State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-27-58
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

MACK TRUCKS, 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 Mack Trucks, Inc. 1990 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 Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
LMT0728FACX (19)	11.9	(728)	Turbocharger Charge Air Cooler
LMT0728FADO (20)	11.9	(728)	Turbocharger Charge Air Cooler /ECM
LMT0728FAE1 (21)	11.9	(728)	Turbocharger Charge Air Cooler /ECM

Engine models and codes are listed on attachments.

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

Hydrocarbons gm/bhp-hr	Carbon Monoxide gm/bhp-hr	Nitrogen Oxides gm/bhp-hr	Particulates gm/bhp-hr
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):

Engine Family	Hydrocarbons gm/bhp-hr	Nitrogen Oxides gm/bhp-hr	Particulates gm/bhp-hr
LMT0728FACX	0.2	5.5	0.50
LMT0728FADO	0.0(0.03)	4.5	0.50
LMT0728FAE1	0.1	4.4	0.45

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 provisions (Health and Safety Code Section 43205.5 and Title 13, California Code of Regulations, 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 15th day of August, 1990.

Nona Kaye for
R. B. Summerfield
Assistant Division Chief
Mobile Source Division

E.O.# A-27-58

Page 16.04-7

1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Mack Trucks, Inc. Engine Family (19) LMT0728FACX

Liter (CID) 11.9 (728 CID) Eng. Type 6 Cylinder In-Line

Emission Control Sys. and (Special Features) Turbocharger Charge Air Cooler

Engine Model	Fuel Injection Pump Mfr. Part Number 313GC	Injector Mfr. Part Number 114GC	Maximum Rated HP at RPM	Fuel Rate mm^3/stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm^3/stroke (lbs/Hr)
E7-300	Bosch 5185-P18	Bosch 323	300 @ 1950	165.9 (108.2)	1083 @ 1200	198.6 (79.7)
E7-250	Bosch 5185-P26	Bosch 323	250 @ 1950	140.5 (91.6)	975 @ 1200	181.1 (72.7)

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DATE _____ EPA REP _____

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E.O.# A-27-58

Page 16.04-8

1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Mack Trucks, Inc. Engine Family (20) LMT0728FADO

Liter (CID) 11.9 (728 CID) Eng. Type 6 Cylinder In-Line

Emission Control Sys. and (Special Features) Turbocharger Charge Air Cooler

Engine Model	Fuel Injection Pump Mfr. Part Number 313GC	Injector Mfr. Part Number 114GC	Maximum Rated HP at RPM	Fuel Rate mm^3/stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm^3/stroke (lbs/Hr)
EM7-300	Bosch 5183-P2'	Bosch 323	300 @ 1750	174 .1 (101.9	1425 @ 1020	269.7 (92.0)

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DATE _____ EPA REP _____

030186

E.O.# A-27-58

Page 16.04-9

1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Mack Trucks, Inc. Engine Family (21) LMT0728FAE1

Liter (CID) 11.9 (728 CID) Eng. Type 6 Cylinder In-Line

Emission Control Sys. and (Special Features) Turbocharger Charge Air Cooler

Engine Model	Fuel Injection Pump Mfr. Part Number 313GC	Injector Mfr. Part Number 114GC	Maximum Rated HP at RPM	Fuel Rate mm^3/stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm^3/stroke (lbs/Hr)
E7-400	Bosch 5183-P2	Bosch 323	400 @ 1800	227.1 (136.7)	1460 @ 1250	278.9 (116.6)
E7-350	Bosch 5183-P2	Bosch 323	350 @ 1800	192.2 (115.7)	1277 @ 1250	236.6 (98.9)

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