

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-69
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

CATERPILLAR, INC.

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, Inc. 1993 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
PCT0893FPB7	14.6 (893)	Turbocharger Smoke Puff Limiter Charge Air Cooler

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family in grams per brake-horsepower-hour:

<u>Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.3	15.5	5.0	0.25

The following are the certification emission values for this engine family in grams per brake-horsepower-hour:

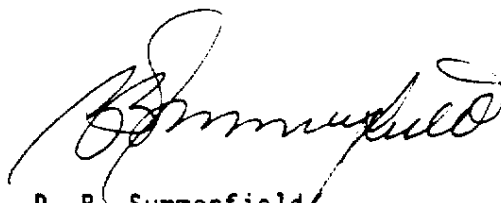
<u>Engine Family</u>	<u>Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
PCT0893FPB7	0.3	1.4	5.0	0.25

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, Section 2035 et seq.).

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 and attachments.

Executed at El Monte, California this 25th day of October, 1992.

A handwritten signature in black ink, appearing to read "R. B. Summerfield", is written over the printed name and title.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

.73

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel Sulfur Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) SPL (TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(A)	RESERVED				
(B)	RESERVED				
(C)	RESERVED				
(D)	RESERVED				
(E)	1022896 (1)	1007550	425 @ 2000 415 @ 1800	213 222	---
(F)	1022896 (1)	1007550	425 @ 2000 425 @ 1800	213 227	---
(G)	4P1387 (1) 4P1387 (1)	7W7040 7W7040	310 @ 1800 300 @ 1800	175 170	---
(H)	4P1371 (1) 4P2044 (1)	7W7040 7W7040	330 @ 1600 285 @ 1600	201 173	---
(I)	RESERVED				
(J)	613060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	350 @ 1800	196	---
(L)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	330 @ 1800	181	---

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-0893FPB-1 through 15).

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1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

.73

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) SPL (TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC (M)	4P1391 (1)	7W7042	400 @ 2000	197	---
	4P1391 (1)	7W7042	400 @ 1800	216	---
(N)	4P1398 (1)	7W7041	425 @ 2000	210	---
	4P1402 (1)	7W7041	415 @ 1800	224	---
(O)	4P1390 (1)	7W7041	425 @ 2000	213	---
	4P1397 (1)	7W7041	425 @ 1800	231	---

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-0893FPB-1 through 15).

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11-17-92

HEAVY-DUTY DIESEL ENGINES

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) EM, SPL (D1,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(A)	RESERVED				
(B)	4P1387(1)	1007551	350 @ 1800	189	---
			330 @ 1800	176	---
			330 @ 1600	201	---
(C)	RESERVED				
(D)	RESERVED				
(E)	1022896 (1)	1007550	425 @ 2000	213	---
			415 @ 1800	222	---
(F)	1022896 (1)	1007550	425 @ 2000	213	---
			425 @ 1800	227	---
(G)	4P1387 (1)	7W7040	310 @ 1800	175	---
	4P1387 (1)	7W7040	300 @ 1800	170	---
(H)	4P1371 (1)	7W7040	330 @ 1600	201	---
	4P2044 (1)	7W7040	285 @ 1600	173	---
(I)	RESERVED				
(J)	613060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1)	7W7040	350 @ 1800	196	---
	4P1387 (1)				
	4P1387 (1)				
(L)	4P1387 (1)	7W7040	330 @ 1800	181	---
	4P1387 (1)				
	4P1387 (1)				

(1) Basic Fuel Pump 4P7681

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Dec 31-92

HEAVY-DUTY DIESEL ENGINES

Manufacturer Caterpillar Inc.Engine Family PCT0893FPB7Liter (CID) 14.6 (893)Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(A)	RESERVED				
(B)	4P1387 (1)	1007551	350 @ 1800	189	---
			330 @ 1800	176	---
			330 @ 1600	201	---
(C)	6I3060 (1)	1007551	350 @ 1950	179	---
(D)	RESERVED				
(E)	1022896 (1)	1007550	425 @ 2000	213	---
			415 @ 1800	222	---
(F)	1022896 (1)	1007550	425 @ 2000	213	---
			425 @ 1800	227	---
(G)	4P1387 (1)	7W7040	310 @ 1800	175	---
	4P1387 (1)	7W7040	300 @ 1800	170	---
(H)	4P1371 (1)	7W7040	330 @ 1600	201	---
	4P2044 (1)	7W7040	285 @ 1600	173	---
(I)	RESERVED				
(J)	6I3060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1)	7W7040	350 @ 1800	196	---
	4P1387 (1)				
	4P1387 (1)				
(L)	4P1387 (1)	7W7040	330 @ 1800	181	---
	4P1387 (1)				
	4P1387 (1)				

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-0893FPB-1 through 15).

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HEAVY-DUTY DIESEL ENGINES

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7

Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16

Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC (L)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	330 @ 1800	181	---
(M)	4P1391 (1) 4P1391 (1)	7W7042 7W7042	400 @ 2000 400 @ 1800	197 216	--- ---
(N)	4P1398 (1) 4P1402 (1)	7W7041 7W7041	425 @ 2000 415 @ 1800	210 224	--- ---
(O)	4P1390 (1) 4P1397 (1)	7W7041 7W7041	425 @ 2000 425 @ 1800	213 231	--- ---

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-0893FPB-1 through 03).

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**1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES**

Manufacturer Caterpillar Inc. Engine Family PCT0893FP87

Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16

Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC (A)	4P1387(1)	1007558	310 @ 1800	173	---
	4P2044		300 @ 1800	168	---
			285 @ 1600	177	---
(B)	4P1387 (1)	1007551	350 @ 1800	189	---
	613058		330 @ 1800	176	---
			330 @ 1600	201	---
(C)	613060 (1)	1007551	350 @ 1950	179	---
(D)	1022896 (1)	1007557	400 @ 2000	197	---
	613060		400 @ 1800	217	---
(E)	1022896 (1)	1007556	425 @ 2000	213	---
	613060		415 @ 1800	222	---
(F)	1022896 (1)	1007556	425 @ 2000	213	---
	613060		425 @ 1800	227	---
(G)	4P1387 (1)	7W7040	310 @ 1800	175	---
	4P1387 (1)	7W7040	300 @ 1800	170	---
(H)	4P1371 (1)	7W7040	330 @ 1600	201	---
	4P2044 (1)	7W7040	285 @ 1600	173	---
(I)	RESERVED				
(J)	613060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1)	7W7040	350 @ 1800	196	---
	4P1387 (1)				
	4P1387 (1)				

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-0893FP8-1 through 04).

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**1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES**

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Gated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(L)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	330 @ 1800	181	---
(M)	4P1391 (1) 4P1391 (1)	7W7042 7W7042	400 @ 2000 400 @ 1800	197 216	--- ---
(N)	4P1398 (1) 4P1402 (1)	7W7041 7W7041	425 @ 2000 415 @ 1800	210 224	--- ---
(O)	RESERVED				
(P)	4P1390 (1) 4P1397 (1)	7W7041 7W7041	425 @ 2000 425 @ 1800	213 231	--- ---
(Q)	RESERVED				
(R)	613060	1007558	350 @ 1950	182	---
(S)	4P1387 (1) 613058 (1)	1007558	350 @ 1800 330 @ 1800 330 @ 1800	201 185 199	--- --- ---

(1) Basic Fuel Pump 4P7681

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1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm/stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC (A)	4P1387(1) 4P2044	1007558	310 @ 1800 300 @ 1800 285 @ 1600	178 171 183	--- --- ---
(B)	4P1387 (1) 613058	1007551	350 @ 1800 330 @ 1800 330 @ 1600	189 176 201	--- --- ---
(C)	613060 (1)	1007551	350 @ 1950	179	---
(D)	1022896 (1) 613060	1007557	400 @ 2000 400 @ 1800	203 220	--- ---
(E)	1022896 (1) 613060	1007556	425 @ 2000 415 @ 1800	216 225	--- ---
(F)	1022896 (1) 613060	1007556	425 @ 2000 425 @ 1900 425 @ 1800	214 223 233	--- --- ---
(G)	4P1387 (1) 4P1387 (1)	7W7040 7W7040	310 @ 1800 300 @ 1800	175 170	--- ---
(H)	4P1371 (1) 4P2044 (1)	7W7040 7W7040	330 @ 1600 285 @ 1600	201 173	--- ---
(I)	RESERVED				
(J)	613060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	350 @ 1800	196	---

(1) Basic Fuel Pump 4P7681

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1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(L)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	330 @ 1800	181	---
(M)	4P1391 (1) 4P1391 (1)	7W7042 7W7042	400 @ 2000 400 @ 1800	197 216	--- ---
(N)	4P1398 (1) 4P1402 (1)	7W7041 7W7041	425 @ 2000 415 @ 1800	210 224	--- ---
(O)	RESERVED				
(P)	4P1390 (1) 4P1397 (1)	7W7041 7W7041	425 @ 2000 425 @ 1800	213 231	--- ---
(Q)	RESERVED				
(R)	6I3060	1007558	350 @ 1950	187	---
(S)	4P1387 (1) 6I3058 (1)	1007558	350 @ 1800 330 @ 1800 330 @ 1600	201 190 203	--- --- ---

(1) Basic Fuel Pump 4P7681

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No. 2 22 JUN 93

1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

7-06-93

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7

Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16

Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC (A)	4P1387(1) 4P2044	1007558	310 @ 1800 300 @ 1800 285 @ 1600	178 171 183	--- --- ---
(B)	4P1387 (1) 613058	1007551	350 @ 1800 330 @ 1800 330 @ 1600	189 176 201	--- --- ---
(C)	613060 (1)	1007551	350 @ 1950	179	---
(D)	1022896 (1) 613060	1007557	400 @ 2000 400 @ 1800	203 220	--- ---
(E)	1022896 (1) 613060	1007556	425 @ 2000 415 @ 1800	216 225	--- ---
(F)	1022896 (1) 613060	1007556	425 @ 2000 425 @ 1800	214 233	--- ---
(G)	4P1387 (1) 4P1387 (1)	7W7040 7W7040	310 @ 1800 300 @ 1800	175 170	--- ---
(H)	4P1371 (1) 4P2044 (1)	7W7040 7W7040	330 @ 1600 285 @ 1600	201 173	--- ---
(I)	RESERVED				
(J)	613060 (1)	7W7040	350 @ 1950	181	---
(K)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	350 @ 1800	196	---

(1) Basic Fuel Pump 4P7681

(Reference Page No. 16.04-Q893FPB-1 through 04).

1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

File 11-22-93

Manufacturer Caterpillar Inc. Engine Family PCT0893FPB7
 Liter (CID) 14.6 (893) Fuel Type #2 Diesel (.25% Sulfur) Engine Config. 16
 Exhaust Emission Control Sys. and (Special Features) EM, SPL (DI,TC,CAC)

(Use abbreviations per SAE J1930 JUN 88)

Engine Model (Eng. Code)	Fuel Pump MFR. P/N	Injector MFR. P/N	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke	Part. Trap/ Catalyst MFR. P/N
3406 ATAAC					
(L)	4P1387 (1) 4P1387 (1) 4P1387 (1)	7W7040	330 @ 1800	181	---
(M)	4P1391 (1) 4P1391 (1)	7W7042 7W7042	400 @ 2000 400 @ 1800	197 216	--- ---
(N)	4P1398 (1) 4P1402 (1)	7W7041 7W7041	425 @ 2000 415 @ 1800	210 224	--- ---
(O)	RESERVED				
(P)	4P1390 (1) 4P1397 (1)	7W7041 7W7041	425 @ 2000 425 @ 1800	213 231	--- ---
(Q)	RESERVED				
(R)	613060 (1)	1007558	350 @ 1950	187	---
(S)	4P1387 (1) 613058 (1)	1007558	350 @ 1800 330 @ 1800 330 @ 1600	201 190 203	--- --- ---
(T)	1022896 (1) 613060 (1)	1007557	475 @ 1900 475 @ 1900	242 233	--- ---
(U)	1022896 (1) 613060 (1)	1007556	475 @ 1900	225	---

(1) Basic Fuel Pump 1077533

(Reference Page No. 16.04-0893FPB-1 through 04).