

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-51
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

CUMMINS ENGINE COMPANY, 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 Cummins Engine Company, Inc. 1989 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems (Special Features)</u>
KCE0855FAA3 (093E)	14	(855)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
KCE0855FZA8 (093J)	14	(855)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
KCE0611FAAX (343C)	10	(611)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
KCE0239EAA3 (382)	3.9	(239)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger)
KCE0239FAA6 (383)	3.9	(239)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
KCE0359FAA0 (403)	5.9	(359)	Smoke Puff Limiter (Direct Injection - Direct) (Turbocharger) (Intercooler)

Engine models and codes are listed on attachments.

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

<u>Hydrocarbons</u> <u>gm/bhp-hr</u>	<u>Carbon</u> <u>Monoxide</u> <u>gm/bhp-hr</u>	<u>Nitrogen Oxides</u> <u>gm/bhp-hr</u>	<u>Particulates</u> <u>gm/bhp-hr</u>
1.3	15.5	6.0	0.60

The following are the certification emission values for these engine families, except that compliance with the carbon monoxide emission standard has been demonstrated pursuant to the Code of Federal Regulations, Title 40, Part 85, Subpart A, Section 86.088-23(c)(2)(1):

<u>Engine Family</u>	<u>Hydrocarbons</u> <u>gm/bhp-hr</u>	<u>Nitrogen Oxides</u> <u>gm/bhp-hr</u>	<u>Particulates</u> <u>gm/bhp-hr</u>
KCE0855FAA3	0.6	5.1	0.49
KCE0855FZA8	0.5	5.0	0.44
KCE0611FAAX	1.1	5.1	0.44
KCE0239EAA3	0.7	4.8	0.46
KCE0239FAA6	0.4	4.4	0.45
KCE0359FAA0	0.9	4.3	0.51

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).

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 27th day of September, 1988.


K. D. Drachand, Chief
Mobile Source Division

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
 HEAVY-DUTY DIESEL ENGINES

HHDD

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0855FAA3 (093E)
 Liter (CID) 14 (855) Eng. Type Inline 6
 Emission Control Sys. and (Special Features) ~~EM~~ ^{SPL} (DID, TC)(IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
NTC-350 CPL0840	Cummins 3037216	Cummins 3059424	350@1800	189 (115)	1200@1300	221 (97)
	3034873 3034874		350@2100	172 (122)	1200@1300	221 (97)
NTC-315 CPL0838	Same	Same	315@1700	178 (103)	1150@1300	208 (91)
NTC-300 CPL0838	Same	Same	300@1700	173 (99)	1000@1300	182 (80)

Date of Issue _____ Revisions:

030186

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HHDD
 HEAVY-DUTY DIESEL ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0855FZA8 (093J)

Liter (CID) 14 (855) Eng. Type Inline 6

Emission Control Sys. and (Special Features) SPL STC (DID, TC)(IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
NTC-400	Cummins	Cummins	400@1800	221 (134)	1325@1300	251 (110)
CPL0827	3037216	3053765	400@2100	201 (142)	1325@1300	251 (110)
	3034873	3059960				
	3034874	3063228				
	217795	3062150				
NTC-444	Same	Cummins	444@2100	222 (157)	1400@1500	265 (134)
CPL0910		3058852				
		3062151				
NTC-444	Same	Cummins	444@2100	222 (157)	1400@1500	265 (134)
CPL1210		3065350				
NTC-400	Same	Cummins	400@1800	221 (134)	1325@1300	251 (110)
CPL1211		3065349	400@2100	201 (142)	1325@1300	251 (110)
NTC-365	Same	Same	365@1800	201 (122)	1325@1300	251 (110)
CPL1211						

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1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
 HEAVY-DUTY DIESEL ENGINES

HHDD

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0611FAAX (343C)
 Liter (CID) 10 (611) Eng. Type Inline 6
 Emission Control Sys. and (Special Features) SPL ~~EM~~ (DID, TC) (IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
LTA10 CPL 0842	Cummins 3037216 3034873 3034874	Cummins 3053411	300@1900	153 (98)	950@1300	180 (79)
LTA10 CPL 1223	Same	Cummins 3056342	350@2100	161 (114)	950@1300	176 (77)
LTA10 CPL 1224	Same	Cummins 3056342	270@1900 270@1800	137 (88) 140 (85)	860@1300 860@1300	160 (70) 160 (70)
LTA10 CPL 0980	Same	Cummins 3056342	285@2200	132 (98)	1020@1300	187 (82)
LTA10 CPL 1226	Same	Cummins 3056342	270@2100 240@2100	130 (92) 117 (83)	860@1300 870@1300	167 (73) 169 (74)
LTA10 CPL 1225	Same	Cummins 3056342	285@2200	132 (98)	1020@1300	187 (82)

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030186

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET LMDD
 HEAVY-DUTY DIESEL ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0239EAA3(382)

Liter (CID) 3.9 (239) Eng. Type Inline 4

Emission Control Sys. and (Special Features) SPL ~~EM~~ (DID, TC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
4BT3.9	Robert Bosch	Robert Bosch	105@2500	76.0 (42.7)	267@1700	86.1 (32.9)
CPL0858	3911242(12V)	3912469				
	3911243(24V)	3915792				
	3914884(12V)					
	3914885(24V)					
	3914924(12V)					
	3914925(24V)					
	3914930(12V)					
	3914931(24V)					
	3915521(12V)					
	3915522(24V)					

Date of Issue _____ Revisions:

030186

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET **LHDD**
 HEAVY-DUTY DIESEL ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0239FAA6(383)

Liter (CID) 3.9 (239) Eng. Type Inline 4

Emission Control Sys. and (Special Features) SPL (DID, TC, IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
4BTA3.9 CPL0857	Robert Bosch 3911240(12V) 3911241(24V) 3914886(12V) 3914887(24V) 3914932(12V) 3914933(24V) 3914845(12V) 3914846(24V) 3915523(12V) 3915524(24V)	3912468 3915792	120@2500	86.3(48.5)	302@1700	97.1(37.1)

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1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET MHDD
 HEAVY-DUTY DIESEL ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family KCE0359FAA0(403)

Liter (CID) 5.9 (359) Eng. Type Inline 6

Emission Control Sys. and (Special Features) SPL (DID, TC, IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
6BTA5.9	3911238(12V)	3912468	180@2500	87.2 (73.5)	451@1700	96.1 (55.1)
CPL0856	3911239(24V)	3915792				
	3914847(12V)					
	3914848(24V)					
	3914892(12V)					
	3914893(24V)					
	3914928(12V)					
	3914929(24V)					
	3915529(12V)					
	3915530(24V)					

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