State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-27-76

Relating to Certification of New Heavy-Duty Engines and Vehicles

MACK TRUCKS, INC.

Pursuant to the authority vested in the Air Resources Board at Sections 43100, 43101, and 43102 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and Mack Trucks, Inc. and any modifications to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following 1999 model-year Mack Trucks, Inc. diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle-weight-rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

Engine Family	Displacement Liters	Displacement Cubic Inches	Exhaust Emission Control Systems and Special Features
XMKXH11.9E54 (54)	11.9	728	Turbocharger Charge Air Cooler Electronic Control Module

The engine models and codes are listed on attachments.

BE IT ORDERED AND RESOLVED: That the following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour under the Federal Test Procedure ("FTP") for Heavy-Duty Diesel Engines (Title 13, California Code of Regulations, Section 1956.8):

	Total Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Particulate Matter
"FTP"	1.3	15.5	4.0	0.10

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to the following emission standards, in grams per brake horsepower-hour, under the EURO III tests in the Settlement Agreement, and a "Not-to-Exceed" nitrogen oxides emission standard of 7.0 grams per brake horsepower-hour:

	Total Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Particulate Matter
"EURO III"	1.3	15.5	6.0	0.10

BE IT FURTHER RESOLVED: That the following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour, except that compliance with the carbon monoxide exhaust emission standard has been demonstrated pursuant to Title 40, Code of Federal Regulations, Part 86, Subpart A, Section 86.091-23(c)(2)(i):

	Total Hydrocarbons	Nitrogen Oxides	Particulate Matter
"FTP"	0.2	3.8	0.07
"EURO III"	0.1	5.6	0.02

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, Sections 2035 et seq.).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

1. The Settlement Agreement is in effect.
2. The Settlement Agreement has not become null and void under Settlement Agreement Paragraph 165.
3. Mack Trucks, Inc. is in compliance with all applicable certification requirements of the Settlement Agreement.

Engines certified under this Executive Order must conform to all applicable California emission regulations and to all applicable terms and conditions of the Settlement Agreement.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 21st day of December 1998.

John Kowalski for

R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

9/29/98

EO: A-27-76

Manufacturer: Mack Trucks, Inc

Process Code: New Submission

EPA Engine Family: XMKXH11.9E54

Manufacturer Family Name: 54

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
N/A	E7-460	460 @ 1800	242.3	151.7	1660 @ 1200	297.6	124.2	ECM,TC,CAC
N/A	E7-427	427 @ 1800	223.1	139.7	1560 @ 1200	277.9	116.0	ECM, TC, CAC
N/A	E7-400	400 @ 1800	214.7	134.4	1460 @ 1200	262.3	109.5	
N/A	E7 355/380	355 @ 1800	189.6	118.7	1560 @ 1100	282.0	107.9	
N/A	E7-350	350 @ 1800	186.2	116.6	1360 @ 1200	242.0	101.0	
N/A	E7-330/350	330 @ 1800	174.9	109.5	1460 @ 1100	264.0	101.0	
N/A	E7-310/330	310 @ 1800	164.4	102.9	1360 @ 1100	244.6	93.6	
N/A	E7-300	300 @ 1950	149.2	101.2	1160 @ 1200	203.9	85.1	
N/A	E7-300	300 @ 1800	157.6	98.7	1160 @ 1200	204.6	85.4	
N/A	E7-300	300 @ 1700	166.8	98.6	1160 @ 1200	204.6	85.4	
N/A	EM7-300	300 @ 1750	164.1	99.9	1425 @ 1020	255.9	90.8	
N/A	EM7-275	275 @ 1750	151.3	92.1	1305 @ 1020	235.4	83.5	