Light-Duty Vehicle Compliance and Enforcement

Allen Lyons April 2015 Mexico City

LEV III Structure and Overview (Certification Process - Manufacturer)

- Group vehicles into
 - Durability groups (DG)
 - Engine families/Test groups (EF/TG)
 - Evaporative families (EvpF)
- Conduct durability testing per durability groups and evaporative families to determine deterioration factors (DF) ~ 9-15 months before production
 - Durability data vehicle (DDV) undergoing useful life (UL) service/mileage accumulation
 - Whole vehicle, or
 - Bench aging of critical components (e.g., catalyst, oxygen sensor, fuel injectors, purge valve, canister)
- Conduct certification exhaust & evaporative testing
 - Emission data vehicle (EDV) with ~4000 miles accumulated ~ 2-6 months before production
 - Apply DFs to EDV test results to determine UL cert emission levels (CEL)
 - All certification emission limits (CELs) must not exceed applicable emission standard

LEV III Structure and Overview (Certification Process - Manufacturer)

- Submit an application to ARB per Test Group
 - On-Board Diagnostic II (OBD II) to Advanced Engineering Section, ECARS
 - Vehicle and emission data to Certification section, ARB
 - Since 2007 cert applications submitted electronically to ARB Electronic Documents Management System (EDMS)
- Application information
 - Description of DG, TG, EvpF, engine, emission control systems (ECS), EDV test results, DFs and CELs
 - Description of AECD (auxiliary emission control devices)
 - Description of adjustable parameters and anti-tampering method used
 - Label samples
 - VECI (Vehicle Emission Control Information) affixed in engine compartment
 - EP (Environmental Performance) affixed on vehicle window
 - Smog and global warming scores
 - Emission warranty statement and warranted parts list
 - Description of vehicle make/models covered
 - Production specs for fuel tank fill pipe and openings

LEV III Structure and Overview (Certification Process - Manufacturer)

- Compliance statements
 - Vehicle was tested and in compliance with standards
 - No increase in toxic or noxious emissions and causing no unsafe conditions to operator or vehicle
 - Production vehicles being in all material respects the same as described in application
 - High altitude emission compliance
 - Compliance with Inspection & Maintenance (I/M) standards
- Update cert application
 - For production running changes (RC) and field fixes (FF)
- Submit Part II application
 - Preliminary

 January of calendar year corresponding to model year
 - Part numbers
 - Calibration info
 - Test parameters for production models
 - Final January of calendar year after corresponding model year
 - Changes since submission of preliminary Part II application

Compliance and Enforcement (Warranty)

- Emission control component warranty established by section §43205 of the California Health and Safety Code
- Basic warranty for 3 years or 50,000 miles, whichever comes first
 - Covers any emission control component that would cause the vehicle to fail smog check
- Extended warranty for 7 years or 70,000 miles, whichever comes first, for high cost components
 - Covers any emission component that would cause the vehicle to fail smog check
 - Cost adjusted yearly by the nationwide Consumer Price Index
 - Each year ARB issues a Manufacturers' Advisory Correspondence listing the cost limit
 - Cost limit for 2015 is \$590

LEV III Structure and Overview (Certification Process - ARB)

- Conduct meetings with manufacturers before cert applications
 - Annual cert preview program (CPP)
 - Product offerings, test and cert plans, carry-over/carry-across proposals*
 - Select vehicles for 50 °F testing
 - May select vehicles for confirmatory testing at ARB or US EPA
 - Topical e.g., AECD*, alternative/modified test fuels* and/or durability/emissions procedures*, anti-tampering methods* for adjustable parameters
 - *Require ARB approval
- Upon receipt of cert application
 - Conduct preliminary review for completeness Notify manufacturer within 30 days
 - Conduct formal review of complete application Notify manufacturer if explanation, clarification and/or supplemental info is needed
 - Draft EO (Executive Order) if all requirements are met, including OBDII, VECI & EP labels, warranty statement.
 - (If not, draft cert denial letter. Rare event because ARB goal is to work with manufacturer for compliance and certification.)
 - EO undergoes review by cert engineer, section manager, branch chief, and division chief

LEV III Structure and Overview (Certification Process – ARB)

- EO is signed by ECARS Division Chief (or designees)
 - Specifying the model year, Test Group, Evaporative Family, emission standards (and in-use standards if different than cert standards), vehicle make/models, and any conditions deemed necessary. Valid for only the specified model year.
 - Posted at http://www.arb.ca.gov/msprog/onroad/cert/cert.ph

Executive Order - Certification

California Environmental Protection Agency

Air Resources Board

FORD MOTOR COMPANY Executive Order: A-010-1859

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Page 1 of 4

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-14-012:

IT IS ORDERED AND RESOLVED: The following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

				ORMATION	OUP INF	TEST GR				
JEL TYPE	FU	EGORY	CATE	FUEL C	(S)	E CLASS(E	VEHICL	OUP	TEST GRO	MODEL YEAR
ASOLINE	Gi		D SIN	DEDICATED		3, LDT4.	LD	7333	FFMXT02.7	2015
TE IN-USE STO	CATEGORY INTERIM / INT			SION CA	VEHICLE EMISSION			FUL LIFE (miles)		
SFTP	SFTP FTP S		TP SFTP		TP	AP F		R E	EXH/ORV	
NMOG+NOX		NMOG+NOX		COMPOSITE	LEV 3	ULEV70	LEV3	150000	1	150000
DISPLACEME (L)				OBD S	L	N CONTRO	UST EMISSIO	S & EXH	FEATURES	SPECIAL
				FULL		CAC, DFI	HO2S, 2TC,	HO2S, 2	TWC, 2WR-1	1 21
2.7	ALL MODELS 2.7			PARTIAL						
			1	ARTIAL WITH	P					
		FORMATION	Y INF	ORVR) FAMIL	(EVAP	REFUELING	PORATIVE &	EVA	-	
SPECIAL FEATURES		VEHICLE CLASS		GORY	STD CATE	VAPORATIVE	Y E	RVR FAMIL	EVAP / OF	
		LDT3		L		W 2	LE		0160ABC	FFIOR
		LDT3				W 2	LE		0235NBC	FFXXR
			1	NFORMATION	REDIT I	MISSION C	E			
OPTIONAL EX		NMOG CRI		OG CREDIT FO		•	TEST GROUP	NCE FOR	ALLOWAN	
TRUCKS	R	DO		EVAP	"	TZEV	ZEV	AT P	PZEV	BASELINE
N		N N								
		N	ATION	AGE INFORMA	TAVERA	AND FLEE	NMOG			
NMOG+NOX FLEET ST LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)		NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/ml)		TIO PC+LDT	MHC RAT	НСНО/NN	MOG/NMHC RATIO		CH4 RAF	NMOG RAF
0.119		.00	0.1				1.10			

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations. California Environmental Protection Agency

⊘ Air Resources Board

FORD MOTOR COMPANY Executive Order: A-010-1859 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 2 of 4

BE IT FURTHER RESOLVED:

The exhaust and evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's NMOG+NOx Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

BE IT FURTHER RESOLVED:

For the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards' (California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

BE IT FURTHER RESOLVED:

The test group listed in this Executive Order is certified conditionally on the manufacturer providing data to demonstrate compliance with California's greenhouse gas fleet average emission standard (CA GHG Standard) specified in Title 13, California Code of Regulations, (13 CCR) Section 1961.1 and the incorporated California 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, amended December 6, 2012 (CA Test Procedures). The manufacturer has elected, under 13 CCR Section 1961.1(a)(1)(A)(ii) and under Section E.2.5.1(ii) of the CA Test Procedures, to demonstrate compliance with the CA GHG Standard by demonstrating compliance with the National greenhouse gas program (National GHG Program). Therefore, the test group listed in this Executive Order is certified conditionally further on the manufacturer complying with the requirements specified in said provisions in 13 CCR, and Sections E.2.5.1(ii) and H.4.5(b) and H.4.5(c) of the CA Test Procedures (among other things, concerning data and information submission, timing, and format as specified by the Executive Officer). Failure to comply with the certification requirements to demonstrate compliance with CA GHG Standard by demonstrating compliance with the National GHG Program under said provisions in 13 CCR and CA Test Procedures may be cause for the Executive Officer to revoke the Executive Order. Vehicles in the revoked Executive Order shall be deemed uncertified and subject to penalties authorized under California law. Notwithstanding the requirement herein, a manufacturer that becomes, after MY2009, a large-volume manufacturer, as defined in 13 CCR Section 1900, is not required to comply with the CA GHG Standard until the beginning of the fourth model-year from becoming a large-volume manufacturer. Additionally, notwithstanding the requirement herein, a small-volume manufacturer, independent low-volume manufacturer, or intermediate volumemanufacturer, as defined in 13 CCR Section 1900, is not required to comply with CA GHG Standard during modelyears (MY) 2012 through 2015.

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 6

day of October 2014.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

FORD MOTOR COMPANY

Executive Order: A-010-1859 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 3 of 4

ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50°F, 20°F)

CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbon; NMHC: non-CH4 HC; CO: carbon monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter. RAF: reactivity adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hot-soak; RL [g HC/mi]: running loss; ORVR [g HC/gallon dispensed]: on-board refueling vapor recovery; g: gram; mg: milligram; mi: mile; K: 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplemental FTP

FUEL TYPE

		NMOG+NOx (g/ml)		7.000			NOx (g/mi)		HCHO (mg/ml)		PM (g/mi)					
1		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD					
FTP@50K	*						*									
FTP@UL	GASOLINE- LEV3 E10	0.052	0.070	0.7	1.7				4		0.01					
50°F @4K	GASOLINE- LEV3 E10	0.079	0.140	0.6	1.7		*	1.2	16	9065	501/4					

7 3000	FILE TYPE	NMOG+N	IOx (g/mi)	CO (g/mi)		
	FUEL TYPE		STD	CERT	STD	
HWFET @ 50K	•			E 1 5	allows told	
HWFET @ UL	GASOLINE-LEV3 E10	0.021	0.070	The said		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE		The state of the s	1.05	12.5	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

7		de frait	1 11 11 11	US06	X 11 2 12 12 12 12 12 12 12 12 12 12 12 1	SC03		COM	POSITE	-
1	FUEL TYPE		NMOG+NOx (g/ml)	CO (g/ml)	PM (mg/mi)	NMOG+NOx (g/mi)	CO (g/ml)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
		CERT					*	- Inner	0 1	135.7
@ 4K		STD			are not		*		MALLELL.	100
		CERT					*	0.058	0.8	
@ UL	GASOLINE- LEV3 E10	STD					*	0.140	4.2	
	2243 210	BIN	Chipman.					0.100	271711	1000

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FUEL TYPE			WHOLE	RL (g/ml) @ UL					
	FUEL TYPE	3DHS (g/test) @ UL				2DHS (g/test) @ UL			
	CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
FFMXR0160ABC	GASOLINE - TIER 2 UNLEADED	0.33	0.90		0.66	1.15		0.000	0.05
FFMXR0235NBC	GASOLINE - TIER 2 UNLEADED	0.29	0.90		0.70	1.15		0.000	0.05

California Environmental Protection Agency

Bar Resources Board

FORD MOTOR COMPANY Executive Order: A-010-1859

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

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				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTE TEST (g/test) @ 4			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
FFHXR0160ABC	GASOLINE - TIER 2 UNLEADED	0.05	0.20									
FFHORR0235NBC	GASOLINE - TIER 2 UNLEADED	0.04	0.20							•		

not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: LDT<6000#GVWR,3751-5750#LVW; LDT3; LDT 6001-8500#GVWR,3751-5750#ALVW; LDT4; LDT 6001-8500#GVWR,5751-8500#ALVW: MDV: medium-duty vehicle; MDV4: MDV 8501-10000#GVWR; MDV5: MDV 10001-14000#GVWR; MDPV: mediumduty passenger vehicle; ECS: emission control system; CERT: certification; STD: standard; FEL: family emission limit; GVWR: gross vehicle weight rating; LVW: loaded vehicle weight; ALVW; adjusted LVW; LEV; low emission vehicle; ULEV; ultra LEV; SULEV; super ULEV; ZEV: zero-emission vehicle; PZEV: partial ZEV; AT PZEV: advanced technology PZEV; TZEV: transitional ZEV; TWC/OC: 3-way/oxidizing catalyst; ADSTWC: adsorbing TWC; HAC: HC adsorbing catalyst; WU: warm-up catalyst; NAC: NOx adsorption catalyst; SCR-U or SCRC/SCR-N or SCRC-NH3; selective catalytic reduction-urea/ammonia; NH3OC; ammonia oxidation catalyst; CTOX/PTOX: continuous/periodic trap oxidizer; DPF: diesel particulate filter (active); GPF: PM filter for sparkgnited engine; HO2S/O2S: heated/oxygen sensor; WR-HO2S or AFS: wide range/linear/heated air-fuel ratio sensor; NOXS: NOx sensor: PMS: PM sensor: RDQS: reductant quality sensor: NH3S: ammonia sensor: EGR: exhaust gas recirculation: EGRC: EGR cooler, AIR/AIRE: secondary air injection (belt driven)/(electric driven); PAIR: pulsed AIR; SFI/MFI: sequential/multiport fuel injection; DFI/IFI: direct/indirect fuel injection: TC/SC: turbo/super charger; CAC: charge air cooler; F/P/\$: full/partial/partial with fines on-board diagnostic; DOR: direct ozone reducing; HCT: hydrocarbon trap; BCAN: bleed carbon canister; prefix 2: parallel; (2) suffix: series; CNG/LNG: compressed/liquefied natural gas; LPG: liquefied petroleum gas; E85: "85%" ethanol ("15% gasoline) fuel; E10; "10%" ethanol ("90%" gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS. automated manual-selectable transmission; OT; other transmission

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
FORD	P150 PICKUP 2WD	LDT3	2.7	SA6	FFMKR0160ABC	1	2	
FORD	F150 PICKUP 2WD	LDT3	2.7	SA6	FFMXR0235NBC	1	P	
FORD	F150 PICKUP 2WD	LDT4	2.7	SA6	FFMXR0160ABC	1	P	
FORD	F150 PICKUP 2WD	LDT4	2.7	SA6	FFMXR0235NBC	1	P	
FORD	F150 PICKUP 4WD	LDT3	2.7	SA6	FFMXR0160ABC	1	P	
FORD	F150 PICKUP 4WD	LDT3	2.7	SA6	FFHCKR0235NBC	1	P	
FORD	F150 PICKUP 4WD	LDT4	2.7	SA6	FFMXR0160ABC	1	P	
FORD	F150 PICKUP 4WD	LDT4	2.7	SA6	FFMKR0235NBC	1	P	
FORD	F150 SFE PICKUP 2WD	LDT3	2.7	SA6	FFMXR0160ABC	1	P	
	F150 SFR		-					

FFMXR0235NBC

LDT3

PICKUP 2WD

2.7

FORD

Compliance and Enforcement (Tracking and Auditing Compliance)

- After Certification
 - Review/approve manufacturer's assembly functional check plans
 - Process Running Change and Field Fixes requests
 - Determine, at end of model year, compliance with fleet average standards (NMOG, VEC, GHG) and/or phase-in (e.g., LEV III) requirements using actual sales
 - Manufacturer initially demonstrated compliance with fleet average emission and phase-in requirements using projected sales during annual certification preview program using projected sales.
 - Manufacturer submits current status re: credits/debits at end of model year sales.
 - ARB certification staff audits manufacturer credit/debit status report.

Compliance and Enforcement (Manufacturer In-Use Testing)

Manufacturers are required to perform in-use testing at both low mileage and high mileage as defined in the tables Number of vehicles to be tested depends on the manufacturer's status (small volume or high volume manufacturer) or size of the test group.

Vehicles tested to determine compliance with FTP, Highway and USO6 emission standards.

Up to two USO6 cycles may be run to purge the catalyst of sulfur if the fuel sample from the vehicle as received exceeds 15 ppm sulfur.

Vehicles tested at low mileage must have a minimum odometer mileage of 10,000 miles

Vehicles tested at high mileage must have a minimum odometer mileage of 105,000 miles.

California Small Volume Manufacturers and Small Volume Test Groups								
California only test group annual sales ¹ 1-1,500 1,501-4,500								
Low Mileage	Voluntary	0						
High Mileage	Voluntary	22						

¹ Total annual production of groups eligible for testing under small volume sampling plan is capped at a maximum of 4,500 California-only production volume per model year, per large volume manufacturer. All other remaining large volume manufacturers' small volume test groups shall meet the requirements in the Table below.

² Particulate emissions must be measured for one vehicle per test group that certifies to the LEV III particulate standards

California Large Volume Manufacturers									
California only test groups -	4,500-	15,001-	>25,000						
annual sales	15,000	25,000	<i>7</i> 23,000						
Low Mileage	2^1	3 ²	4 ²						
High Mileage	42	5 ³	63						

¹ Particulate emissions must be measured for one vehicle per test group that certifies to the LEV III particulate standards.

 $^{^2}$ Particulate emissions must be measured for two vehicles per test group that certifies to the LEV III particulate standards .

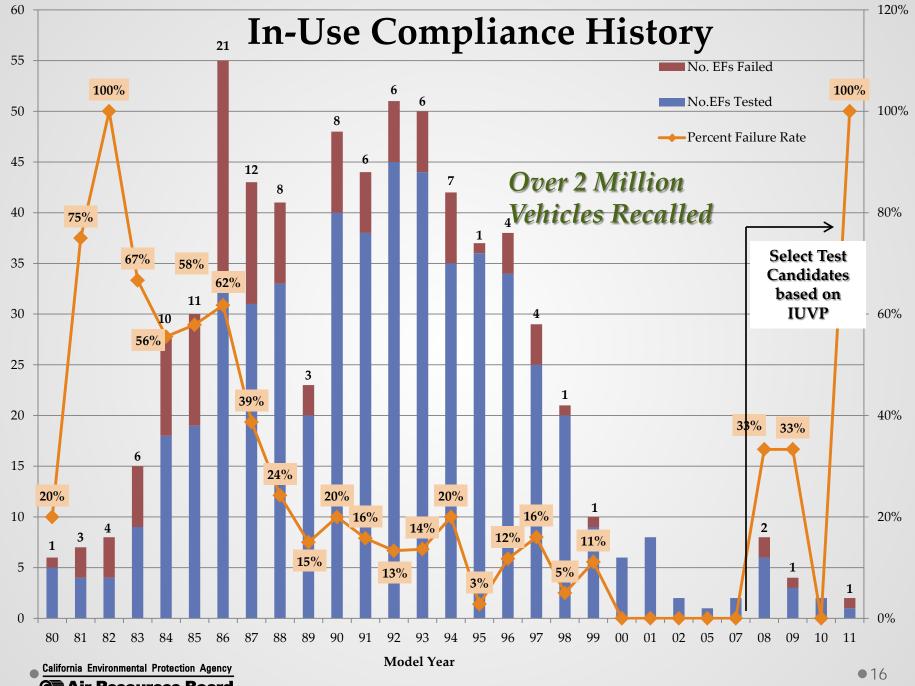
³ Particulate emissions must be measured for three vehicles per test group that certifies to the LEV III particulate standards.

Compliance and Enforcement (In-use Testing by ARB)

- Objectives
 - o Force durable emission control designs
 - o Catch and fix problems early in the field
- Process Test Light- and Medium-Duty test groups and (Coming Soon) Heavy-Duty engine families
- Minimum 10 vehicle sampled at up to 75% useful life mileage
 - Properly maintained and used
- Noncompliance subject to remedial action (Recall)
- Recall repairs enforced through vehicle registration at California Department of Motor Vehicles
- High capture rate (+90% vehicles repaired)

Compliance and Enforcement (In-Use Testing by ARB)

- Program began in 1983 5 engine families were tested
- •High failure rate program expanded in 1987
- ARB generally targets vehicles that certify close to the emission standard or that employ new technologies
- Dramatic drop in failure rate since inception of the program



Compliance and Enforcement (In-use Testing by ARB)

- Vehicles procured through private contractor
- Contractor administers 40 question telephone questionnaire to vehicle owner to establish vehicle maintenance history
- Vehicles must be properly maintained according to manufacturer's recommendations
 - o Oil changed at recommended intervals, etc.
- Some restorative maintenance allowed
- Vehicle owner is provided a rental vehicle and vehicle returned with full tank of fuel after testing



Compliance and Enforcement (In-Use Testing by ARB)

- Emissions measured by testing under simulated driving conditions on a dynamometer
- Evaporative emissions are also measured for compliance with the applicable evaporative emission standard
- Emissions measured using same test procedures used to certify vehicles.



Compliance and Enforcement (In-use Testing by ARB)

- Non-Compliance Determined if:
 - o Three or more of the same emission components are defective
 - Average emissions exceed applicable standards Minimum of 10 vehicles sampled

Compliance and Enforcement (In-use Compliance Testing)

In this case the manufacturer failed the SULEV30 standard by 50%. The fix was determined by the manufacturer to consist of catalyst replacement.

	NMOG + NOx (g/mi)	CO (g/mi)
Standard	0.030	1.0
10 Vehicle Average	0.045	0.83
% of Standard	+ 50%	- 17%



Part Replaced	Cost to Replace	Affected Vehicles	RECALL COST
Catalyst (CA)	\$550	13000	\$7,150,000
Catalyst (U.S)	\$550	130,000	\$71,500,000

Compliance and Enforcement (Enforcement Measures)

- Notwithstanding the fact that the vehicles described in the application may comply with all other requirements of this subpart, the ARB may deny issuance of, suspend, or revoke a previously issued certificate of conformity if ARB finds any one of the following infractions to be substantial:
 - o (1) The manufacturer submits false or incomplete information.
 - (2) The manufacturer denies an ARB enforcement officer or ARB authorized representative the opportunity to conduct authorized inspections.
 - (3) The manufacturer renders inaccurate any test data which it submits, or fails to make a good engineering judgment in accordance with §86.1851-01(c)(1).
 - (4) The manufacturer denies an ARB enforcement officer or ARB authorized representative reasonable assistance as required in §86.1849-01.
 - (5) The manufacturer fails to provide the records required in §86.1844-01 to ARB within the deadline set forth in the request for such information.
 - o (6) The manufacturer fails to comply with all conditions under which the certificate of conformity was granted as specified in 86.1848-01.
 - (7) The manufacturer otherwise circumvents the intent of the Act or of this part.

Compliance and Enforcement (Enforcement Measures)

- Besides subject to recall, manufacturers may be subject to monetary penalty if emission violation excessive
 - Generally negotiated between ARB and manufacturer
- Any business or person that sells vehicles not certified for sale in California is also subject to monetary penalties.

Compliance and Enforcement (Summary)

- ARB staff issued 527 Executive Orders for light- and medium-duty vehicles in 2014
 - o Original Executive Orders are superceded whenever a manufacturer makes a running change or field fix.
- Counting all on-road and off-road certifications,
 ARB staff issued 3,166 Executive Orders in 2014
- ARB typically tests 6 light-duty test groups per year for a total of 84 vehicles tested for in-use compliance
- ARB staff also conduct unannounced inspections of motor vehicle dealers to assure vehicles on lot are compliant with California requirements