## State of California AIR RESOURCES BOARD

## EXECUTIVE ORDER U-R-11-17

## 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 Corp. 1999 model-year engines with rated power between 175 and 750 horsepower and exhaust emission control systems are certified as described below in heavy-duty off-road equipment:

Typical Equipment Usage:

Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set

Fuel Type:

Diesel

Engine Family	Displacement Liters Cubic Inches		Exhaust Emission Control Systems and Special Features			
XX9XL0505AAA (A412)	8.3	505	Charge Air Cooler Turbocharger			

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 matter (PM) certification exhaust emission standards in grams per brake horsepower-hour (g/hp-h), and the opacity-of-smoke emission standards in percent (%) during acceleration (Accel), lugging (Lug), and peak (Peak) modes for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

Exhaus	st Emiss	ions (q/l	<u>hp-h)</u>	_Smoke	<u>Opacit</u>	<u>y_(%)</u>
<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx, and PM exhaust emissions certification values in grams per brake horsepower-hour, and the opacity-of-smoke emissions certification values in percent for this engine family are:

<u>Exhau</u>	<u>ıst Emis</u>	sions (	<u>q/hp-h)</u>	_Smoke	<u>Opacity</u>	(%)
<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Luq	<u>Peak</u>
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, Sections 2425 et seq.).

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

Executed at El Monte, California this 24 day of November 1998.

R. B. Summerfield, Chief

Mobile Source Operations Division

Manufacturer: Case Corporation

Process Code: New Submission

EPA Engine Family: XX9XL0505AAA

EPA Engine Family: XX9XL0505AAA		•	Manufacturer Family Name:		A412			
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 Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J193
CPL 1943								,
FR 9873	6T-830	205@2200	106	78.9	60004500	405		•
FR 9871	6T-830	190@2200	98	78. <del>9</del> 73.0	636@1500	125	63.4	TO CAC
FR 9870	6T-830	185@2200	96	73.0 71.0	590@1500	116	58.5	TC CHC
FR 90225	6T-830	170@2200	92		575@1500	110	55.8	TC CH
		110@2200	92	68.0	520@1500	105	52.9	TC (AC
CPL 2060 FR 90168	6T-830	181@2000	101	67.6				
FR 90350	6T-830	165@2200	101 89	67.8	626@1500	124	62.7	TC (AC
FR 90117	6T-830	150@2200	80	66.1	550@1400	109	51.6	TC CAL
	01 000	130@2200	OU	59.1	475@1500	85	43.2	TC CAL
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