



**Zero-Emission Forklifts Rulemaking
Workgroup Meeting
to Discuss Potential Regulatory Concept**

February 22, 2022

Agenda

- **Background**
- **Rulemaking Status Update**
- **Staff Goals for this Workgroup**
- **Draft Regulatory Concept Overview**
- **Fleet Examples**
- **Next Steps**
- **Discussion**

Background

- Purpose: Accelerate deployment of zero-emission technology in forklifts and reduce NO_x, ROG, and GHG emissions
- Identified in the SIP, the 2016 Mobile Source Strategy, and the Sustainable Freight Action Plan
- Aligns with the directives in Governor's Executive Order N - 79 - 20

Rulemaking Status Update

- Last Workgroup held in August 2021
- Updated concept discussion document, which is available on ARB webpage (arb.ca.gov/zeforklifts)
- Second workshop planned for Summer 2022
- Board consideration in 2023

Staff Goals for the Regulatory Concept Discussion

- Gather feedback on the draft regulatory concept and on the modifications staff has made since the last workgroup meeting
- Hear suggestions for alternative approaches/provisions that could achieve equivalent outcomes

Draft Regulatory Concept: Updates Since August 2021 Workgroup

- Updates to exemption concepts
 - Removed diesel forklifts from scope of draft concept
 - Revised Low-Use Provision concept
- Simplified fleet reporting requirements
- Added requirements for dealers and rental agencies
- Added new zero-emission standard for LSI Forklift engines and warranty requirements for manufacturers
- Updated small business definition and provisions
- Added detail to overall concept

Draft Regulatory Concept: Applicability

- Fleet Operators (private and public)
- Dealers
- Rental Agencies
- Manufacturers

Draft Regulatory Concept: Affected Forklifts

- Large Spark-Ignition (LSI) forklifts up to 12,000 lb. lift capacity
- **Not included:**
 - Rough terrain forklifts
 - Military Tactical Vehicles
 - Pallet jacks
 - Forklifts with telescoping booms
 - Forklifts owned or operated by facilities subject to the Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards Regulation
 - Forklift subject to the In-Use Off-Road Diesel Regulation (i.e., diesel forklifts)

Draft Regulatory Concept: Fleet Operator Performance Requirements

Fleet Requirements	Effective Year*
Fleets may not purchase new LSI Forklifts	2026
Fleets Must Retire existing LSI forklifts 13-Year and older	2026+

*Implementation dates January 1st of each year

Draft Regulatory Concept: Retirement of Existing LSI Fleet

Calendar Year	Model Years Being Retired*
2026	2013 & Older
2027	2014
2028	2015
...	...
2038	2025

*Implementation dates January 1st of each year

Draft Regulatory Concept: Reporting for Fleet Retirement

- Initial Report with company and forklift information
- Annual attestation and applicable updates to company and contact information
 - No reporting of annual forklift retirements
- Final Report once fleets transition fully to zero-emission

Draft Regulatory Concept: Reporting Process

- Updating DOORS, which is already used for the LSI and Off-road Diesel regulations, to accommodate reporting for the ZE Forklift Measure
- Fleets that have already reported in DOORS would be able to import information and use the same Equipment Identification Numbers (EIN)

Draft Regulatory Concept: Rental Allowance for Fleet Operators

- Rental allowance of LSI forklifts intended for unforeseen circumstances and seasonal workload increases
- Limited to 30 days per calendar year
- Advanced reporting required
- Sign and submit documentation to Rental Agency attesting that forklift will be used in a manner permitted by this regulation

Draft Regulatory Concept: Low-Use Exemption

- < 200 hours/year
- Limited to 10% of fleet (LSI and ZE)
- Fleet reporting required
- Annual operating-hours reporting (with photo of hour meter)
- Forklift label required
- Exemption sunsets in 2031, except for microbusinesses, which would be allowed to maintain one low-use forklift indefinitely.

Draft Regulatory Concept: Qualifying as a Microbusiness

- ≤ 25 employees, $\leq \$5M$ annual gross receipts (California Government Code 14837)
- Annual reporting to CARB
- Must maintain at the facility tax returns from previous 3 years and, if the business has employees, the Quarterly Contribution Return & Report of Wages (Continuation) Form DE 9C from the four most recent quarters.
- Transition process to be determined for microbusinesses that outgrow designation.

Draft Regulatory Concept: Dealer and Rental Agency Requirements

- Cannot sell or rent MY2026+ LSI forklifts that are not zero-emission
- May continue to sell/rent out MY2025 and previous LSI forklifts
- Initial Report (company information)
- If a fleet is renting, for each Affected Forklift transaction, collect and retain the following for the renter:
 - Company name, address, and DOORS ID
 - Purchaser attestation
 - Deployment location address
 - Forklift information, including hour-meter reading
 - Transaction information
- Submit Annual Transaction Summary to CARB

Draft Regulatory Concept: Manufacturer Requirements

- New Zero-E mission Standard for LSI Forklifts
- 100% zero-emission mandate starting with MY2026
- Production and Sales Reporting of all Affected Forklifts in CA
- Required Warranty for Zero-Emission Forklifts
 - Based on years and/or hours
 - Covers all parts not scheduled for replacement as required maintenance
 - Warranty Reporting
- Authorized service-and-repair facility in CA

Draft Regulatory Concept: Definition of Rough Terrain Forklift

A powered industrial truck that:

- (A) Meets the requirements in ANSI/ITSDF B56.6-1987, ANSI/ITSDF B56.6-2005, ANSI/ITSDF B56.6-2011, or ANSI/ITSDF B56.6-2016, "Safety Standard for Rough Terrain Forklift Trucks";
- (B) Bears a label indicating the forklift meets one of the aforementioned ANSI standards;
- (C) Has a minimum front-wheel rim diameter of 18 inches; and
- (D) Is identified and marketed as a rough terrain forklift by the forklift manufacturer.

Draft Regulatory Concept: ANSI/ITSDF B56.6

- Design and construction standards for a rough terrain forklift truck
- Required by existing State regulation on forklift safety (Title 8, California Code of Regulations, Section 3650)
- One of several ANSI/ITSDF standards applicable to powered industrial trucks
- Maintained by the American National Standards Institute and the Industrial Truck Standards Development Foundation

Consider Example Fleet (#1)

- Fleet Size: 45 LSI Forklifts
- MY Range in 2026: MY2011 – MY2025 (1-15 years old)
 - 3 of each MY
 - 9 MY2013 and older

What Regulation Would Mean for Example Fleet (#1)

- Required LSI Forklift Phase Out (by calendar year)
- Beginning in 2026, additions and voluntary replacements would be required to be zero-emission
- May keep five low-use LSI forklifts of any age until 2031

Yr	Forklifts to Turn Over
'26	9 MY 2013 and older
'27	3 MY 2014
'28	3 MY 2015
'29	3 MY 2016
'30	3 MY 2017
'31	3 MY 2018
'32	3 MY 2019
'33	3 MY 2020
'34	3 MY 2021
'35	3 MY 2022
'36	3 MY 2023
'37	3 MY 2024
'38	3 MY 2025

Consider Example Fleet (#2)

- Fleet Size: 27 LSI Forklifts
- MY Range in 2026: MY2017 – MY2025 (1-9 years old)
 - 14 MY2017
 - 13 MY2025
- Has extra busy time in December and so needs to rent 10 extra forklifts each December

What Regulation Would Mean for Example Fleet (#2)

- Beginning in 2026, additions and voluntary replacements must be zero-emission.
- Rents 10 extra LSI forklifts Dec. 1-30 each year
- May keep three low-use LSI forklifts of any age until 2031

Yr	Forklifts to Turn Over
'26 to '29	No turnover required
'30	14 MY2017
'31 to '37	No turnover required
'38	13 MY2025

Consider Example Fleet (#3)

- Example Microbusiness Fleet
 - Fleet Size: 1 MY 2020 LSI Forklift
 - Microbusiness (≤ 25 employees, $\leq \$5M$ annual gross receipts)

What Regulation Would Mean for Example Fleet (#3)

- The MY 2020 forklift would be required to turnover in 2033
- However, because they are a microbusiness, they may keep one forklift of any age as low-use (< 200 hrs/yr) indefinitely

2026-2032	2033 onwards
No Turnover Required	Must turnover or convert to low-use

Feedback Requested

- Any questions or concerns regarding the draft regulatory concept?
- Emergency Operations
 - Are there LSI forklift fleets dedicated to emergency operations?
 - How are LSI forklifts used in emergency operations?
- Remote Worksite
 - Are there situations where LSI is used at a remote worksite?
 - How to define?
 - What kind of documentation would a fleet be able to provide to substantiate infrastructure efforts and status?

Next Steps

- Obtain feedback/information from stakeholders through individual meetings and emails
- Next workshop in Summer 2022
- Board consideration in 2023

Contacts

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Webpage & Email Sign-Up

- **Webpage:**
 - <https://arb.ca.gov/zeforklifts>
- **Sign-Up for Zero-Emission Forklifts Email Updates**
 - https://public.govdelivery.com/accounts/CARB/subscriber/new?topic_id=zeforklifts
- **General Information on Existing Off-Road Equipment Regulations:** <https://ww2.arb.ca.gov/OffRoadZone>