State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-11-24
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

CASE CORPORATION

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

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

IT IS ORDERED AND RESOLVED: That the following diesel engines and the exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Loader and Pump

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

	Displacement		Exhaust Emission Control
Engine Family	Liters	Cubic Inches	Systems and Special Features
YX9XL0359ABA (A403)	5.9	359	Turbocharger Charge Air Cooler

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

	Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
	THC	CO	NOx	PM	Accel	Lug	Peak
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.3	0.6	5.2	0.1	6	1	22

BE IT FURTHER RESOLVED: That the engine models listed on the attachments with engine power ratings less than 175 horsepower are not covered by this Executive Order.

BE IT FURTHER RESOLVED: That the listed engine models comply with "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 "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 28th day of December 1999.

Raphael Susnowitz

for R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Case Corporation**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **YX9XL0359ABA**

Mfr Family Name: **A403**

Process Code: **New Submission**

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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 J1930
1889;FR90001	6TA-590	200@2500	91	77.1	593@1500	112	56.8	TC
1889;FR9898	6TA-590	185@2500	85	71.9	550@1500	104	52.5	TC
2072;FR90080	6TA-590	174@2500	78	65.8	458@1500	88	43.7	TC
1962;FR90338	6TA-590	168@2200	84	62.0	541@1500	101	51.0	TC +CAC
1962;FR90018	6TA-590	165@2200	81	60.4	512@1500	97	48.9	TC
1962;FR90337	6TA-590	153@2200	74	55.0	493@1500	96	48.5	TC
1962;FR90020	6TA-590	150@2200	75	55.8	466@1500	89	45.1	TC