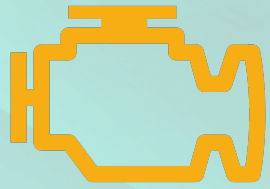




Draft Regulatory Amendments to the On-Board Diagnostic (OBD) Regulations

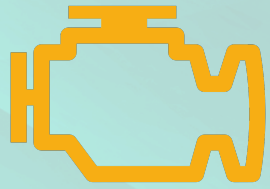
February 24, 2021



Background

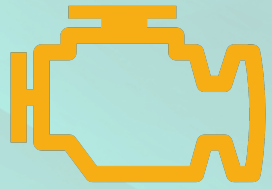
- What is OBD?
 - A system in the vehicle's on-board computer that monitors the performance of emission-related components for malfunctions
 - For important components (e.g., catalyst, diesel particulate matter (PM) filter), detects faults before emissions exceed a certain level
 - Started in 1994 for light-duty (LD) and medium-duty (MD) vehicles, 2010 for heavy-duty (HD) vehicles
- How does it work?
 - Mostly software in vehicle computer
 - Illuminates check engine light' to alert driver when a fault is detected
 - Stores information about what is malfunctioning and the type of malfunction
 - Works for the entire life of the vehicle





Background (cont.)

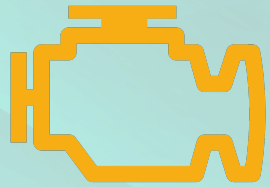
- Benefits of OBD: Identifies emission-related malfunctions
 - Reduce in-use emissions through faster identification/repair of problems
 - Pinpoints malfunction to avoid unnecessary repairs
 - Broken components covered under warranty
- OBD used as basis for Smog Check inspections
 - Fail vehicle if check engine light is on or OBD data indicate vehicle is not ready for inspection
 - More effective/less expensive than traditional tailpipe testing or other methods
 - Projected to be used for future inspection program on HD vehicles
- OBD program updates occur regularly
 - Address implementation and field issues with regulation
 - Strengthen requirements



Proposal

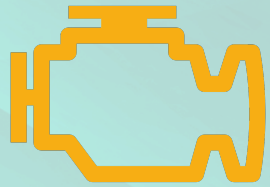
- Add SAE J1979-2 Communication Protocol for OBD
 - Helps technicians accurately repair malfunctions by providing more vehicle information
 - Helps CARB staff better determine if OBD systems are working in use
 - Improves data for Smog Check inspections
 - Affects LD, MD, and HD vehicles
- Required starting with 2027 model year
 - Option to start as early as 2023





Proposal (cont.)

- Strengthen a few monitoring requirements
 - PM filter monitors
 - PM filters help decrease PM emissions
 - Proposal would require detection of failures at lower emissions levels than currently required starting in the 2026 model year – full implementation in 2029
 - Affects LD and MD diesel vehicles
 - Cold start emission reduction strategy (CSERS) monitors
 - CSERS reduces emissions when engine is cold and vehicle first starts up – cold emissions account for a high percentage of vehicle emissions
 - Proposal would more specifically detail what specific failures need to be detected
 - Affects LD, MD, and HD vehicles



Other Information

- Regulation Timeline
 - Final proposal and associated documents must be finalized by end of March 2021
 - Public notice published in beginning of June 2021
 - Board hearing scheduled for July 2021
- More information about the OBD program can be found at:

<https://ww2.arb.ca.gov/our-work/programs/obd>