State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-23
Relating to Certification of New Motor Vehicle Engines

CATERPILLAR TRACTOR COMPANY

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-45-3;

IT IS ORDERED AND RESOLVED: That Caterpillar Tractor Company 1978 model-year diesel-powered engines in heavy-duty motor vehicles with manufacturer's gross vehicle weight rating greater than 8500 pounds are certified for the engine family, codes and models described below:

Family	Engine Size (CID)	Type
12	1099	V-8-Turbocharged Aftercooled

Models and Engine Codes as listed in attachment.

Section 43200, Part 5, Division 26 of the California Health and Safety Code requires that the manufacturer affix a decal to the side window to the rear of the driver or, if there is no such window on the driver's side, to the windshield of the motor vehicle.

The decal shall display the applicable model year heavy-duty engine exhaust emission standards and the following recommended values:

Engine Family	HC + NOx gm/bhp-hr	CO gm/bhp-hr	HC gm/bhp-hr	NOx gm/bhp-hr
12	Not applicable	1	0.2	5.4

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

The Department of Motor Vehicles, the California Highway Patrol, and the Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California, this 28 day of November, 1977.

G. C. Hass

G. C. Hass, Chief
Vehicle Emissions Control Division

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL ENGINES

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Engine Family 12 Engine (CID) 1099

Emission Control Systems _____ Type V8-TCA

Engine Model	Fuel Injection Pump Mfgr. Part Number	Injector Mfg. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP	Basic Initial Timing
3408	Caterpillar 9N3316	Caterpillar 4N1251	450 HP @ 2100 RPM	191 mm^3/stroke 181 lbs/hr	11° BTDC (static)
			425 HP @ 2100 RPM	179 mm^3/stroke 170 lbs/hr	
			400 HP @ 2100 RPM	169 mm^3/stroke 160.5 lb/hr	
			425 HP @ 1950 RPM	191 mm^3/stroke 168 lb/hr	
			400 HP @ 1950 RPM	179 mm^3/stroke 157.5 lb/hr	

Comments

Date of Issue

Abbreviations

Type

NA - Natural Aspiration

TC - Turbocharged

TCA- Turbocharged and Aftercooled

Emission Control Systems

AC - Aftercooler

EGR - Exhaust Gas Recirculation

TD - Throttle Delay