## **CUMMINS POWER GENERATION**

EXECUTIVE ORDER U-U-008-0283 New Off-Road Small Spark-Ignition Engines at or Below 19 Kilowatts

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 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: That the following engine and emission control systems produced by the manufacturer are certified for use in small off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGIN	IE FAMILY	DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)			
2017	2017 HN5XS.6532LC		653	4-stroke, <u>≥</u> 225 cc		LPG			
DURABILITY HOURS			SPECIAL FEATURES		TYPICAL EQUIPMENT APPLICATION				
500			TWC, PAIR		Generator Set				
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment							

ABBREVIATIONS: EM=engine modification TWC/OC=three-way/oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2(prefix)=parallel (2)(suffix)=in series ECM=engine control module

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx), carbon monoxide (CO), and particulate matter (PM) emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2403(b)), and certification emission levels for this engine family in grams per kilowatt-hour (g/kW-hr). Engines within this engine family shall have closed crankcases in conformance with Section 1054.115(a) of the "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines," adopted October 25, 2012.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)	
STANDARD	8.0	549	*	
FAMILY EMISSION LEVEL	5.5	549	*	
CERTIFICATION LEVEL	3.4	222	*	

BE IT FURTHER RESOLVED: That the family emission level(s) (FELs), as applicable, is an emission limit declared by the manufacturer for use in the averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2403(e)(1) and 2407(a).

BE IT FURTHER RESOLVED: That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2404 (emission control labels) and 13 CCR Sections 2405 and 2406 (emission control system warranty).

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

Quarterly reports of engines produced in this engine family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

-H-LIN. -

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Page: 9

Model Year: Manufacturer: 2017

**Cummins Power Generation** 

Issued:

Revised: 3/22/2016

Engine Family: HN5XS.6532LC

E.O. Number: U-U-008-0283

## **Small Off-Road Engine Model Summary Form**

Units for Table: kw

47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
5.5HGJAB-1119	50-State	653	80/65	20 .	8.47	2400	34.5	2400	TWC, PAIR
5.5HGJAB-1270	50-State	653	80/65	20	8.47	2400	34.5	2400	TWC, PAIR
5.5HGJAB-1381	50-State	653	80/65	20	8.47	2400	34.5	2400	TWC, PAIR
5.5HGJAE-2144	50-State	653	80/65	20	8.47	2400	34.5	2400	TWC, PAIR
5.5HGJAE-3255	50-State	653	80/65	20	8.47	2400	34.5	2400	TWC, PAIR
6.5HGJAB-904	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
6.5HGJAB-915	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
6.5HGJAE-2145	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
6.5HGJAE-3256	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
6.5HGJAE-3554	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
6.5HGJAE-4665	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC, PAIR
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The state of the s	Model Designation 5.5HGJAB-1119 5.5HGJAB-1270 5.5HGJAB-1381 5.5HGJAE-2144 5.5HGJAE-3255 6.5HGJAB-904 6.5HGJAB-915 6.5HGJAE-2145 6.5HGJAE-3256 6.5HGJAE-3554	Model         Sales           Designation         Code           5.5HGJAB-1119         50-State           5.5HGJAB-1270         50-State           5.5HGJAB-1381         50-State           5.5HGJAE-2144         50-State           5.5HGJAE-3255         50-State           6.5HGJAB-904         50-State           6.5HGJAB-915         50-State           6.5HGJAE-2145         50-State           6.5HGJAE-3256         50-State           6.5HGJAE-3554         50-State	Model Designation         Sales Code         Displ (cc)           5.5HGJAB-1119         50-State         653           5.5HGJAB-1270         50-State         653           5.5HGJAB-1381         50-State         653           5.5HGJAE-2144         50-State         653           5.5HGJAE-3255         50-State         653           6.5HGJAB-904         50-State         653           6.5HGJAB-915         50-State         653           6.5HGJAE-2145         50-State         653           6.5HGJAE-3256         50-State         653           6.5HGJAE-3554         50-State         653	Model Designation         Sales Code         Displ (cc)         Bore/ Stroke           5.5HGJAB-1119         50-State         653         80/65           5.5HGJAB-1270         50-State         653         80/65           5.5HGJAB-1381         50-State         653         80/65           5.5HGJAE-2144         50-State         653         80/65           5.5HGJAE-3255         50-State         653         80/65           6.5HGJAB-904         50-State         653         80/65           6.5HGJAB-915         50-State         653         80/65           6.5HGJAE-2145         50-State         653         80/65           6.5HGJAE-3256         50-State         653         80/65           6.5HGJAE-3554         50-State         653         80/65	Model Designation         Sales Code         Displ (cc)         Bore/ Stroke         Ignition Timing           5.5HGJAB-1119         50-State         653         80/65         20           5.5HGJAB-1270         50-State         653         80/65         20           5.5HGJAB-1381         50-State         653         80/65         20           5.5HGJAE-2144         50-State         653         80/65         20           5.5HGJAE-3255         50-State         653         80/65         20           6.5HGJAB-904         50-State         653         80/65         20           6.5HGJAB-915         50-State         653         80/65         20           6.5HGJAE-2145         50-State         653         80/65         20           6.5HGJAE-3256         50-State         653         80/65         20           6.5HGJAE-3256         50-State         653         80/65         20           6.5HGJAE-3554         50-State         653         80/65         20	Model Designation         Sales Code         Displ (cc)         Bore/ Stroke         Ignition Timing         Max Power           5.5HGJAB-1119         50-State         653         80/65         20         8.47           5.5HGJAB-1270         50-State         653         80/65         20         8.47           5.5HGJAB-1381         50-State         653         80/65         20         8.47           5.5HGJAE-2144         50-State         653         80/65         20         8.47           5.5HGJAE-3255         50-State         653         80/65         20         8.47           6.5HGJAB-904         50-State         653         80/65         20         9.57           6.5HGJAB-915         50-State         653         80/65         20         9.57           6.5HGJAE-2145         50-State         653         80/65         20         9.57           6.5HGJAE-3256         50-State         653         80/65         20         9.57           6.5HGJAE-3554         50-State         653         80/65         20         9.57           6.5HGJAE-3554         50-State         653         80/65         20         9.57	Model Designation         Sales Code         Displ (cc)         Bore/ Stroke         Ignition Timing         Max Power         Rated Speed (RPM)           5.5HGJAB-1119         50-State         653         80/65         20         8.47         2400           5.5HGJAB-1270         50-State         653         80/65         20         8.47         2400           5.5HGJAB-1381         50-State         653         80/65         20         8.47         2400           5.5HGJAE-2144         50-State         653         80/65         20         8.47         2400           5.5HGJAE-3255         50-State         653         80/65         20         8.47         2400           6.5HGJAB-904         50-State         653         80/65         20         9.57         2880           6.5HGJAB-915         50-State         653         80/65         20         9.57         2880           6.5HGJAE-3256         50-State         653         80/65         20         9.57         2880           6.5HGJAE-3554         50-State         653         80/65         20         9.57         2880           6.5HGJAE-3554         50-State         653         80/65         20         9.57	Model Designation         Sales Code         Displementary         Bore/ Stroke         Ignition Timing         Max Pated Speed (RPM)         Rated Torque           5.5HGJAB-1119         50-State         653         80/65         20         8.47         2400         34.5           5.5HGJAB-1270         50-State         653         80/65         20         8.47         2400         34.5           5.5HGJAB-1381         50-State         653         80/65         20         8.47         2400         34.5           5.5HGJAE-2144         50-State         653         80/65         20         8.47         2400         34.5           5.5HGJAE-3255         50-State         653         80/65         20         8.47         2400         34.5           6.5HGJAB-904         50-State         653         80/65         20         9.57         2880         32.3           6.5HGJAB-915         50-State         653         80/65         20         9.57         2880         32.3           6.5HGJAE-2145         50-State         653         80/65         20         9.57         2880         32.3           6.5HGJAE-3256         50-State         653         80/65         20         9.57	Model Designation         Sales Code         Displementary         Bore/ Stroke         Ignition Timing         Max Pated Speed (RPM)         Rated Torque Speed (RPM)           5.5HGJAB-1119         50-State         653         80/65         20         8.47         2400         34.5         2400           5.5HGJAB-1270         50-State         653         80/65         20         8.47         2400         34.5         2400           5.5HGJAB-1381         50-State         653         80/65         20         8.47         2400         34.5         2400           5.5HGJAE-2144         50-State         653         80/65         20         8.47         2400         34.5         2400           5.5HGJAE-3255         50-State         653         80/65         20         8.47         2400         34.5         2400           6.5HGJAB-904         50-State         653         80/65         20         9.57         2880         32.3         2880           6.5HGJAE-2145         50-State         653         80/65         20         9.57         2880         32.3         2880           6.5HGJAE-3256         50-State         653         80/65         20         9.57         2880         32.3 </td

## ATTACHNENT ( page 2 of 2)

Model Year:

2017

Issued:

Manufacturer: Engine Family:

Cummins Power Generation Revised: HN5XS.6532LC

E.O. Number

Small Off-Road Engine Model Summary Form (page 2)

	47	48	49	50	51	52	53	54	55	56
Worst	Model		Disp	Bore/S	Ignition	Max	Rated Speed	Rated	Torque Speed	Emiss Control
Case	Designation	Sales-Code	(cc)	troke	Timing	Power	(RPM)	Torque	(RPM)	Sys
	5.5HGJAB-1220	50-State	653	80/65	20	8.47	2400	34.5	2400	TWC,PAIR
	6.5HGJAB-1272	50-State	653	80/65	20	9.57	2880	32.3	2880	TWC,PAIR
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