State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-46
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. 1988 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

Engine Family	Displacement Cubic Inches	(Liters)	Exhaust Emission Control Systems (Special Features)
JCE0855FAA3 (093E)	855	(14)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
JCE0855FZA9 (093J)	855	(14)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
JCE0611FAA0 (343C)	611	(10)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Intercooler)
JCE0239EAA4 (382)	239	(3.9)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger)
JCE0359EAA9 (402)	359	(5.9)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger)
JCE0505EAA2 (412)	505	(8.3)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger)

Engine models and codes are listed on attachments.

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

Engine Family	Hydrocarbons gm/bhp-hr	Nitrogen Oxides gm/bhp-hr	Particulates gm/bhp-hr
JCE0855FAA3 (093E)	0.7	4.5	0.51
JCE0855FZA9 (093J)	0.6	5.3	0.38
JCE0611FAA0 (343C)	0.3	5.4	0.38
JCE0239EAA4 (382)	0.8	5.2	0.50
JCE0359EAA9 (402)	0.5	5.6	0.47
JCE0505EAA2 (412)	0.5	4.6	0.58

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.

Executed at El Monte, California this 23rd day of October, 1987.

K. D. Drachand, Chief
Mobile Source Division

E.O.# A-21-46

19 88 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

HHDD

Manufacturer Cummins Engine Company, Inc. Engine Family JCE0855FAA3 (093E)

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

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

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	Cummins	Cummins	350 @1800	189 (115)	1200@1300	221 (97)
CPL0840	3037216 3034873 3034874	3059424	350 @2100	172 (122)	1200@1300	221 (97)
NTC-315 CPL0838	Same	Same	315@1700	178 (103)	1150@1300	208 (91)

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E.O.# A-21-46

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

HHDD

Manufacturer Cummins Engine Company, Inc. Engine Family JCE0855FZA9 (093J)

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

Emission Control Sys. and (Special Features) STC (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)
NTC-400 CPL0827	Cummins 3037216 3034873 3034874 217795	Cummins 3053765 3059960 3062150	400@1800 400@2100	221 (134) 201 (142)	1325@1300 1325@1300	251 (110) 251 (110)
NTC-365 CPL0827	Same	Same	365@1800	201 (122)	1325@1300	251 (110)
(1) NTC-444 CPL 09 0	Same	3058852 3062151	444@2100	223 (158)	1400@1500	265 (134)
(1)	Revised 11-25-87 (RC # 1-093J-88)					

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1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

HHDD

Manufacturer Cummins Engine Company, Inc. Engine Family JCE0611FAAO (343C)

Liter (CID) 10 (611) Eng. Type Inline 6

Emission Control Sys. and (Special Features) 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)
LTA10 CPL0842	Cummins 3037216 3034873 3034874	Cummins 3053411	300 @1900	153 (98)	950@1300	180 (79)
LTA10 CPL0939	Same	Cummins 3056342	350 @2100	161 (114)	950@1300	176 (77)
LTA10 CPL0956	Same	Cummins 3056342	270 @1900	137 (88)	860@1300	160 (70)
LTA10 CPL 0980	Same	Cummins 3056342	285@2200	132(98)	1020@1300	187 (82)
LTA10 CPL0996	Same	Cummins 3056342	270@2100 240@2100	130(92) 117(83)	860@1300 870@1300	167(73) 169(74)

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SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 343C

	CPL CODES		
COMPONENTS	0842	0939	0956
Model	LTA10	LTA10	LTA10
Injector	3053411	3056342	3056342
Camshaft	3053006	3053006	3053006
Piston	3052852	3055622	3055622
Turbocharger	3525237	3525237	3525743
Cylinder Head	3051423 3055723	3051423 3055723	3051423 3055723
Aftercooler	3039272 3821696	3039272 3821696	3039272 3821696
Thermostat	3045913	3045913	3045913
STC Pressure Valve	NA	NA	NA
Fuel Lines	NA	NA	NA
Timing Code	CY	GT	GP
Pulse Manifold	Yes	Yes	Yes
Air Fuel Control	Yes	Yes	Yes
Air Signal Attenuator	No	No	No
Fuel Pump	3037216 3034874 3034873	3037216 3034874 3034873	3037216 3034874 3034873

SUBMITTED SEP 10 1987

EO # A-21-46

SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 093E

COMPONENTS	CPL CODES 0840	0838
Model	NTC-350	NTC-315
Injector	3059424	3059424
Camshaft	3053525	3053525
Piston	3053526	3053526
Turbocharger	3524557	3525325
Cylinder Head	3046760	3046760
Aftercooler	3049534	3049534
Thermostat Hgs. Ass.	3053697	3053697
STC Pressure Valve	N/A	N/A
Fuel Lines	N/A	N/A
Timing Code	GG	GG
Pulse Manifold	Yes	Yes
Air Fuel Control	Yes	Yes
Air Signal Attenuator	Yes	Yes
Fuel Pump	3037216	3037216
	3034874	3034874
	3034873	3034873

SUBMITTED SEP 10 1987

E.O.# A-21-46

19 88 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

MHDD

Manufacturer Cummins Engine Company, Inc. Engine Family JCE0505EAA2 (412)

Liter (CID) 8.3 (505) Eng. Type Inline 6

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

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)
6CT8.3 CPL0819	Robert Bosch 3911352 3912645 3914299	Robert Bosch 3911350	210@2200	110.9(82.3)	605@1500	121.4 (61.4)
6CT8.3 CPL0955	Robert Bosch 3912636	Robert Bosch 3911350	210@2500	101.7(85.7)	605@1500	118.8 (60.1)

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ED # A-21-46

SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 402

COMPONENTS	0804	CPL CODES	
Model	6BT5.9		
Injector	3909522		
Camshaft	3907447 3904225 3907824		
Piston	3907163		
Turbocharger	3522778		
Cylinder Head	3909974		
Aftercooler	N/A		
Thermostat	N/A		
Fuel Lines	3909439 3904441		
Timing Code	1.4MM		
Pulse Manifold	Yes		
Fuel Pump	3910769 3910439		

SUBMITTED SEP 10 1987

E.O.# A-21-46

MHDD

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family JCE0359EAA9 (402)

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

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

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)
6BT5.9 CPL 0804	Robert Bosch 3910769 (12V) 3910439 (24V)	Robert Bosch 3909522	160@2500	78.3 (66.0)	400 @ 1700	82.0 (47.0)

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EO # A - 21 - 46

SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 382

COMPONENTS	0858	CPL CODES	
Model	4BT3.9		
Injector	3912469		
Camshaft	3907446 3907823		
Piston	3907163		
Turbocharger	3525699		
Cylinder Head	3909973		
Aftercooler	N/A		
Thermostat	N/A		
Fuel Lines	3903716 3903717		
Timing Code	1.0 MM		
Pulse Manifold	Yes		
Fuel Pump	3911242 3911243		

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E.O.# A-21-46

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer Cummins Engine Company, Inc Engine Family JCE0239EAA4 (382)

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

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

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 CPL0858	Robert Bosch 3911242 (12V) 3911243 (24V)	Robert Bosch 3912469	105@2500	76.0 (42.7)	267 @ 1700	86.1 (32.9)

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EO # A-21-46

SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 093J

	CPL CODES
COMPONENTS	0827
Model	NTC-400
Injector	3053765 3059960
Camshaft	3053130 3058957
Piston	3052794
Turbocharger	3525299
Cylinder Head	3046760
Aftercooler	3049534
Thermostat	3053697
STC Pressure Valve	3056558
Fuel Lines	NA
Timing Code	GS
Pulse Manifold	Yes
Air Fuel Control	Yes
Air Signal Attenuator	Yes
Fuel Pump	217795 3037216 3034873 3034874

SUBMITTED SEP 10 1987

EO # A-21-46

SECTION XVI CONTROL PARTS AND SPECIFICATIONS

Engine Family 412

COMPONENTS	CPL CODES 0819	0955	_____
Model	6CT8.3	6CT8.3	
Injector	3911350	3911350	
Camshaft	3911236 3907540	3911236	
Piston	3908749	3908749	
Turbocharger	3525128 3525487	3525488	
Cylinder Head	3911286 3909970	3911286 3909970	
Aftercooler	N/A	N/A	
Thermostat	N/A	N/A	
Fuel Lines	3906778 3910524 3910832	3906778 3910524 3910832	
Timing Code	NA	NA	
Pulse Manifold	Yes	Yes	
Air Fuel Control	LDA	LDA	
Air Signal Attenuator	NA	NA	
Fuel Pump	3911352 3912645 3914299	3912636	
Fuel Pump Timing	14°	15°	

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