

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-02-003;

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 ENGINE FAMILY		Y ENGINE SIZES (L)			INTENDED SERVICE CLASS <sup>2</sup>	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 6					
2010	ADDXH15.6GED 15.6		DIESEL	DIESEL	HHDD	ECM, TC, CAC, EGR, OC, PTOX, SCR-U	EMD+					
	ENGINE'S IDLE NS CONTROL		AD	DITIONAL IDLE EN	lissions co	ntrol 5						
30g N/A												
ENGINE (	L)	ENGINE MODELS / CODES (rated power, in hp)										
15.6		See Attachment for engine models and ratings										
-		•										
L=liter, hp CNG/LI L/M/H is ECS=el up catalyst; TBI=throttic super chargeontrol mode ESS=er (per 13 CC	-horsepower; kw=kilot MG=compressed/liquefit IDD=light/medium/heat nission control system nission control system DPF=diesel particulat a body fuel injection; S per, CAC=charge air collule; EM=engine modification ngine shutdown system R 1956.8(a)(6)(D); Exx.	watt; hr=hour; ed natural gas; LPG=liquef vy heavy-duty diesel; UB=u TWC/OC=three-way/oxidiz e filter; PTOX=periodic trap F/MFI=sequential/multi por pooler, EGR / EGR-C=exhat fication; 2 (preftx)=parallel; (per 13 CCR 1956.8a)(6), sympt=exempled per 13 CCI	ied petroleum gas; E85=85% e irban bus; HDO=heavy duty Ot tring catalyst; NAC=NOx adsory o oxidizer; HO25/O25=heated/ f. tuel injection; DGI=direct gass tst gas recirculation / cooled EG (2) (suffix)=in series; A(1): 30g=30 g/hr NOx (per 13 R 1956.8(a)(6)(B) or for CNG/LN	thanol fuel; MF=multo; to; btion catalyst; SCR-L oxygen sensor; HAF bline injection; GCAR R; PAIR/AIR=pulse B CCR 1956.8(a)(6)(C NG fuel systems; N/A	ti fuel a.k.a. BI J / SCR-N=sele S/AFS=heated. B=gaseous ca d/secondary air c); APS =internia=not applicable	R 86.abc=Title 40, Code of Federal Regulations F=bi fuel; DF=dual fuel; FF=flexible fuel;  citive catalytic reduction – urea / – ammonia; W /air-fuel-ratio sensor (a.k.a., universal or linear o roburetor, IDI/DDI=indirect/direct diesel injection; rinjection; SPL=smoke puff limiter, ECM/PCM= hal combustion auxiliary power system; ALT=alt e (e.g., Otto engines and vehicles);	/U (prefix) =warm- xygen sensor); TC/SC=turbo/ engine/powertrain					
" EMD=	ngine manufacturer dia	agnostic system (13 CCR 19	971); OBD(F) / (P) / (\$)=full / pa	artial / partial with fine	/ on-board dia	gnostic;	(2009August06)					

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, EURO 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	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	0.20	0.20	•	*	15.5	15.5	0.01	0.01	*	•
FEL	•	*	<del>-</del>		*	•	•	*		•		•
CERT	0.000	0.000	0.12	0.17	•	•	0.1	0.01	0.000	0.000	•	*
NTE	0.21		0.30		•		19.4		0.02		•	

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, including RMCSET=ram mode cycle supplemental emissions testing; NTE=Not-to-Exceed; 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; (Rev.: 2007-02-26)

**BE IT FURTHER RESOLVED:** Certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

**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 1971.1 (on-board diagnostic, full or partial compliance), and 13 CCR 2035 et seq. (emission control warranty).

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.

Executed at El Monte, California on this

\_\_ day of February 2010.

Annette Hebert, Chief

**Mobile Source Operations Division** 

## **Engine Model** Symmary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torqueD	9.Em ssion Control evice Per SAE J1930
								·	
ADDXH15.6GED		DD16	475@1800	270	160.3	1750@1240	308	125.8	ECM, TC, CAC
ADDXH15.6GED	11	DD16	500@1800	285	169.2	1750@1240	308	125.8	EGR, DOC,
ADDXH15.6GED	101	DD16	535@1800	307	181.7	1750@1240	308	125.8	DPF, SCR
ADDXH15.6GED	IV	DD16	500@1800	285	169.2	1850@1240	327	133.3	(all ratings)
ADDXH15.6GED	V	DD16	550@1800	316	187.0	1850@1240	327	133.3	
ADDXH15.6GED	VI	DD16	600@1800	346	204.8	1850@1240	327	133.3	
ADDXH15.6GED	VII	DD16	475@1800	270	160.3	1950@1240	345	141.0	
ADDXH15.6GED	VIII	DD16	500@1800	285	169.2	2050@1240	364	148.7	
ADDXH15.6GED	IX	DD16	550@1800	316	187.0	2050@1240	364	148.7	
ADDXH15.6GED	Х	DD16	600@1800	346	204.8	2050@1240	364	148.7	

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