

APPENDIX G

Aftermarket Parts Verification Guidelines

Gasoline and Diesel

Introduction

Aftermarket parts fall into four categories:

- Replacement Parts
- Consolidated Parts
- Modified Parts
- Add-on Parts

In general, Modified Parts and Add-on Parts require California Air Resources Board (CARB) exemption through an Executive Order (EO). Replacement Parts and Consolidated Parts do not require exemption. For more information, see the definitions below.

California Vehicle Code (VC) section 27156, in part, prohibits modifications to emission control devices or systems without CARB exemption. For the Smog Check inspection, not all parts that require CARB exemption will be verified during the inspection.

The Miscellaneous Guidelines and Categories I and II, contained in this appendix, provide Smog Check criteria for aftermarket parts and emission control modifications. For the purposes of a Smog Check inspection, only those parts listed in Category II require verification of an EO exemption by CARB. These guidelines are intended to provide guidance for technicians conducting Smog Check inspections only; they are not requirements for part manufacturers or dealers.

CARB Definitions of Aftermarket Parts

Replacement Part

“Replacement part” means any aftermarket part intended to replace an original equipment emissions-related part and which is functionally identical to the original equipment part in all respects which in any way affect emissions (including durability) or a consolidated part.

California Code of Regulations (CCR) Title 13 § 1900 (b) (20)

Replacement parts do not require a CARB exemption to be installed on vehicles in California.

Examples include replacement air filter elements, spark plugs, spark plug wires, distributor caps, chromed valve covers, replacement EGR valves, and replacement carburetors. (Note: A replacement EGR valve or carburetor must be specified as replacement, by the part manufacturer, for the vehicle on which it is installed).

CARB Definitions of Aftermarket Parts

Consolidated Part

“Consolidated part” means a part which is designed to replace a group of original equipment parts and which is functionally identical of those original parts in all respects which in any way affect emissions (including durability). A consolidated part may qualify as replacement part.

CCR Title 13 § 1900 (b) (2)

Consolidated parts do not require a CARB exemption to be installed on vehicles in California.

For example, a parts manufacturer markets a replacement EGR assembly that consolidates the valve and backpressure transducer that were originally two separate components. A manufacturer may also consolidate part numbers to make a parts application more universal.

Modified Part

“Modified part” means any aftermarket part intended to replace an original equipment emission-related part and which is not functionally identical to the original equipment part in all respects which in any way affect emissions, excluding consolidated parts.

CCR Title 13 § 1900 (b) (13)

Examples: Camshafts, carburetors and fuel injection components, cylinder heads, engine management components and adjustable camshaft gears.

For inspection information, see Miscellaneous Guidelines and Categories I and II in this document.

Add-on Part

“Add-on part” means any aftermarket part which is not a modified part or a replacement part. For the purposes of a Smog Check inspection, add-on parts that could adversely affect the effectiveness of the vehicle emission controls must have a CARB exemption

CCR Title 13 § 1900 (b) (1)

Examples: Add-on turbocharger and nitrous oxide kits.

For inspection information, see Miscellaneous Guidelines and Categories I and II in this document.

Miscellaneous Guidelines

Carburetors (Gasoline Only)

A replacement carburetor is acceptable on an emission controlled vehicle, provided the manufacturer specifies that the carburetor is an emissions compatible replacement for the original. A carburetor shown in the manufacturer's catalog as "Not Street Legal in California", "For Off-Road Use Only", or similar language, is not acceptable on an exhaust emission controlled vehicle.

For the purposes of a Smog Check inspection, the following carburetor conversions must have an exemption from CARB:

- Replacing a 2 barrel carburetor with a 4 barrel when there was no 4 barrel carburetor option for that model year, model and engine size;
- Replacing a single carburetor with multiple carburetors, which were not an option for that model year, model and engine size;
- The carburetor does not make provision for all the required emission controls;
- The carburetor is replaced with an aftermarket fuel injection system.

Exhaust Headers

Aftermarket exhaust headers (tubular exhaust manifolds) are acceptable on non-catalyst vehicles as long as all required emission controls are functioning and connected - no EO number required. Aftermarket headers for catalyst vehicles must be CARB approved.

Note: Most headers manufactured before 1988 do not have a CARB EO number affixed.

Be aware that some vehicles are factory equipped with tubular exhaust manifolds.

Intake Manifolds

For the purposes of a Smog Check inspection, an intake manifold that includes provisions for the OEM emission controls (EGR, TAC, carburetor, thermal switches, choke stove, exhaust cross-over etc.) is acceptable. The manifold must be marketed by the manufacturer as designed for street use on emission controlled vehicles.

Miscellaneous Guidelines

Non-Original Equipment Catalytic Converters (Gasoline Only - All diesel exhaust gas aftertreatment systems, including catalysts must meet original equipment specifications).

Catalytic Converters Installed Before January 1, 2009

New aftermarket catalytic converters and certified used catalytic converters can be identified by a permanent stamp or label on the shell of the converter. The label/stamp should be in the following U.S. EPA format:

T/CA/MC XXXX YYYY

- T: Either “N” (for new aftermarket converters), or “U” (for certified used converters).
This character will sometimes be omitted on new aftermarket converters.
- CA: Indicates that the converter has been CARB approved
- MC: A two character code for the converter manufacturer (see table below)
- XXXX: The converter’s part or series number. The number may be longer than 4 digits
- YYYY: The date of manufacture. The first two digits indicate the month, and the last two the year.

If the vehicle is OBD II equipped, the converter stamp or label should also include either an “OBD II” or “OBD 2” designation.

The following circumstances indicate that the converter’s application is not correct:

- The converter stamp or label does not include the “CA” designation.
- The vehicle is OBD II equipped, but the converter stamp or label does not indicate “OBD II” or “OBD 2”.
- A certified used converter is installed with a date of manufacture/date of certification testing after June 30, 2008, or there is other evidence that the converter was installed after this date.
- A new aftermarket converter with the above label format is installed with a date of manufacture after December 2008, or there is other evidence that the converter was installed after this date.

The table on the next page lists valid manufacturer codes for California.

Miscellaneous Guidelines

Non-Original Equipment Catalytic Converters (Gasoline Only) continued...

Catalyst Manufacturer identification codes:

Code	Manufacturer	Code	Manufacturer
AD	Advanced Car Specialties Ltd (RiteCat).	ES	ESW America, Inc.
AE	The Automotive Edge (Hermoff)	ET	Emico Technologies, Inc.
AT	AirTek, Inc. (Catco)	LP	LaPointe Exhaust System Equipment
BN	Brown Recycling & Manufacturing, Inc.	MC	Miller Catalyzer Corp
BO	Bosal Mexico SA DECV	MM	Maremont
CE	Car Sound Exhaust System, Inc. (Magnaflow)	PA	Perfection Auto Prod. Corp
CT	Valina, Inc. (CarTex)	PP	Products For Power
CV	Cateran Pty Ltd.	TA	Walker Manufacturing
EM	Eastern Manufacturing, Inc.	TD	TRI-D Industries Inc.
EQ	Equipo Industrial Automotriz S.A. de C.V.	TP	Tested Products (DEC)

Catalytic Converters Installed After January 1, 2009

All catalytic converters installed on or after January 1, 2009, must meet more stringent requirements. Each catalytic converter must be labeled with a CARB EO number. The converter label format is as follows:

D-XXX-XX
YYYYYY
ZZZZ

D-XXX-XX: This is the ARB EO number for the catalytic converter's exemption.

YYYYYY: The part number for the converter (assigned by the manufacturer)

ZZZZ: The date of manufacture. The first two digits indicate the month, and the last two the year.

The EO number can be used to obtain information about the approval status of the catalytic converter on CARB's Web site in the same manner that aftermarket add-on and performance parts can be looked up.

Certified used catalytic converters are no longer legal for sale or installation in California.

Category I

Not necessary to check for CARB exemption

For the purposes of a Smog Check inspection, the following parts and emission control changes are acceptable **provided that all of the required emission controls are connected and functioning**. When conducting a Smog Check inspection, it is not necessary to check for a CARB Executive Order for the following:

- Any emissions related part marketed by the parts manufacturer as a replacement for the original equipment. (Parts identified by the manufacturer as “Not Street Legal in CA” or for “Off Road Use Only” or similar language, are not acceptable);
- Air conditioner cut-out systems;
- Gasoline- Changes to non-thermostatically controlled air cleaner assemblies for 1995 model-year and older vehicles. (Note: Crankcase and EVAP emission controls must remain closed). See Category II for requirements for 1996 model-year and newer vehicles equipped with non-thermostatically controlled air cleaners;
- Diesel- Changes to air cleaner assemblies;
- Diesel- “Air horn” intakes;
- Anti-theft systems (Primary ignition system changes related to anti-theft systems, including engine start and shut off controls);
- Exhaust system modifications on vehicles not equipped with exhaust after-treatment systems. (Note: Emission-related items connected to the exhaust such as EGR systems, turbos, sensors, etc. must remain connected and functional);
- Exhaust system modifications made after or “down stream” of the last emission control device, “CAT Back”.
- Diesel- Exhaust brakes;
- Fuel filters or separators;
- Diesel- Auxiliary fuel tanks;
- Governors;

**Category I
Continued...**

**Not necessary
to check for
CARB
exemption**

- Headers on non-catalyst vehicles;
- Heat stoves for headers;
- Ignition bridges and coil modifications;
- Gasoline- Intercoolers for original equipment (OE) turbochargers. (Note: Diesel Intercoolers are in Category II and do require verification of CARB exemption);
- Oil separators and filters;
- Any intake manifold that includes provisions for the OE emission controls (EGR, TAC, carburetor, thermal switches, choke stove, exhaust cross-over etc.) The manifold must be marketed by the manufacturer for street use on emission controlled vehicles;
- A 4-barrel intake manifold used with the OE (or acceptable equivalent) 2-barrel carburetor as long as the required emission controls are installed and functioning;
- Minor configuration changes to air injection rails;
- Minor configuration changes to ECS hoses and tubes. For example, the installation of universal replacement hose in place of a preformed hose;
- Throttle lockout systems;
- Under carburetor screens;
- Water injection - vapor and steam.

Category II**Parts that
require
verification of
CARB
exemption.**

For the purposes of a Smog Check inspection, the parts and modifications listed below are only acceptable with a CARB Executive Order. CARB grants exemptions by way of Executive Order (EO). Each EO is assigned a specific identification number that can be used to verify proper application. Parts manufacturers are required to label the parts with the applicable EO number. Check the part manufacturer catalog and/or the CARB EO listings for proper application.

The CARB EO listings and additional information or clarification about aftermarket parts can be found on the CARB website at:
<http://www.arb.ca.gov/msprog/aftermkt/aftermkt.htm>, or by calling CARB at (800) 242-4450.

The EO listings may also provide information about modifications that are necessary and acceptable for installation of the particular part, kit or system.

When conducting a Smog Check inspection, it is necessary to check for a CARB EO for the following:

- Any add-on or modified aftermarket emission related part not otherwise addressed in the Miscellaneous Guidelines or Category I;
- Adjustable Camshaft Gears;
- Air flow sensor modifications;
- Alternative fuel conversions;
- Carburetors not marketed as emission replacements;
- Catalytic Converters -see the Miscellaneous Guidelines for more information);
- EGR system modifications;
- Electronic control units Electronic control units (ECUs) Including variable or alternate tuning devices (“PROMs”, “Chips”, “Tuners”, “Pods”, “Power Modules”); or devices that modify inputs or outputs to the ECU, including “inline” devices that plug into the ECU, the wiring, or the OBD connector; or any other “signal conditioners”.
- Engine modifications, engine performance kits (multiple parts sold as one kit);
- Exhaust headers, Crossover Pipes, Heat Risers, and Intake Manifolds, not addressed in Category I;
- Fuel injection systems modifications (including add-on parts or modifications, such as, adjustable fuel pressure regulators);
- Ignition system modifications;
- Diesel- Intercooler/charge air cooler modifications
- Superchargers (including add-on parts);
- Gasoline- Thermostatically controlled air cleaner modifications;
- Gasoline- Beginning with 1996 model-year vehicles, all air cleaner modifications, including those on non-TAC systems;
- Turbochargers (add-on or modified parts, including all related controls, waste gates);
- Nitrous oxide injection systems;
- Propane injection systems;
- Methanol injection systems;
- Hydrogen injection systems.

Quick Reference

Aftermarket Parts for Diesel-Powered Vehicles¹

System	Component	No Verification of CARB EO Required During Inspection ²	Requires Verification of CARB EO During Inspection ³
Computer Management	Variable or Alternate Tuning Devices - “Power Modules,” “PROMs,” “Chips,” “Tuners,” “Pods,” “Power Modules” or any device that modifies inputs or outputs to the ECU (including “inline” devices that plug into the ECU, wiring harness, or the OBD connector, signal conditioners)		X
Induction System	Air Cleaners	X	
	“Air Horn” Intakes	X	
	Intake Manifolds (modifications)		X
	Air Flow Sensor (modifications)		X
	EGR/CDR system (modifications)		X
	Turbochargers (add-on or modified parts including all related controls, i.e. waste gates, compressors).		X
	Intercoolers (modifications)		X
Fuel System	Supercharger		X
	Auxiliary Fuel Tank(s)	X	
	Injectors (modifications)		X
	Injection Pump (modifications)		X
	Fuel Pump - Lift pump	X	
	Added Fuel Filters / Separators	X	
	Added or Alternative Fuel Modifications		X
Exhaust System	Added or Alternate Injection Modifications Including: Propane, Methanol, Hydrogen, Nitrous Oxide.		X
	Exhaust Gas Aftertreatment Controls: catalysts, traps, filters, sensors, dosing systems, etc. (modifications)		X
	General Exhaust System Changes For Vehicles Not Equipped With Aftertreatment Emission Controls (must have provisions for any stock sensors and/or emission control components).	X	
	Exhaust System Changes. Changes After The Last Emission Control Component, “CAT Back”.	X	
	Exhaust Brake Systems	X	

¹ Please check Category II of Appendix G for more details and a comprehensive list of equipment and criteria that cause a Smog Check failure.

² CARB may require an EO for these parts but inspection and verification of an EO is not required during a Smog Check inspection.

³ Replacement parts do not require an EO. However, Add-on or Modified parts do require an EO and they must be verified during a Smog Check inspection. See pages G-1 and G-2 of Appendix G for the definitions of Replacement, Add-on and Modified parts.