State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-11-1

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

CASE CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 Case Corporation 1996 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Construction/Mining Trucks, Snow Groomers, Agricultural Tractors, Logging Equipment

Fuel Type: Diesel

| Engine Family | Liters | (Cubic Inches) | Exhaust Emission Control Systems and Special Features |
|---|---|---|---|
| TX9505R6DTRA (A412) | 8.3 | (505) | Turbocharger<br>Charge Air Cooler |

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

| Exhaust Emissions (g/bhp-hr) | | | | Smoke Opacity ( % ) | | |
|---|---|---|---|---|---|---|
| THC | CO | NOx | PM | Accel | Lug | Peak |
| 1.0 | 8.5 | 6.9 | 0.4 | 20 | 15 | 50 |

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

| | Exhaust Emission (g/bhp-hr) | | | | Smoke Opacity ( % ) | | |
|---|---|---|---|---|---|---|---|
| Engine Family | THC | CO | NOx | PM | Accel | Lug | Peak |
| TX9505R6DTRA (A412) | 0.3 | 0.6 | 5.5 | 0.2 | 5 | 2 | 11 |

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

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 2425 et seq.).

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

Executed at El Monte, California this 28th day of December 1995.

John Kowalski for

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
## HEAVY-DUTY OFF-ROAD DIESEL ENGINES
## CASE CORPORATION

Manufacturer Case Corporation  Engine Family (A412) TX9505R6DTRA

Displacement: 505 / 8.3 Liters/Cubic Inches  Eng Config: I-6

All Codes in Eng Fam: CA ☐ 49S ☐ 50S ☒  Cert Test Procedures: ARB ☒ EPA ☒

Valves/Ports per Cylinder 2  Strokes per Combustion Cycle 4

Maximum Rated Power: 215 HP ( 160 KW) @ 2200 RPM

Ignition: Compression ☒  Compression with Glow Plug ☐  Spark ☐

Fuel Type(s): Dedicated ☒  Flex-Fuel ☐  Dual Fuel ☐  Diesel ☒  M100 ☐  M85 ☐

CNG ☐  LNG ☐  LPG ☐  Other (specify) _____

Diesel Cert Fuel: 40 CFR 89.330-96 ☒  Other (specify) _____

Primary Service Equipment: Construction/Mining Trucks, Snow Groomers, Logging Equipment and AG Tractors

Exhaust ECS (e.g., MFI, TC, CAC): TC,CAC

(use abbreviations per SAE J1930 JUN93)

| Engine Model (Eng Code) | Rated HP @ RPM | Fuel Rate @ Rated HP $mm^3$ / stroke (lbs/hr) | Fuel Pump & Injector Part No. | ECM/PCM Part No. | EGR Valve Part No. | PTOX / Catalytic Converter Part No. |
|---|---|---|---|---|---|---|
| 943 .3-C | 215 @ 2200 | 112.6(82.3) | FP 3926881<br>IN 3928228 | N/A | N/A | N/A |
| C8.3-C | 205 @ 2200 | 108.1(78.9) | FP 3930123<br>IN 3928228 | N/A | N/A | N/A |
| C8.3-C | 190 @ 2200 | 99.9(73.0) | FP 3926878<br>IN 3928228 | N/A | N/A | N/A |
| C8.3-C | 185 @ 2200 | 97.3(71.0) | FP 3926877<br>IN 3928228 | N/A | N/A | N/A |

ıte Issued:

Revisions:

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