

Pursuant to the authority vested in California 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	ENGINE FA	WILY	ENGINE SIZES (L)	FUEL TYPE 1	STANDARDS & TEST	INTENDED SERVICE	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 5				
TEAR	= 6.26.37/1	= (-3-3-1/11/11/11/11/11/11/11/11/11/11/11/11/1		THE STATE OF THE STATE OF	PROCEDURE	CLASS 2	DDI, TC, CAC, ECM, EGR, DOC,	Propries				
2019 KNVXH0402		1020SA 6.6		Diesel	Diesel	LHDD	PTOX, SCR-U	OBD (\$)				
	ENGINE'S IDLE	0)(1)		AL AL	DOITIONAL IDLE EN	IISSIONS CO	NTROL 5	177773				
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ENGINE (I	L)	Nesta.	3101 F Salt	ENGINE MO	DELS / CODES (ra	ted power, in	hp) -	un com				
6.6	7 59/613	11.2	g/No. 7 Fil	en grand of the sec	350HP / D6.6 (3	350)	Form on sent the extra	is while				
3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	the state of	Emergency Vehicle Rating: 350HP / D6.6-E (350)										

=not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; =liter; hp=horsepower; kw=kilowatt; hr=hour;

CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;

L/M/H HDD=light/medium/heavy heavy-duty diesel; U8=urban bus; HDO=heavy duty Otto;

EGS-emission control system; DUC=Diesel 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/02S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor; TBI=throttle body fuel injection; SPIMFI=sequential/multi-port fuel injection; SPImFipsequential/multi-port fuel injection; Direct gasoline injection; GCARB=gaseous carburator; IDVDIE=indirect/direct diesel injection; CTSC=turbol 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 modification; 2 (prefix)=parallel; (2) (suffix)=in series; AMOX=ammonia oxidation catalyst ECS=emission control system; DOC=Diesel oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia; WU (prefix) = warm-up

ESS=engine shuldown 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; the SET 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. "Diésel" 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	0.14	0.20	0.20	*		15.5	15.5	0.01	0.01		with .
CERT	0.01	0.000	0.15	0.08	*	* .	0.3	0.00	0.001	0.000	*	*
NTE	0.21		0.	30	A STREET WITH STREET		19.4		0.02		HAND STORY NOW HAND	

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: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted December 12, 2002, as last amended December 19, 2018 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.

	EPA CERTIFICATI	OF CONFORMITY	PRIMARY INTENDED SERVICE CLASS  VOCATIONAL				
	KNVXH0402	0SA-002-R01					
In	C	O <sub>2</sub>	CH	N.O.			
g/bhp-hr	FTP	SET	CH4	N <sub>2</sub> O			
STD	576		0.10	0.10			
FCL	563	*	*	*			
FEL	580	*	0.10	0.10			
CERT	551	*	0.02	0.04			

STD = standard or emission test cap; FEL=family emission limit; g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; VOCATIONAL=vocational engine; TRACTOR=tractor engine FCL=family certification level; CERT=certification level; CO2=carbon dioxide;

BE IT FURTHER RESOLVED: Certification to the FEL(s) / FCL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) / FCL(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).

BE IT FURTHER RESOLVED: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), 30g rating engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" adopted December 12, 2002, as last amended December 19, 2018, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

BE IT FURTHER RESOLVED: The listed engine models is conditionally certified in accordance with 13 CCR Section 1971.1 (k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system has been determined to have eight deficiencies, and therefore is approved subject to the manufacturer paying a fine of \$250 per engine for the third through eighth deficiencies in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to California Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2019 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to \$37,500 per engine pursuant to HSC Section 43154.

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

This Executive Order hereby supersedes Executive Order A-004-0509 dated December 18, 2018.

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

Executed at El Monte, California on this 1374

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Emissions Compliance, Automotive Regulations and Science Division

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## **Engine Model Summary 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 Ra	te: 9.Emission Control torqueDevice Per SAE J1930
KNVXH04020SA	D6.6	350HP	350@2700	114	138	700@1600	105	75	DDI, TC, CAC, ECM,
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KNVXH04020SA	D6.6-E	350HP	350@2700	114	138	700@1600	105	75	DDI, TC, CAC, ECM
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