

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-11
Relating to Certification of New Motor Vehicles

CATERPILLAR TRACTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 39018, 39600, 39601, 43101, and 43102 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 1976 model year diesel-powered engines in heavy-duty motor vehicles are certified for the engine families described below:

<u>Engine Family</u>	<u>Engine Size (CID)</u>	<u>Engine Model</u>	<u>Type</u>
3	636	3208	V-8 - Natural Aspiration
4	638	3306	Inline 6 - Turbocharger
6	893	1693	Inline 6 - Turbocharger
7	893	1693	Inline 6 - Turbocharger-Aftercooler
9	893	3406	Inline 6 - Turbocharger
10	893	3406	Inline 6 - Turbocharger-Aftercooler
11	893	3406	Inline 6 - Turbocharger
12	1099	3408	V-8 - Turbocharger-Aftercooler
15	1099	3408	V-8 - Turbocharger

Section 43200, Part I, 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 following are the recommended values to be listed on the decal:

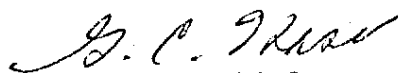
<u>Engine Family</u>	<u>Hydrocarbon plus Nitrogen Dioxide grams/brake horsepower-hour</u>	<u>Carbon Monoxide grams/brake horsepower-hour</u>
3	9	6
4	6	1
6	5	1
7	5	1
9	6	1
10	6	1
11	9	3
12	6	1
15	9	3

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.

Executive Order A-3-11 dated December 12, 1975 is hereby rescinded.

Executed at El Monte, California, this 20 day of January, 1976.



G. C. Hass, Chief
Division of Vehicle Emissions Control

ATR RESOURCES BOARD
SUPPLEMENTAL INFORMATION
1976 MODEL YEAR
HEAVY-DUTY DIESEL ENGINES

EXECUTIVE ORDER NO. A-13-11 PAGE NO. 1

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors		Tune-Up Specification		Fuel Rate	Remarks (Emission System)
				Mfgr. Part No.	Mfgr. Part No.	Mfgr. Part No.	Max Rated H.P. and RPM	Initial Injection Timing			
3	3208	636	NA	Caterpillar 9N1351 or 9N1352	Stanadyne 9L6969		210 HP @ 8800 194 HP @ 8800 178 HP @ 8800 175 HP @ 2800 150 HP @ 2800 185 HP @ 2800	16° BTDC Static	(1)65 (1)61 (1)56 (1)55 (1)47 (1)60		

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{mm}^3}{\text{stroke}}$
 (2) lbs./hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors Mfgr. Part No.	Tune-Up Specification		Fuel Rate	Remarks (Emission System)
				Mfgr. Part No.			Max Rated H.P. and RPM	Initial Injection Timing		
4	3306	638	TC	Caterpillar 9N2304		Caterpillar 7S8722	250 HP @ 2200 225 HP @ 2200	12° BTDC Static	(1)139 (1)122	Air Fuel Ratio Control

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A.- Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{mm}^3}{\text{stroke}}$
 (2) lbs/hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

MANUFACTURER: CATERPILLAR TRACTOR COMPANY		Fuel Pump		Injectors		Tune-Up Specification		Fuel Rate	Remarks (Emission System)
Engine Family	Engine Models	Mfgr. Part No.	Mfgr. Part No.	Mfgr. Part No.	Max Rated H.P. and RPM	Initial Injection Timing	Fuel Rate		
6	1693	893	TC	Caterpillar 8S5174	Caterpillar 7S1059	325 HP @ 2100	8° BTDC Static	(1) 189	Air Fuel Ratio Control

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{gpm}}{\text{stroke}}$
 (2) lbs/hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

EXECUTIVE ORDER NO. A-13-11 PAGE NO. 4

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors		Tune-Up Specification		Fuel Rate	Remarks (Emission System)
				Mfgr. Part No.	Mfgr. Part No.	Mfgr. Part No.	Max Rated H.P. and RPM	Initial Injection Timing			
7	1693	893	TCA	Caterpillar 8S5174	Caterpillar 7S1059	425 HP @ 2100 380 HP @ 2100 375 HP @ 2100	8° BTDC Static	(1)235 (1)208 (1)207	Air Fuel Ratio Control		

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{mm}^3}{\text{stroke}}$
 (2) lbs/hour

AIR RESOURCES BOARD
SUPPLEMENTAL INFORMATION
1976 MODEL YEAR
HEAVY-DUTY DIESEL ENGINES

EXECUTIVE ORDER NO. A-13-11 PAGE NO. 5									
MANUFACTURER: CATERPILLAR TRACTOR COMPANY									
Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump Mfgr. Part No.	Injectors Mfgr. Part No.	Tune-Up Specification Max Rated H.P. and RPM	Initial Injection Timing	Fuel Rate	Remarks (Emission System)
9	3406	893	TC	Caterpillar 9N588	Caterpillar 4N1251	325 HP @ 2100 300 HP @ 300 HP @ 2100 300 HP @ 1950 280 HP @ 2100 255 HP @ 2100 255 HP @ 1950	10° BTDC Static	(1)190 (1)175 (1)184 (1)160 (1)147 (1)157	Air Fuel Ratio Control

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
(1) $\frac{\text{mm}^3}{\text{stroke}}$
(2) lbs/hour

AIR RESOURCES BOARD
SUPPLEMENTAL INFORMATION
1976 MODEL YEAR
HEAVY-DUTY DIESEL ENGINES

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors		Tune-Up Specification		Fuel Rate	Remarks (Emission System)
				Mfgr. Part No.	Mfgr. Part No.	Mfgr. Part No.	Max Rated H.P. and RPM	Initial Injection Timing			
10	3406	893	TCA	Caterpillar 9N72	Caterpillar 4N1251	Caterpillar 4N1251	375 HP @ 2100 360 HP @ 2100 340 HP @ 2100 340 HP @ 1950	10° BTDC Static	(1)211 (1)197 (1)192 (1)200	Air Fuel Ratio Control	

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
(1) $\frac{\text{mm}^3}{\text{stroke}}$
(2) lbs/hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

EXECUTIVE ORDER NO. A-13-11 PAGE NO. 7

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors Mfgr. Part No.	Tune-Up Specification		Fuel Rate	Remarks (Emission System)
				Mfgr. Part No.			Max Rated H.P. and RPM	Initial Injec- tion Timing		
11	3406	893	TC	Caterpillar 9N798 or 9N2626	Caterpillar 9N6884	325 HP @ 2100 300 HP @ 2100 300 HP @ 1950 280 HP @ 2100 280 HP @ 2100 255 HP @ 2100 255 HP @ 1950 280 HP @ 1900 255 HP @ 1900 300 HP @ 1900 305 HP @ 1900 280 HP @ 1800	28° BTDC Static	(1)173 (1)161 (1)168 (1)151 (1)151 (1)138 (1)144 (1)162 (1)147 (1)161 (1)175 (1)167	Air Fuel Ratio Control	

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{mm}^3}{\text{stroke}}$
 (2) lbs/hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

Amendment 7 (4/2/76)

PAGE NO. 7-1

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

EXECUTIVE ORDER NO. A-13-11

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump Mfgr. Part No.	Injectors Mfgr. Part No.	Tune-Up Specification		Fuel Rate	Remarks (Emission System)
						Max Rated H.P. and RPM	Initial Injection Timing		
11	3406	893	TC	Caterpillar 9N798 or 9N2626	Caterpillar 9N6884	275 HP @ 1950	28° BTDC Static	(1)155	Air Fuel Ratio Control
				Caterpillar 9N2514 9N2515 or 9N2512 (R.C.76-11-1)					

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) mm³/stroke
 (2) lbs/hour

AIR RESOURCES BOARD
 SUPPLEMENTAL INFORMATION
 1976 MODEL YEAR
 HEAVY-DUTY DIESEL ENGINES

MANUFACTURER: CATERPILLAR TRACTOR COMPANY EXECUTIVE ORDER NO. A-13-11 PAGE NO. 8

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump Mfgr. Part No.	Injectors Mfgr. Part No.	Max Rated H.P. and RPM	Injec-tion Timing	Fuel Rate	Remarks (Emission System)
12	3408	1099	TCA	Caterpillar 9L6540	Caterpillar 4N1251	450 HP @ 2100 425 HP @ 2100 400 HP @ 2100 425 HP @ 1950 400 HP @ 1950	11° BTDC Static	(1)191 (1)179 (1)169 (1)191 (1)179	Air Fuel Ratio Control

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
 (1) $\frac{\text{mm}^3}{\text{stroke}}$
 (2) lbs/hour

**AIR RESOURCES BOARD
SUPPLEMENTAL INFORMATION
1976 MODEL YEAR
HEAVY-DUTY DIESEL ENGINES**

Rev. 120176 (REF. Caterpillar
102776 letter)

EXECUTIVE ORDER NO. A-13-11

PAGE NO. 9

MANUFACTURER: CATERPILLAR TRACTOR COMPANY

Engine Family	Engine Models	Engine CID	Method of Aspiration *	Fuel Pump		Injectors Mfr. Part No.	Tune-Up Specification		Remarks (Emission System)
				Mfr. Part No.	Mfr. Part No.		Max Rated H.P. and RPM	Initial Injection Timing	
15	3408	1099	TC	Caterpillar 9L6534	Caterpillar 9L6884	400 HP @ 2100	28° BTDC Static	(1)164	Air Fuel Ratio Control
				Caterpillar 9N2902 (R.C.76-15-1N)		360 HP @ 2100		(1)150	
						375 HP @ 1950		(1)160	
						370 HP @ 1900		(1)160	
						380 HP @ 2100		(1)156	

Abbreviations:

- *N.A. - Natural Aspiration
 - T.C. - Turbocharged.
 - T.C.A. - Turbocharged and After-cooled.
- Fuel Rate at Maximum Horsepower
(1) $\frac{\text{mm}^3}{\text{stroke}}$
(2) lbs/hour