EXECUTIVE ORDER A-344-0052-3 New On-Road Heavy-Duty Engines

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

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAN	ENGINE FAMILY		FUEL TYPE 1	STANDARDS & TEST	SERVICE	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 5 EMD+				
2015	FRIIE06.8BW5		SIZES (L) 6.8	LPG	Otto	CLASS THOO	TWC, SFI, 2AFS, HO2S					
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL 4		ADDITIONAL IDLE EMISSIONS CONTROL 4										
N/A		N/A										
ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)										
6.8		Blue Bird Vision School Bus / FFF618BR5, FFF61HBR5, FFF618FR5, FFF61HFR5; F-450/550 Chassis Cab / FFF418YR5, FFF418NR5, FFF41BPR5, FFF41LNR5, FFF41LNR5; Step Van / FFF418RR5; Motor Home / FFF418QR5; F-650 Chassis Cab / FFF618AR5, FFF61HAR5, FFF61UAR5 (362 for all codes)										
L=liter; hp	=horsepower; kw=k	ilowatt; hi	=hour;				R 86.abc=Title 40, Code of Federal Regulatio	ns, Section 86.abc;				

L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;

3 ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction – urea / – ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; Defaired gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/ super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series;

ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);

EMD=engine manufacturer diagnostic system; OBD(F) / (P) / (\$)=full / partial / partial with fine / on-board diagnostic;

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavyduty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.).

in g/bhp-hr	NMHC		NOx		NMHC+NOx		co		PM		нсно	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	*	0.20	*	*	*	14.4	*	0.01	*	0.01	*
CERT	0.07	*	0.08	*	*	*	2.2	*	0.000	*	0.000	*
NTE	*		*		* .		*		*		*	

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET= supplemental emissions testing; NTE=Not-to-Exceed emission limit, STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;)

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 2035 et seq. (emission control warranty) and 13 CCR 1971.1 (on-board diagnostic).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

This Executive Order hereby supersedes Executive Order A-344-0052-2 dated August 28, 2014.

Executed at El Monte, California on this

day of September 2014.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division