



Compliance Guidelines for the Commercial Harbor Craft Regulation

What is the Commercial Harbor Craft Regulation?

The purpose of the Commercial Harbor Craft Regulation (regulation) is to reduce emissions of diesel particulate matter (diesel PM) and oxides of nitrogen (NO_x) from diesel engines used on commercial harbor craft operated in California Regulated Waters. California Regulated Waters are all internal waters, estuarine waters, ports and coastal waters within 24 nautical miles of the California coast. The regulation includes requirements for new and in-use (existing) engines as well as monitoring, recordkeeping, and reporting requirements. Additional information about this regulation is available at <http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>.

What is the status of this regulation?

The California Air Resources Board (ARB) adopted the regulation on October 20, 2008, and it became effective on November 19, 2008. On December 5, 2011 the United States Environmental Protection Agency (U.S. EPA) authorized the ARB to enforce all provisions of the regulation that were adopted October 2008.

ARB amended the regulation in 2010, adding in-use engine emission requirements for engines on crew and supply vessels, barges, and dredges. Amendments of the regulation became effective on July 20, 2011.

On January 19, 2017 the U.S. EPA authorized the ARB (82 Fed. Reg. 6500) to enforce the provisions of the amendments.

Who is required to comply with the regulation?

All owners/operators of commercial harbor craft that operate in California Regulated Waters are required to comply with this regulation. Commercial harbor craft include, but are not limited to, ferries, excursion vessels, tugboats (including ocean-going tugboats), towboats, crew and supply vessels, work boats, pilot vessels, barges, dredges, and commercial and charter fishing boats.

What do commercial harbor craft owners/operators need to do to comply with this regulation?

- Beginning January 1, 2009, all commercial harbor craft owners/operators are required to install (if not already installed) a non-resettable hour meter on each engine of their vessel and keep records of engine and vessel operation. They are required to submit an initial report to the ARB, providing vessel and engine information, as outlined in the text of the regulation. All vessel owners/operators need to keep a copy of the initial report and their yearly records on the vessel or in a central dockside location to be made available upon request by ARB staff.
- Beginning January 1, 2009, all diesel engines on commercial harbor craft must be fueled with CARB diesel fuel (sulfur content less than or equal to 15 parts per million), an alternative diesel fuel (such as biodiesel, water emulsions in diesel, etc.), or diesel fuels and/or additives that have received ARB verification.
- Engines on all new commercial harbor craft vessels are required to meet the United States Environmental Protection Agency (U.S. EPA) marine or U.S. EPA or ARB certified off-road engine emission standards (standards) in effect at the time of vessel acquisition. Off-road engines may be used if the engine or vessel manufacturer has complied with 40 CFR § 10142.605 (Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use).
- All owners/operators replacing an engine on their existing harbor craft vessel are required to install an engine that meets the U.S. EPA standards in effect at the time of engine acquisition. There are additional requirements for propulsion engines on new ferries.
- Owners/operators of ferries, excursion vessels, tugboats, towboats, crew and supply vessels, barges, and dredges must comply with additional in-use engine requirements per a compliance schedule (see pages 3 and 4).

Are barge and dredge vessel engines registered in ARB's Statewide Portable Equipment Registration Program (PERP) subject to the Commercial Harbor Craft regulation?

Yes; owners/operators of barge and dredge vessels are required to meet the fuel use requirement, monitoring, reporting and recordkeeping requirements. In addition, the amendments to the commercial harbor craft regulation added in-use engine compliance requirements for all barge and dredge vessel engines, including those registered in PERP or permitted through the local air districts.

Will I have to file a report to ARB any time other than for the initial report?

Yes; owners/operators will need to file a report for the following:

- Newly acquired vessel or engine: owners/operators acquire a commercial harbor craft vessel or an engine for one of their vessels.
- Change in engine hours of operation: a vessel operating at any time as a ferry, excursion vessel, tugboat, towboat, crew and supply vessel, barge, or dredge, significantly changes annual hours of engine operation, such that it changes the engine compliance date.
- Compliance plan: owners/operators of ferries, excursion vessels, tugboats, towboats, crew and supply vessels, barges or dredges must also file a report by February 28 of the required compliance year indicating their plan for complying with the in-use engine requirements.
- Demonstration of compliance: an additional report is required to demonstrate how they have complied, once compliance is complete.

Can I buy a vessel that is not new?

Yes; the owner/operator of a newly acquired vessel that has previously been in use, either in California or elsewhere, will have to comply with monitoring, reporting, and recordkeeping requirements. If the vessel operates as a ferry, excursion vessel, tugboat, towboat, crew and supply vessel, barge, or dredge and if any of the engines are Tier 1 or earlier (pre-2004, or model years 2004 through 2006, depending on engine size), the engine will be required to meet the in-use engine requirements per the compliance schedule. The regulation requires these engines to meet the U.S. EPA current model year marine or U.S. EPA or ARB certified off-road engine standards through engine replacement, modification, or retrofit. The U.S. EPA marine engine standards, including Tier 1, can be found in the regulation, 17 CCR § 93118.5, in the definitions section (d). See: <https://www.arb.ca.gov/ports/marinevess/harborcraft/hcregulatory.htm>

Can I replace an engine on my in-use vessel with an engine that is not new?

Owners/operators may replace an engine with an engine which is not new only if that engine meets the U.S. EPA current model year standards in effect at the time the vessel owner/operator acquires the engine for installation.

What are the additional requirements for propulsion engines on new ferries?

The propulsion engines on all new ferries acquired after January 1, 2009, with capacity of 75 or more passengers, must meet the applicable Tier 2 or Tier 3 standards in effect at the time of acquisition and additionally, must have the best available control technology (BACT) installed. Alternatively, ferry vessel owners/operators may comply with the regulation by installing propulsion engines that meet the Tier 4 standards.

What are the additional in-use engine requirements for ferries, excursion vessels, tugboats, towboats, crew and supply vessels, barges, and dredges?

The regulation requires that in-use Tier 1 and earlier propulsion and auxiliary diesel engines on a vessel operating as a ferry, excursion vessel, tugboat, towboat, crew and supply vessel, barge, or dredge meet emission limits equal to or cleaner than U.S. EPA standards (Tier 2 or Tier 3) in effect at the time the engine is brought into compliance. Once an engine meets either the Tier 2 or Tier 3 standards, the engine is considered to be compliant.

What if a vessel is used for more than one purpose?

All uses of the vessel must be reported in the initial report. If a vessel is used at any time during the year as a regulated in-use vessel type (ferry, excursion vessel, tugboat, towboat, crew and supply vessel, barge, or dredge), and the individual engine hours are 300 hours annually or more, or 80 hours annually or more for barge or dredge operation, the vessel's engines will be required to meet the in-use engine requirements per the compliance schedule. The engine's total annual hours of operation used in the regulated vessel type will be used to determine the compliance dates, per the compliance schedule.

When will in-use diesel engines on ferries, excursion vessels, tugboats, towboats, crew and supply vessels, barges, and dredges be required to comply?

Compliance dates for these in-use engines are based on the engine model year and the annual operating hours. The oldest, highest-use engines will be required to comply first. The regulation has four compliance schedules: one schedule (Table 1) for ferry, excursion, tug or towboat with homeports outside of the South Coast Air Quality Management District (SCAQMD), and an accelerated schedule (Table 2) for these vessels with homeports within the SCAQMD. There are two additional schedules for crew and supply vessels (Table 3) and barges and dredges (Table 4) that operate in Regulated California Waters.

Table 1. Compliance Dates for Vessels* with Homeports Outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	≥ 1500	12/31/2009
1975 and earlier	≥300 and < 1500	12/31/2010
1976 - 1985	≥1500	12/31/2011
1976 - 1985	≥ 300 and < 1500	12/31/2012
1986 - 1995	≥ 1500	12/31/2013
1986 - 1995	≥ 300 and < 1500	12/31/2014
Ferries Only 1996 - 1999	≥ 300	12/31/2014
Vessels Other Than Ferries 1996 - 1999	≥ 1500	12/31/2015
Vessels Other Than Ferries 1996 - 1999	≥ 300 and < 1500	12/31/2016
2000	≥ 1500	12/31/2015
2000	≥ 300 and < 1500	12/31/2016
2001 - 2002	≥ 300	12/31/2017
2003	≥ 300	12/31/2018
2004	≥ 300	12/31/2019
2005	≥ 300	12/31/2020
2006	≥ 300	12/31/2021
2007	≥ 300	12/31/2022

(*) Compliance dates applicable only to vessels operating at any time as a ferry, excursion vessel, tugboat, or towboat.

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 750 hours in 2011, the owners/operators must bring the engine into compliance with the in-use engine requirements by December 31, 2012.]

Table 2. Compliance Dates for Vessels* with Homeport in SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1979 and earlier	≥ 300	12/31/2009
1980 – 1985	≥ 300	12/31/2010
1986 – 1990	≥ 300	12/31/2011
1991 – 1995	≥ 300	12/31/2012
1996 – 2000	≥ 300	12/31/2013
2001	≥ 300	13/31/2014
2002	≥ 300	12/31/2015
2003	≥ 300	12/31/2016
2004	≥ 300	12/31/2017
2005	≥ 300	12/31/2018
2006	≥ 300	12/31/2019
2007	≥ 300	12/31/2020

(*) Compliance dates applicable only to vessels operating at any time as a ferry, excursion vessel, tugboat, or towboat.

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 300 or more hours in 2009, the owners/operators must bring the engine into compliance with the in-use engine requirements by December 31, 2010.]

Table 3. Compliance Dates for Engines on Crew and Supply Vessels Statewide

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1985 and earlier	≥ 1500	12/31/2011
1985 and earlier	≥ 300 and <1500	12/31/2012
1986 – 1995	≥ 1500	12/31/2013
1986 – 1995	≥ 300 and <1500	13/31/2014
1996 – 2000	≥ 1500	12/31/2015
1996 – 2000	≥ 300 and <1500	12/31/2016
2001 – 2002	≥ 300	12/31/2017
2003	≥ 300	12/31/2018
2004	≥ 300	12/31/2019
2005	≥ 300	12/31/2020
2006	≥ 300	12/31/2021
2007	≥ 300	12/31/2022

Table 4. Compliance Dates for Engines on Barges and Dredges Statewide

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	≥ 80	12/31/2011
1976 – 1980	≥ 80	12/31/2012
1981 – 1985	≥ 80	12/31/2013
1986 – 1990	≥ 80	13/31/2014
1991 – 1995	≥ 80	12/31/2015
1996 – 1999	≥ 80	12/31/2016
2000 – 2001	≥ 80	12/31/2017
2002	≥ 80	12/31/2018
2003	≥ 80	12/31/2019
2004	≥ 80	12/31/2020
2005	≥ 80	12/31/2021
2006	≥ 80	12/31/2022

How do I determine engine model year?

In most cases, the engine's actual model year of manufacture will be used to determine the required compliance date. However, if certain steps have been taken to reduce the emissions of the engine, an "effective model year" may be calculated based on the following:

- If an emissions control strategy has been implemented that obtains at least a 25% reduction of either diesel PM or NO_x, the effective model year may be calculated as the actual model year of manufacture plus five years (this is referred to as the "Engine Model Year +5" method); or
- If it is demonstrated that the engine has been rebuilt to Tier 1 standards or cleaner prior to January 1, 2008, the date of rebuild may be used as the engine's effective model year (this is referred to as the "Engine's Tier 1 Rebuild Model Year" method).

Is engine replacement the only way to comply with the in-use engine requirements for ferries, excursion vessels, tugboats, towboats, barges, and dredges?

No; there are two other options that may be used to comply:

- Demonstrate that the current engine already meets the Tier 2 or Tier 3 standards that are in effect at the time of compliance (i.e., through engine rebuild or by implementing an emission control strategy); or
- Demonstrate that the engine operates less than 300 hours per year in any regulated in-use vessel category other than barge or dredge, or less than 80 hours per year in the barge or dredge vessel categories

The regulation also includes an alternative control of emissions (ACE) option that allows harbor craft owners/operators to use alternative strategies to reduce the emissions from their fleet. The owners/operators must demonstrate that the emission reductions achieved with the alternative controls will be equivalent to, or exceed, the reductions obtained by direct compliance with the regulation. Alternative strategies may include engine modifications, exhaust after-treatment control, engine repower, using alternative fuels or fuel additives, or fleet averaging. ACE applications must be made available for public review and comment prior to being considered by the ARB Executive Officer for approval. Until such approval is granted, the owners/operators must meet the specific in-use engine requirements in the regulation.

Where can I find more information about the regulation?

The current version of the regulatory language can be accessed at: <https://www.arb.ca.gov/ports/marinevess/harborcraft/hcregulatory.htm>

The 2007 rulemaking documents can be accessed on our website at <http://www.arb.ca.gov/regact/2007/chc07/chc07.htm>. The rulemaking documents associated with the amendments to the CHC regulation can be accessed on our website at <http://www.arb.ca.gov/regact/2010/chc10/chc10.htm>.

If you have specific questions or comments about the regulation or supporting documents, please contact Zhenlei Wang at 916-322-1049 or zhenlei.wang@arb.ca.gov, or visit our web site at <http://www.arb.ca.gov/harborcraft>.

For additional general information:

Please contact ARB's diesel hotline at (866) 6DIESEL (634-3757). You may also obtain this document in an alternative format by contacting ARB at (916) 324-9531 (TDD, Sacramento area only); (800) 700-8326 (TDD, outside Sacramento). TTY/TDD/Speech-to-Speech users may dial 711 for the California Relay Service.