⊘ Air Resources Board

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 following on-road motor vehicles with a manufacturer's GVWR over 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

| | | | | | ENG | INE DESC | RIPTION | acidateria. | | | | | |
|-----------------|----------------------------------|---|---|--|--|--|---|--|--|---|--|--|--|
| R I | | | | INE FAMILY | ENGINE SIZES (L) | | | & TEST | INTENDED SERVICE CLASS ² | ECS & SPECIAL FEATURES 3 | OBD | | |
| A-34 | 14-0059-1 | 20 | 016 GRI | GRIIE06.8BWZ | | LPG | | Otto | HDO | TWC, SFI, HO2S 2WR-HO2S, | EMD+ | | |
| or Alco Only | nol Vehicle | S | | | | | VE | HICLE DESCR | IPTION | | | | |
| VE | FUEL TANK | | VEHICLE | | | | | = | ENGINE MODELS / CODES | | | | |
| UL (K) | | (gallons) | | VEITIGEE | WARE & WOBLES | | (L) | | (rated power, in hp) | | | | |
| 150 | 41, 64 | 1 | 2017 | 17 Roush E450 | | 450 Incomplete 6 | | | complete / GHE418NR5, GHE418MR5, GHE41LNR5, 41LMR5, GHE418SR5, GHE418PR5, GHE41LSR5, GHE41LPR5 (305 for all codes) | | | | |
| | or Alcol Only VE UL (K) | ORDER A-344-0059-1 or Alcohol Vehicle Only VE FUEL TA CAPACI (gallon | ORDER YE A-344-0059-1 20 or Alcohol Vehicles Only VE FUEL TANK CAPACITY (gallons) | ORDER YEAR ENG ORDER YEAR ENG A-344-0059-1 2016 GRI ORDER YEAR PUBLIFICATION OF THE CAPACITY (gallons) ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR ENG ORDER YEAR PUBLIFICATION (gallons) | ORDER YEAR ENGINE FAMILY A-344-0059-1 2016 GRIIE06.8BWZ ORDER YEAR ENGINE FAMILY ORDER YEAR ENGINE FAMILY | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) A-344-0059-1 2016 GRIIE06.8BWZ 6.8 or Alcohol Vehicles Only VE FUEL TANK CAPACITY (gallons) VEHICLE MAKE & M ORDER SIZES (L) GRIIE06.8BWZ 6.8 VEHICLE MAKE & M | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) FUEL TY A-344-0059-1 2016 GRIIE06.8BWZ 6.8 LPG or Alcohol Vehicles Only VE FUEL TANK CAPACITY (gallons) VEHICLE MODELS VEHICLE MAKE & MODELS | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) FUEL TY'PE 1 SIZES (L | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) FUEL TY PE 1 & TEST PROCEDURE A-344-0059-1 2016 GRIIE06.8BWZ 6.8 LPG Otto Or Alcohol Vehicles Only VE FUEL TANK CAPACITY (gallons) VEHICLE MODEL YEAR VEHICLE MAKE & MODELS (L) ENGINE (L) ENGINE (L) ENGINE (L) E450 Inc. | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) FUEL TY PE 1 STANDARDS & TEST PROCEDURE CLASS 2 A -344-0059-1 2016 GRIIE06.8BWZ 6.8 LPG Otto HDO OR Alcohol Vehicles Only VE FUEL TANK CAPACITY (gallons) VEHICLE MODEL YEAR UL (K) Gallons) VEHICLE MAKE & MODELS (L) ENGINE (L) ENGINE MODEL (rated power for the power for the power form of the power form | R EXECUTIVE ORDER YEAR ENGINE FAMILY SIZES (L) FUEL TY'PE 1 STANDARDS & TEST PROCEDURE CLASS 2 FEATURES 3 A -344-0059-1 2016 GRIIE06.8BWZ 6.8 LPG Otto HDO TWC, SFI, HO2S 2WR-HO2S, OTTAL ORDER | | |

*=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; L=liter; K=1000 miles; hp=horsepower; kw=kilowatt;

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; UB=urban bus; HDO=heavy duty Otto;

L/M/H HDD=light/medium/neavy neavy-duty dieset; UB=urban bus; HDD=neavy duty Otto;

ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; WU (prefix) = warm-up catalyst; WR-HO2S=wide range oxygen sensor; DPF=diesel particulate filter;
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; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR=exhaust gas recirculation; 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;
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 1956.1 (urban bus) or 13 CCR 1956.8 (other than urban bus); 2) 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, in g/bhp-hr, 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 1956.1 or 13 CCR 1956.8 are in parentheses.)

| | NMHC | | NOx | | NMHC+NOx | | СО | | 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 | 0.10 | * | 0.11 | * | * | * | 2.8 | * | 0.002 | * | 0.000 | * |
| NTE | * | | * | | * | | | | | | * | |

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle; NTE=Not-to-Exceed emission limit; STD=standard or emission test 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 vehicle 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), 13 CCR 1976(b)(1)(F) (evaporative emission standards), 13 CCR 2035 et seq. (emission control warranty), and 13 CCR 2235 [fill pipes and openings of motor vehicle fuel tanks]. (The braces { } are for gasoline, LPG or alcohol fueled vehicles only. The brackets [] are for gasoline or alcohol fueled vehicles only.

Vehicles 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 July 2016.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division