

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-326-1-1

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

POWER SYSTEMS ASSOCIATES

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 1996 model-year Power Systems Associates diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel [dedicated] or Diesel + Compressed Natural Gas (CNG) [bi-fueled] or Diesel + Liquid Natural Gas (LNG) [bi-fueled]

| <u>Engine Family</u> | <u>Engine Displacement</u><br>Liters (Cubic Inches) |       | <u>Exhaust Emission Control Systems and Special Features</u>   |
|----------------------|---|-------|--|
| TPS629EZJARK         | 10.3  | (629) | Turbocharger<br>Charge Air Cooler<br>Engine Control Module (Diesel)<br>Engine Control Module (CNG/LNG) |

Engine model codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour: (The standards for diesel + CNG/LNG bi-fuel are in the parentheses.)

| <u>Total (Non-Methane) Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulates</u> |
|---|------------------------|------------------------|---------------------|
| 1.3 (1.2)                               | 15.5 (15.5)            | 5.0 (5.0)              | 0.10 (0.10)         |

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour: (The values in parentheses are the certification exhaust emission values for diesel + CNG/LNG bi-fuel.)

| <u>Engine Family</u> | <u>Total (Non-Methane) Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulates</u> |
|----------------------|---|------------------------|------------------------|---------------------|
| TPS629EZJARK         | 0.2 (0.6)                               | 1.3 (4.6)              | 4.4 (5.0)              | 0.09 (0.09)         |

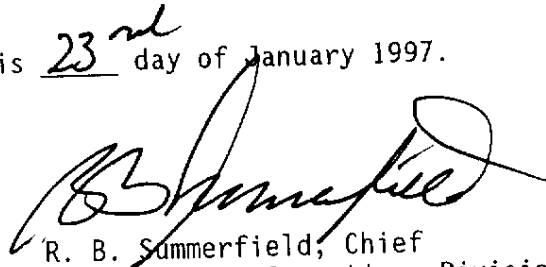
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Executive Order A-326-1, dated August 14, 1996, is hereby superseded by Executive Order A-326-1-1

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 order and attachments.

Executed at El Monte, California this 23<sup>rd</sup> day of January 1997.



R. B. Summerfield, Chief  
Mobile Source Operations Division

199 6 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer: Power Systems Associates Engine Family: TPS629EZJARK  
 Displacement: 10.3 /          Liters 629 /          Cubic Inches  
 All Eng Codes in Eng Family: CA 49S 50S x Strokes/Cycle: 4 Valves/Cylinder: 4  
 Ignition: Compression x Compression with Glow Plug          Spark           
 Fuel Type(s): Dedicated x Flex-Fuel          Dual-Fuel          Bi-Fuel x Diesel x CNG x  
                   LNG x LPG          M85          H100          Other (specify)          ~~Pick Fuel~~ (Bi-Fuel, Multi-Fuel, Diesel/Natural Gas)  
 Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94 x  
 Maximum Rated Power: 350 HP @ 2120 RPM Engine Configuration: I6  
 Exhaust ECS (e.g., OC, EGR, PTOX, IFI, TC, CAC): CAC, ECM(2), TC  
 (Use abbreviations per SAE J1930 SEP91)

| Engine Model (Eng. Code) | Rated H/P @ RPM | Fuel Rate @ Rated HP mm3/stroke | Fuel Pump & Injector Part No. | Natural Gas Injector Part No. | ECM/PCM Part No. | ECM/Natural Gas Part No. | EGR Valve Part No. | PTOX/Catalytic Converter Part No. |
|--------------------------|-----------------|---------------------------------|-------------------------------|-------------------------------|------------------|--------------------------|--------------------|-----------------------------------|
| 1                        | 350 @ 2120      | 20.5 Diesel                     | 1168888                       | 616281                        | 1299334          | 607394                   | -----              | -----                             |
|                          |                 | 186.5 Natural Gas               |                               | (SP014D1)                     | 1299352          | 613089                   |                    |                                   |
| 2                        | 325 @ 2120      | 17.7 Diesel                     | 1168888                       | 616281                        | 1299346          | 607394                   | -----              | -----                             |
|                          |                 | 161.2 Natural Gas               |                               | (SP014D1)                     |                  | 613088                   |                    |                                   |
| 3                        | 275 @ 2120      | 13.5 Diesel                     | 1168866                       | 616281                        | 1299337          | 607394                   | -----              | -----                             |
|                          |                 | 123 Natural Gas                 |                               | (SP014D1)                     |                  | 613087                   |                    |                                   |

Date Issued:

Revisions: