

# Large Spark-Ignition Fleet Regulation

## Overview



### **Large Spark-Ignition (LSI) Engine Fleet Requirements Regulation**

In 2006, the California Air Resources Board (CARB) adopted, and later amended in 2010 and 2016, new regulations to reduce emissions from existing fleets operating large spark-ignited (LSI) engine powered equipment. This document provides information regarding the fleet average provisions for medium and large fleets (four or more forklifts or non-forklift equipment) and the 2016 amendments that require recordkeeping, reporting, and labeling.

### **What types of equipment are subject to the regulation?**

Only forklifts, floor scrubbers and sweepers, airport ground support equipment, and industrial tow tractors with LSI engines of 25 horsepower (19 kilowatt) or greater, and greater than 1.0 liter displacement, including electric equipment are subject to the regulation. LSI engines are fueled with gasoline, propane, and compressed natural gas.

### **What are the reporting, labeling, and recordkeeping requirements?**

- Report all equipment subject to a Fleet Average Emission Level (FAEL) within 60 days using CARB's free on-line DOORS reporting system;
- Label of each piece of equipment within 30 days of receiving an Equipment Identification Number (EIN); and
- Maintain records until June 30, 2023.

### **How is equipment reported and labeled?**

Equipment is reported into DOORS, an on-line reporting system where fleets that own and operate diesel off-road equipment have used for many years. CARB expanded DOORS to include LSI equipment. DOORS is accessed at:

[https://ssl.arb.ca.gov/ssldoors/doors\\_reporting/doors\\_login.html](https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html)

If fleets are unable to access the on-line reporting tool, please call the DOORS hotline at (877) 59-DOORS [(877) 593-6677] or send an e-mail to [doors@arb.ca.gov](mailto:doors@arb.ca.gov).

Initial reporting of all equipment subject to the FAEL was required to be completed by June 30, 2017. Fleets that are newly subject to the FAEL after June 30, 2017 (e.g., new fleets operating in California or fleets that grow from small to large fleet size), must report within 60 days of a fleet becoming subject to the FAEL. After a fleet reports their LSI equipment to CARB, each piece of equipment is assigned a unique EIN. The fleet must label its equipment within 30 days of receiving EINs. Note that CARB does not issue EIN labels; it is the fleet's responsibility to follow CARB's label specifications and to make or purchase the labels or placards, or paint the EINs on its equipment. CARB uses the same label specifications for both LSI and diesel off-road equipment; however, only one label is required for LSI equipment. More information on label specifications is available at <https://www.arb.ca.gov/msprog/offroad/orspark/faqs/lsifaqeinlabeling.pdf>.

*While this document is intended to assist fleets with their compliance efforts. It does not alter or modify the terms of any CARB regulation, is not a substitute for reading the regulation, nor does it constitute legal advice. It is the sole responsibility of fleets to ensure compliance with the Large Spark-Ignition Engine Fleet Requirements Regulation.*

A list of label vendors is available at <https://www.arb.ca.gov/msprog/ordiesel/labelvendors.htm>.

**What are the emissions requirements of the regulation?**

LSI fleets must meet the FAEL standards in the table below.

Fleet Type	Number of units	Fleet Average Emission Level g/kw-hr (g/bhp-hr)		
		1/1/2009	1/1/2011	1/1/2013
Large forklift fleet	26+	3.2 (2.4)	2.3 (1.7)	1.5 (1.1)
Mid-size forklift fleet	4-25	3.5 (2.6)	2.7 (2.0)	1.9 (1.4)
Non-forklift fleet	4+	4.0 (3.0)	3.6 (2.7)	3.4 (2.5)

**What actions can a fleet take to meet these requirements?**

The quickest way for a fleet to reduce its fleet average emissions is to phase out older equipment with used or new equipment that has engines certified to the 2010 0.6 g/bhp-hr emissions level. Uncontrolled equipment may be addressed through retrofit (available for 1990 and newer model year engines), or repower with a 2010 or newer engine.

Fleets could also add zero-emission equipment to their fleet. In recent years, the capabilities of zero-emission off-road equipment, such as electric forklifts, have increased dramatically with the advent of more powerful and energy-efficient alternating current traction motors, higher voltage batteries, waterproofing of electronics and batteries, and fast charging.

**Are there any exemptions?**

- Small fleets, which are those with one to three forklift and/or non-forklift equipment;
- In-field agricultural equipment;
- Leased or rented equipment that is operated for a period of no more than 30 aggregated calendar days per year; and
- Off-road military tactical vehicles or equipment exempt under the federal national security exemption.

**Where can more information about the regulation be found?**

Further information, is available on the LSI regulation website at <https://www.arb.ca.gov/lsi>.

For additional information or assistance with reporting, labeling, or DOORS, please call the DOORS hotline at (877) 59-DOORS [(877) 593-6677] or send an e-mail to [doors@arb.ca.gov](mailto:doors@arb.ca.gov).

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