meeting the in-use performance standards
 - Retrofit with the required level of VDECS
 - Level 2 retrofit meets the LETRU in-use standard
 - Level 3 retrofit meets the ULETRU in-use standard
 - Alternative Technologies may also be used to meet ULETRU (and LETRU); but to qualify, TRU diesel PM emissions must be eliminated at distribution centers and limited at delivery point facilities. There will be more about this in a later slide.
- More discussion about compliance options is provided in a later slide.

In-Use Performance Standards Compliance Schedule

| Engine Model Year | In-Use Compliance Standard Compliance Date | |
|-------------------|--|-------------------|
| | LETRU | ULETRU |
| 2001 and older | December 31, 2008 | December 31, 2015 |
| 2002 | December 31, 2009 | December 31, 2016 |
| 2003 | December 31, 2010 | December 31, 2017 |
| 2004 (<25 hp) | December 31, 2011 | December 31, 2018 |
| 2004 (>25 hp) | Skip to ULETRU | December 31, 2011 |
| 2005 | Skip to ULETRU | December 31, 2012 |
| 2006 | Skip to ULETRU | December 31, 2013 |
| 2007 | Skip to ULETRU | December 31, 2014 |
| 2008 | Skip to ULETRU | December 31, 2015 |
| 2009 | Skip to ULETRU | December 31, 2016 |
| 2010 | Skip to ULETRU | December 31, 2017 |
| 2011 | Skip to ULETRU | December 31, 2018 |
| 2012 | Skip to ULETRU | December 31, 2019 |
| 2013 | Skip to ULETRU | December 31, 2020 |
| 2014 | Skip to ULETRU | December 31, 2021 |

Generally, the compliance date is December 31st of model year plus 7 years.
See TRU Advisory 08-01 for exception allowing use of TRU model year.

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This table shows that compliance dates are phased in, based on the engine model year.

Engine model year is shown here in the left column. Compliance dates for meeting the LETRU in-use standard are shown in the middle column and for ULETRU in the right column.

It should be noted that the owner has the option of skipping compliance with the LETRU in-use standard and meeting the more stringent ULETRU standard, but this must be done by the earlier LETRU compliance date. That way they can choose to comply with the more stringent standard by the earlier compliance date and not need to worry about compliance costs a second time.

- Looking at the first row, you can see that model year (or MY) 2001 and older engines must comply with LETRU by the end of 2008 (middle column); however, ARB delayed enforcement of this first compliance date for one year, until the end of 2009 because U.S. EPA did not authorize ARB to enforce this regulation until after the first compliance date.
 - Then, these same model years, if they are still in use, must comply with the more stringent ULETRU in-use standard by the end of 2015 (right column).
- On the second row, you can see that MY 2002 must comply with LETRU by the end of 2009 (middle column). There was no grace period for this compliance date and will not be for any other in-use performance standard compliance dates.
 - Then, MY 2002 engines, if they are still in use, must comply with ULETRU by the end of 2016 (right column), 7 years after meeting LETRU.
- In the third row, MY 2003 engines meet LETRU by the end of 2010 and ULETRU by the end of 2017.
- The compliance requirements and dates for MY 2004 depend on whether the engine is rated at less than 25 hp or 25 hp and greater. MY 2004 engines rated at less than 25 hp must meet LETRU by the end of 2011 and ULETRU by the end of 2018. But, in the case of MY 2004 engines rated at 25 hp or greater, these engines must skip LETRU and meet ULETRU by the end of 2011.
- All MY 2005 and subsequent model year engines must skip LETRU and comply with ULETRU by the end of the 7th year after the engine model year.
 - So, model year 2005 engines would have to meet ULETRU by December 31, 2012.
 - Model year 2006 engines would have to meet ULETRU by December 31, 2013.
 - And this pattern continues until new TRU engines are equipped with an emissions control system that reduces diesel particulate matter to 0.02 grams per hp-hour or less, which would be aligned with the ULETRU in-use standard. Retrofits would not be required if the new engine meets ULETRU.
- You can see from this table that all in-use TRU engines must eventually comply with ULETRU in order to operate legally in California.
- The model year is displayed on the engine label, which is typically located on the valve cover or oil pan. Examples of engine labels are shown on the ARBER Help screens at: <http://www.arb.ca.gov/arber/trureg/trucompliance.htm>.
- The engine model year is used to determine the compliance date for the in-use performance standards, except in the case where the unit model year is only one year later. Then the unit model year or manufacture year may be used to determine the compliance date(s). If the difference between engine model year and unit model year is more than one year, then the engine model year must be used. See TRU Advisory 08-01.

Compliance Options for Meeting In-Use Performance Standards

- ◆ Replace in-use engine with new or newer engine
 - **Only** resets the compliance clock to the replacement engine model year plus 7 years
- ◆ Replace in-use engine with a rebuilt engine that meets a cleaner certified emissions configuration
 - See TRU advisory 08-05 for details
- ◆ Retrofit with required level of VDECS
- ◆ Use Alternative Technology
 - Must eliminate diesel engine emissions from the TRU engine at all facilities it visits, with narrow exceptions

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There are several ways to comply with the in-use performance standards.

- One compliance strategy is to use a TRU with an engine that is newer than 7 years old. Some fleets are complying by replacing older TRUs with new or newer TRUs.
- Similarly, the owner may choose to replace an in-use engine with a new or newer engine. This **only** resets the compliance clock, meaning that these replacement engines are in compliance until the new compliance deadline, seven years after the replacement engine's model year or effective model year.
- Old engines may be rebuilt to meet a more stringent emissions standard, provided all of the parts used are a "matched set" of parts from a configuration that has been certified to meet the more stringent emissions standard. A supplemental label must be permanently affixed in a visible area of the engine that includes the year of the rebuild and the emissions standard being met. This **only** resets the compliance clock to 7 years after the **effective model year** of the certified configuration, which may not be the same as the rebuild date. Because of this, rebuilt engines may not provide 7 full years of compliance from the rebuild date. See TRU Advisory 08-05 at the TRU website for more details.
- Retrofitting with the required level of VDECS is another compliance option, as discussed on previous slide #15:
 - Retrofit with a Level 2 VDECS to meet LETRU, or
 - Retrofit with a Level 3 VDECS to meet ULETRU.
- Using Alternative Technology is another compliance option. The key to using an Alternative Technology is that it must eliminate the use of the TRU engine (or the emissions of diesel PM) while it is at a distribution facility. There will be more on this in a later slide.

Verified Diesel Emission Control Strategies (VDECS) for TRUs

- ◆ VDECS' Executive Order (EO)
 - VDECS are verified for specific engine models and model years
 - Read the EO and VDECS owners manual before buying
 - Specific conditions may apply
- ◆ Enforcement issue
 - If not matched to right engines and installed appropriately, then DECS is not verified and installation is illegal – citations will be issued with significant penalties

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As previously discussed, retrofitting with the required level of VDECS is a compliance option.

- Proper selection of VDECS requires due diligence by the TRU owner to ensure the VDECS was verified for use on the TRU engine make, model, model year and operating conditions.
- Read the Executive Order that ARB issued when the verification was approved and carefully review the VDECS owners manual before you buy it to be sure the VDECS is matched correctly to your TRU engine.
- To be considered “verified,” a DECS must be matched with the correct engine model and model year engine, and used under the operating conditions for which it was verified.
- Talk to the VDECS manufacturer or their representative to correctly match your engine with a VDECS.
- During an inspection, ARB inspectors will make sure the retrofitted devices are verified and matched with the correct engine. Mis-matched VDECS-engine combinations will result in citations with significant penalties. This is engine tampering and would be an additional citation added to noncompliance with in-use standards violation.

Alternative Technologies

- ◆ Electric standby or hybrid electric/diesel
 - To qualify, TRU engines must not operate at non-retail delivery/pick-up points
 - Must plug in at any non-retail delivery or pick-up points
 - Engine run time at retail delivery points must not exceed 30 minutes, otherwise, electric power plugs are required at these delivery points
 - Records required to demonstrate compliance
 - See TRU Advisory 08-02 at the TRU website for more details
- ◆ Cryogenic temperature control
 - Hybrid cryogenic-diesel – records required to demonstrate compliance (TRU engine operation at non-retail delivery points is eliminated)
 - See TRU Advisory 08-13 at the TRU website for more details
- ◆ Qualifying Alternative Technologies meet LETRU and ULETRU

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- Alternative technologies must be used in such a way as to eliminate the TRU engine operation while at a distribution center or to eliminate diesel particulate matter emissions.
- If you choose electric standby as your compliance option for a TRU you must be careful to ensure that your operations actually qualify for compliance:
 - The TRU engine can't operate at any non-retail delivery or pick-up point. There are limited exceptions to this:
 1. TRU engine operations that are related to normal ingress and egress (e.g. engine operation during normal movements around the yard) at a non-retail delivery or pick-up point are allowed.
 2. TRU engine operations that are related to repair and maintenance are exempt.
 - TRU engine operation at retail delivery points is allowed, provided the engine run time does not exceed 30 minutes.
 - Recordkeeping is required with the use of electric standby. The operator must demonstrate TRU engine use is eliminated at the non-retail delivery and pick-up points and never exceeds 30 minutes and retail delivery and pick-up points.
 - See TRU Advisory 08-02 for more details.
- Cryogenic refrigeration systems would also require recordkeeping if they are of the hybrid type, where there is a diesel engine that can be used when on the road. Records need to demonstrate diesel TRU engine use is eliminated at non-retail delivery and pick-up points and is limited at retail delivery points. See TRU Advisory 08-13 for more details.
- Keep in mind that qualifying Alternative Technologies can meet both LETRU and ULETRU.

Enforcement

◆ ARB implementation and enforcement

- Inspections at border crossings, scales, roadside inspections, terminals, distribution centers, and delivery points
- Fines are assessed by the type of infraction:
 - Failure to meet in-use standards: \$1,000 per violation
 - Failure to register: \$500 per violation
 - Failure to attach IDN: \$300
 - Incorrect registration information: \$300
 - Fines are additive, for multiple violations
 - Fines increase if not corrected



- Inspections of TRUs will take place at border crossings, scales, and roadside inspections, distribution centers, terminals, and delivery points. Essentially, anywhere TRUs operate, inspectors may check for compliance.
- Fines can be at least the following amounts for each type of violation:
 - Failure to meet the in-use performance standards: \$1,000 per violation
 - Failure to register in ARBER to get an IDN for each TRU: \$300 per violation
 - Failure to attach the IDN to both sides of the TRU housing or in accordance with the size and contrast requirements: \$300 per violation
 - Submitting incorrect registration information to ARBER: \$300 per violation
- Fines for each violation are added together and may be greater than the amounts listed above if the owner fails to correct the violation within the amount of time allowed (typically 30 days) or if there are recurring violations.

Enforcement (cont'd)

- ◆ ARB Identification Number (IDN) database
 - Unit, engine, and compliance information provided in IDN application is entered
- ◆ Inspectors will access the database using the IDN or other identifying numbers to check compliance status
- ◆ Inspectors will have to open the TRU housing doors to inspect for compliance if no IDN – much more delay for the driver

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- IDN applications include information about the unit, engine, and compliance status.
- This information is entered into the ARBER database.
- Field inspectors will access ARBER data by entering an IDN or other identifying number to view the compliance status.
- California-based TRUs are required to have IDNs. Inspectors will look for California-based units with no IDN and a ticket will be issued to the driver for any violations.
- TRUs that are based out-of-state aren't required to have IDNs. On out-of-state units, inspectors ask the driver to open the TRU housing to check compliance. This will take more time than using an IDN. Fleets that come into California frequently are likely to be interested in getting an IDN to speed up the inspection process. Therefore, out-of-state TRU owners may voluntarily apply for IDNs. There are no fees for IDNs.
- As mentioned earlier, the TRU owner is responsible for compliance with the in-use performance standards and registration in ARBER.

Enforcement (cont'd)

- ◆ Comprehensive audits at:
 - Carrier terminals
 - Distribution centers
- ◆ Review records, check accuracy
- ◆ Inspections resulting from:
 - Complaints, tips from public
 - Field citations
- ◆ Plan to comply early



- More comprehensive audits will take place at carrier terminals and distribution centers. In addition to checking for compliance with IDNs and in-use performance standards, inspectors will audit operator reports to ensure they are up to date and the information is true and correct.
- As mentioned earlier, the operator is responsible for the accuracy of the IDN information and operator report information. Revisions to the IDN and Operator Report information are required within 30 days of any changes to this information.
- Some inspections at terminals and DCs will be in response to complaints, tips from the public, citations issued at border crossings, scales, and roadside inspections.
- Early compliance is recommended.

Further Information/Contacts

- ◆ TRU website:
<http://www.arb.ca.gov/diesel/tru/tru.htm>
– Advisories – click on link in left navigation bar
- ◆ ARBER website:
<http://www.arb.ca.gov/arber/arber.htm>
- ◆ TRU List Serve:
<http://www.arb.ca.gov/listserv/tru.htm>
- ◆ Toll-Free TRU Help Line
 - 1-888-878-2826
(1-888-TRU-ATCM)
- ◆ Complaint Hotline:
 - 1-800-952-5588



- If you need more detailed information, the TRU website provides compliance assistance materials and lists VDECS for TRUs. The web address is shown in this slide. Documents include:
 - “How Do I Comply with the TRU ATCM”
 - “Frequently Asked Questions and Guidelines for Compliance”
 - TRU Brochure #2 (in English and Español)
 - Advisories – see link on left navigation bar
 - “Control Technology Options for Complying with the TRU ATCM”
 - “TRU ATCM Compliance Option Contacts”
 - TRU Verified Diesel Emission Control Strategy (VDECS) Information – list of VDECS for TRU retrofits and links to companies that manufacture and install VDECS
- ARB Equipment Registration (ARBER) system website is where electronic on-line registration of TRUs can be completed to apply for ARB IDNs and submit Operator Reports.
- Sign up for the TRU Listserve so that you are emailed notices related to TRU ATCM compliance.
 - Start at the TRU website, scroll down and click on the link for “TRU List Serve”.
 - Enter your email address twice.
- If you have further questions, call us at ARB’s toll-free TRU help line:
1-888-878-2826 (1-888-TRU-ATCM.)
- ARB’s General Complaint Hotline is at 1-800-952-5588. Use this number to report noncompliant units.

Further Information/Contacts

- ◆ If you require special accommodation or language needs, please call 1-888-878-2826 or email tru@arb.ca.gov. TTY/TDD/Speech users may dial 711 for a California Relay Service.

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