To: ALL MANUFACTURERS OF Mail-Out #ECC 2020-06

- PASSENGER CARS
- LIGHT-DUTY TRUCKS
- MEDIUM-DUTY VEHICLES AND ENGINES USED IN SUCH VEHICLES
- HEAVY-DUTY VEHICLES AND ENGINES USED IN SUCH VEHICLES
- ON-ROAD MOTORCYCLES
- OFF-HIGHWAY RECREATIONAL VEHICLES
- OFF-ROAD SMALL SPARK-IGNITION ENGINES
- OFF-ROAD SMALL SPARK-IGNITION EQUIPMENT
- OFF-ROAD LARGE SPARK-IGNITION ENGINES
- OFF-ROAD LARGE SPARK-IGNITION EQUIPMENT
- OFF-ROAD SPARK-IGNITION MARINE ENGINES
- OFF-ROAD SPARK-IGNITION MARINE WATERCRAFT
- OFF-ROAD COMPRESSION-IGNITION ENGINES
- AFTERMARKET PARTS
- DIESEL EMISSION CONTROL STRATEGIES

ALL OTHER INTERESTED PARTIES

Date: October 14, 2020

Subject: ALERT: SELF-DISCLOSURE OF NON-COMPLIANT SOFTWARE AND OTHER VIOLATIONS BY DECEMBER 31, 2020

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Dear Manufacturer:

On September 25, 2015, the California Air Resources Board (CARB) wrote light-, medium-, and heavy-duty vehicle and engine manufacturers to remind them to properly disclose all auxiliary emission control devices (AECDs) at the time of certification. That letter also informed manufacturers of CARB's intent to begin using then newly-developed screening tests in CARB's In-Use Compliance Program, in addition to standard certification emission test cycles, to identify unapproved AECDs and defeat devices, the discovery of which would subject the manufacturer to penalties and remedial measures. The goal of that letter was clear: for manufacturers to proactively inform CARB of undisclosed software devices and reintroduce a level of trust and forthrightness into the certification process.

While a handful of manufacturers stepped forward over the last five years, the vast majority did not. As promised in 2015, CARB moved forward with expanded testing programs and a suite of newly developed techniques to detect unauthorized AECDs and defeat devices in diesel engines.

The results of this expanded program are now visible for all to see: multiple settlements with manufacturers for cheating on their certification documentation. Those settlements revealed a sad litany of disbenefits to public health as a result of excess emissions, and a commensurate amount of money – now exceeding one billion dollars, with more investigations underway – for mitigation and penalties with numerous manufacturers. Full compliance with CARB's emission regulations for vehicles and other mobile sources is essential to California's plans to meet air quality targets and to protect heavily impacted communities from the harmful effects of air pollution exposure.

This situation will not continue--It is a clear violation of public health to pollute the air with illegal devices, and it undermines the essential trust that has supported the certification program for decades. **CARB is therefore now writing to you again to encourage voluntary disclosure of any potential violations with respect to these and other applicable regulatory requirements.** Voluntary disclosure will trigger a reduction in penalties; failure to do so may affect the result of future enforcement actions involving your company when CARB's new techniques – and its new state-of-the-art testing laboratory opening in 2021 – inevitably detect any violations you may have.

CARB's recent screening tests and investigations have uncovered several types of systemic violations. In general, CARB has found that manufacturers have failed to submit required information (specific examples below) about their engines and vehicles during the certification process and following certification in-use. Manufacturers are required to submit complete and accurate information according to California Code of Regulations (CCR) sections and test procedures incorporated in the CCR sections for mobile source categories. Failure to do so is a violation of law and will be pursued under our enforcement authority. Broadly, the violations include manufacturers failing to submit information at the time of certification, whenever changes are made to certified configurations (hardware and software), and when emissions related parts or engines fail to meet the certification requirements.

Affected mobile source categories include light-duty vehicles, heavy-duty on-road engines and vehicles, highway motorcycles, off-road compression ignition engines, off-road small and large spark-ignition engines, off-highway recreational vehicles, spark-ignition marine engines, and evaporative systems for off-road small and large equipment and marine watercraft. The following is a more specific, sample listing of the systemic violation types CARB is investigating (example regulatory citations are included in the attached table):

- Undisclosed Auxiliary Emissions Control Devices (AECDs)
  CARB test procedures require manufacturers to, among other things, list all AECDs installed on their vehicles, including those that are activated by faults (e.g., default actions). An AECD is defined as any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.
- Defeat Devices
  CARB test procedures require manufacturers to include a justification for each AECD, and rationale for why each AECD is not a defeat device. A defeat device is any AECD that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use. An AECD may not be a defeat device if (1) the AECD conditions are substantially included in the Federal emission test procedures; (2) the need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) the AECD does not go beyond the requirements of engine starting; or (4) the AECD is present only for emergency vehicles and the need is justified. Unless any of these conditions are met, the AECD is a defeat device.
- Unapproved Running Changes and Field Fixes
  CARB test procedures and regulations require manufacturers to, among other things, report changes to emissions related hardware and software, including changes to the on board diagnostic (OBD) system, that are different than what was described for the certified vehicles and engines. Manufacturers must report changes to CARB that occur on the assembly line and changes they implement in the field.
- Failure to Report or Address Warranty Claims
  Vehicle and engine manufacturers are required to file emissions warranty information reports and field information reports when claims meet or exceed specified thresholds, and are required to initiate corrective action (extended warranty and/or recall) for failing parts when warranty rates meet or exceed specified thresholds.
- Manufacturer In-Use Compliance Testing and Manufacturer's Self-Testing (MST)
  CARB has found that manufacturers are failing to timely complete their MST and/or submit the test data to CARB, and has also found instances where parts have been swapped out before conducting MST demonstrations without proper notification and CARB approval. CARB is also concerned that manufacturers

are not completing their in-use verification program (IUVP) and heavy duty in-use testing (HDIUT) obligations on time and/or in compliance with the regulations.

- Failure to Report Corrective Actions that Should be Under a CARB Approved Recall Plan – not a Technical Service Bulletin or Other Field Fix
  CARB must review and approve voluntary, influenced, and ordered emissions recall plans before these are implemented.
- Submission of False Data or Non-Compliance with Regulatory Test Requirements
  Certification is predicated on all information submitted to CARB being true, accurate, and complete. Manufacturers must use the applicable test procedures.
- Failure to Meet OBD Requirements
  The OBD systems, through the use of a(n) onboard computer(s), monitor emission systems in-use for the actual life of the vehicle/engine, and must be capable of detecting malfunctions of the monitored emission systems, illuminating a malfunction indicator light (MIL) to notify the vehicle operator of detected malfunctions, and storing fault codes identifying the detected malfunctions. The OBD regulations require manufacturers to conduct Production Engine/Vehicle Evaluation Testing and to report the results by deadlines specified in the regulations. Another issue of concern is that CARB has found manufacturers calibrating diagnostics that would allow for threshold component malfunctions to be detected during certification test cycles but not during in-use driving.
- Failure to Disclose Adjustable Parameters that May Affect Emissions
  An adjustable parameter on a motor vehicle or engine is any device, system, or element of design that someone (especially consumers) can adjust that affects emissions. It must be disclosed at the time of certification. CARB may test vehicles or engines in any setting of the adjustable parameter to ensure emissions compliance. Adjustable parameters may include settings that alter air/fuel ratios (e.g., idle air-fuel ratio adjustment screw), turbochargers, threaded adjustments, and special transmission modes.

CARB enforcement, in consultation with CARB's certification staff, is focusing on these systemic issues, and is taking into account CARB's 2017 updated enforcement policy. That policy describes the factors that the agency considers when setting penalties, and describes the factors that we consider in order to reduce a penalty when a responsible party voluntarily discloses violations. The reduction in penalties may range from 25%

to 75% depending on the relevant facts and circumstances of the case and depending on the extent to which a regulated party meets the voluntary disclosure criteria specified in the policy.

CARB is selecting its next set of cases for enforcement and has already identified specific entities for further investigation. If you are not in compliance with CARB regulations, **CARB urges you to voluntarily disclose to the contact person identified below any violation(s) associated with your certified vehicles and/or engines.** Voluntarily disclosing your violation(s) by December 31, 2020 and settling the matter expeditiously thereafter will substantially mitigate the associated penalties. CARB will protect information disclosed to the agency during this process that is confidential and/or privileged under State or federal law.

If you are not in compliance with CARB regulations, and you do not voluntarily disclose your violations, you may become the subject of a lengthy investigation and enforcement action. Our testing and investigations to identify non-compliance are continuing, and violations after 2016 are subject to the legislatively increased maximum penalty of $37,500 per mobile source or engine, per identified violation. In raising the maximum penalty, the State of California is sending a strong a message that certification requirements must be met to protect public health.

If you would like to respond to this letter or have any questions, please contact Allen Lyons, Chief of the Emissions Certification and Compliance Division, by email at Allen.Lyons@arb.ca.gov.

Sincerely,

Steven S. Cliff, Ph.D.
Deputy Executive Officer
California Air Resources Board

cc: Todd Sax, D.Env.
Chief
Enforcement Division

California Code of Regulations and Test Procedure Citations for Mobile Source Categories

The table below contains examples of the applicable CCR and Code of Federal Regulations (CFR) sections for all mobile source categories. Please note that the CCR and CFR sections referenced are not an exhaustive list of applicable sections/requirements.

| Mobile Source Category | Defeat Device Prohibition | Auxiliary Emission Control Device Definition | Running Changes/Field Fixes | Adjustable Parameters | Warranty/Defect Reporting | Recall | On-Board Diagnostics |
|---|---|---|---|---|---|---|---|
| Light-duty Vehicles | -CCR title 13, section (13CCR) 1961(d) & 1961.2(d)<br>-40CFR 86.1803-01 & 86.1809-12 | -13CCR 1961(d) & 1961.2(d)<br>-40CFR 86.1803-01 & 86.1844-01 | -13CCR 1961(d) & 1961.2(d)<br>- 40CFR 86.1842-01<br>- 86.1848-10(b)(6) | 40 CFR 1833-01<br>-13CCR 1961(d) & 1961.2(d) | -13CCR 2141-2149 | -13CCR 2111-2135 | -13CCR 1968.2 |
| On Road Heavy Duty Engines | -13CCR 1956.8(d)<br>-40CFR 86.004-2, 40CFR 86.004-16(a) | -13CCR 1956.8(d)<br>- 40CFR 86.082-2 40 CFR 1036.801 | -13CCR 1956.8(d)<br>-40CFR 86.079-32, 86.079-33, 86.082-34, 1036.225, | 13CCR 1956.8(d)<br>40 CFR 1036.115(a) and 40 CFR 86.094-21 | -13CCR 2141-2149 | -13CCR 2111-2135 | -13CCR 1971.1 |

| Mobile Source Category | Defeat Device Prohibition | Auxiliary Emission Control Device Definition | Running Changes/Field Fixes | Adjustable Parameters | Warranty/Defect Reporting | Recall | On-Board Diagnostics |
|---|---|---|---|---|---|---|---|
| Highway Motorcycles (HMC) and Off-Highway Recreational Vehicles (OHRV) | -13CCR 1958(c) & 2412(c)<br>-40CFR 86.409-78 | -13CCR 1958(c) & 2412(c)<br>-40CFR 86.416-80(a)(2)(i) & 86.416-80(a)(4) | -13CCR 1958(c) & 2412(c)<br>-40CFR 86.438-78 & 86.439-78 | 40 CFR 86.428-80(d)<br>-13CCR 1958(c) & 2412(c) | -13CCR 2414 &<br>-13CCR 2141-2149 | -13CCR 2414 &<br>-13CCR 2111-2135 | N/A |
| Off-Road Small Spark-Ignition Engines (SSIE) - Exhaust | -13CCR 2403(d)<br>-40CFR 1054.115(e) | -13CCR 2403(d)<br>-40CFR 1054.205(b) & 1054.801 | -13CCR 2403(d)<br>-40CFR 1054.225 | -13CCR 2403(d)<br>-40CFR 1054.115 (b) &1054.205 | -13CCR 2405.1 | -13CCR 2405.2 & 2405.3 | N/A |
| Off-Road Large Spark-Ignition Engines (SSIE) – Exhaust (<= 1 Liter) | -13CCR 2433(d)(1)<br>-40CFR 1054.115(e) | -13CCR 2433(d)(1)<br>-40CFR 1054.205(b) & 1054.801 | -13CCR 2433(d)(1)<br>-40CFR 1054.225 | -13CCR 2433(d) (1)<br>-40CFR 1054.115(b) & 1054.205 | Applicability is based on 13CCR 2111<br><br>-13CCR 2141-2149 | Applicability is based on 13CCR 2111<br><br>-13CCR 2111-2135 | N/A |
| Off-Road Large Spark-Ignition Engines (LSIE) – Exhaust (>1 Liter) | -13CCR 2433(c)<br>-40CFR 1048.115(g) | -13CCR 2433(c)<br>-40CFR 1048.205(b) & 1048.801 | -13CCR 2433(c)<br>-40CFR 1048.225 | -13CCR 2433(c)<br>-40CFR 1048.115(e) & 1048.205 | Applicability is based on 13CCR 2111<br><br>-13CCR 2141-2149 | Applicability is based on 13CCR 2111<br><br>-13CCR 2111-2135 & 13 CCR 2439 | N/A |

| Mobile Source Category | Defeat Device Prohibition | Auxiliary Emission Control Device Definition | Running Changes/Field Fixes | Adjustable Parameters | Warranty/Defect Reporting | Recall | On-Board Diagnostics |
|---|---|---|---|---|---|---|---|
| Spark-Ignition Marine Engines (SIME) - Exhaust | -13CCR 2442(f)<br>-13CCR 2447, TP Part I, Section 6 | -13CCR 2447<br>-TP Part I, Section 14(b)(2)(A) | -13CCR 2447<br>-TP Part I, Sections 28 & 29 | -13CCR 2447<br>-TP Part I, Section 20 | 13CCR 2141-2149 | 13CCR 2444.1 &<br>-13CCR 2111-2135 | N/A |
| Off-Road Small Spark-Ignition Evaporative System (SSIE Evaporative) | N/A | N/A | -13CCR 2758<br>-CP-901 Sections 6.7 & 6.8, CP-902 Sections 5.10 & 5.11 | -13CCR 2758<br>-CP-902 Section 5.8 | 13CCR 2761 | 13CCR 2762 & 2763 | N/A |
| Off-Road Large Spark-Ignition Equipment < = 1 Liter (LSIE Evaporative System) | N/A | N/A | -13CCR 2433(b)(4)(B) & 2758<br>-CP-901 Sections 6.7 & 6.8, CP-902 Sections 5.10 & 5.11 | -13CCR 2433(d)(2)<br>-CP 902 Section 5.8 | Applicability is based on 13CCR 2111<br><br>-13CCR 2141-2149 | Applicability is based on 13CCR 2111<br><br>-13CCR 2111-2135 | N/A |
| Spark-Ignition Marine Watercraft (SIMW) – Evaporative | N/A | N/A | -13CCR 2856 | N/A | -13CCR 2863 | N/A | N/A |

| Mobile Source Category | Defeat Device Prohibition | Auxiliary Emission Control Device Definition | Running Changes/Field Fixes | Adjustable Parameters | Warranty/Defect Reporting | Recall | On-Board Diagnostics |
|---|---|---|---|---|---|---|---|
| Heavy Duty Vehicles | -13CCR 1956.8(d)<br>-17CCR 95663(d)<br>-40CFR 86.004-2, 1037.115(d), 1068.101(b)(2) | -13CCR 1956.8(d)<br>-17CCR 95663(d)<br>-40CFR 1037.801 | -13CCR 1956.8(d)<br>-17CCR 95663(d)<br>-40CFR 1037.225 | -13CCR 1956.8(d)<br>-17CCR 95663(d)<br>-40 CFR 1037.115(a)<br>-40CFR 1037.801 | -13CCR 2141-2149 | -13CCR 2111-2135 | -13CCR 1971.1 |
| Off Road Compression Ignition Engines | -13 CCR 2423(b)(12)<br>-40CFR 1039.115(g) | -13CCR 2421 (a)(9)<br>-40CFR 1039.665(a), 1039.801 | -13CCR 2423(c)<br>-40CFR 1039.225 | 40 CFR 1039.115(e) And 13 CCR 2423 | -13CCR 2425.1 | 13CCR 2111-2135 | N/A |