

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-45  
Relating to Certification of New Motor Vehicle Heavy-Duty 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 the following Caterpillar Tractor Company 1986 model-year diesel engines have shown compliance with the optional transient test procedure and standards and are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
GCT0636FPA9	636 (10.4)	(Diesel Injection-Direct) (Turbocharger) (Aftercooler)

Engine models and codes are listed on attachments.

The following are the certification emission values for these engine families:

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>
GCT0636FPA9	1.0	2.3	3.6

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

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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.

Executed at El Monte, California this 26<sup>th</sup> day of March 1986.



K. D. Drachand, Chief  
Mobile Source Division

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

Manufacturer CATERPILLAR TRACTOR CO. Page 2  
 Engine Family GCT0636FPA9 CID(Liter)-Type 636 (10.4) V8  
 ECS (Special Features) (TC, AA/AC DID)

Engine Model	Fuel Injection Pump Manufacturer Part Number	Injector Manufacturer Part Number	Maximum Rated hp and rpm	Fuel Rate at Maximum hp mm <sup>3</sup> /stroke	Label Identification
3208	CATERPILLAR 7C1645	CATERPILLAR 4W7016	300 @ 2800	95	
	<u>TURBOCHARGER</u> 7C2510 7C3856				7C0965-1 EMISSIONS LABEL  7C0970 CARB LABEL

Date of Issue - 13 FEB 86

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Manufacturer Caterpillar Tractor Co. Executive Order No. A-13-45 Page 1  
 Engine Family GCT0636FPA9 Evaporative Family N/A  
 Engine CID (Liters) 636 (10.4) V8

ABBREVIATIONS

Ignition System

CA -Centrifugal Advance  
 EEC-Electronic Engine Control  
 EI -Electronic Ignition  
 ESAC-Electronic Spark Advance Control  
 VA -Vacuum Advance  
 VR -Vacuum Retard

Fuel System

CFI, CL, DID, DIP, EFI, MFI  
 nV -nVenturi Carburetor  
 W -Variable Venturi

Exhaust Emissions Control System

AIP-Air Injection-Pump  
 AIV-Air Injection-Valve  
 CL -Closed Loop  
 EGR-Exhaust Gas Recirculation  
 EM -Engine Modification  
 OC -Oxidation Catalyst System  
 TR -Thermal Reactor  
 TWC-Three Way Catalyst System

Special Features

CCV -Combustion Chamber Valve  
 CFI -Central Fuel Injection  
 DID -Diesel Injection-Direct  
 DIP -Diesel Injection-Prechamber  
 MFI -Mechanical Fuel Injection  
 TC -Turbocharged  
 AC -Aftercooled  
 AA/AC-Air-to-Air and Aftercooled

Engine Family

GCT0636FPA9

Engine Model

3208

39A.36

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