

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-27-71

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-45-9;

IT IS ORDERED AND RESOLVED: That the following 1997 model-year Mack Truck, Inc. diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VMK728EJDARA	11.9 (728)	Turbocharger Charge Air Cooler Engine Control Module

Engine models and codes are listed on attachments.

The following are the certification exhaust 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	0.10

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):


<u>Engine Family</u>	<u>Hydrocarbons</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VMK728EJDARA	0.03	4.5	0.09

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 15th day of January 1997.



R. B. Summerfield, Chief
Mobile Source Operations Division

A15

LARGE ENGINE MODEL SUMMARY

ED # A-27-71

Manufacturer: MACK TRUCKS, INC.

EPA Engine Family: VMK72BEJDARA

Manufacturer Family Name: FAMILY 45

Engine Code	Engine Model	BHP@RPM (SAE Gross)	Fuel Rate: min/stroke @ rated speed (for diesel only)	Fuel Rate: (lb/hr) @ rated speed (for diesels only)	Torque @ RPM (SAE Gross)	Fuel Rate: mm/stroke @ max rated torque	Fuel Rate: (lb/hr) @ max rated torque	Emission Control Device Per SAE J1920
N/A	E7-454	454 @ 1800	244.1	152.8	1560 @ 1250	277.2	120.5	ECM, IC, CAC
N/A	E7-427	427 @ 1800	223.3	139.8	1560 @ 1250	276.5	120.2	DI
N/A	E7-400	400 @ 1800	209.2	131.0	1460 @ 1250	252.8	109.9	
N/A	E7-375	375 @ 1800	193.7	121.3	1460 @ 1250	252.8	109.9	
N/A	E7-355/380	355 @ 1800	184.3	115.4	1560 @ 1100	278.6	106.6	
N/A	E7-350	350 @ 1800	180.8	113.8	1277 @ 1250	236.2	102.7	
N/A	E7-330/350	330 @ 1800	169.6	106.2	1460 @ 1100	258.2	98.8	
N/A	E7-325	325 @ 1800	166.8	104.4	1240 @ 1250	273.9	93.0	
N/A	E7-300	300 @ 1800	153.5	96.1	1160 @ 1250	198.3	86.2	
N/A	E7-300	300 @ 1700	160.5	94.0	1160 @ 1250	198.3	86.2	
N/A	E7-300	300 @ 1950	146.1	99.1	1160 @ 1200	198.9	83.0	
N/A	EM7-300	300 @ 1750	158.9	96.7	1425 @ 1020	252.3	89.5	
N/A	EM7-275	275 @ 1750	145.7	88.7	1305 @ 1020	229.2	81.3	
N/A	EM7-250	250 @ 1750	133.6	81.3	1190 @ 1020	210.6	74.7	
N/A	E7-310/330	310 @ 1800	159.4	99.8	1360 @ 1100	235.5	90.1	

B. Federal Codes