State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-27-69

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 1996 model-year Mack Trucks, 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

Engine Family	Engine Displacement Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
TMK728EJDARA (45)	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:

Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Particulates
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):

Engine Family	Hydrocarbons	Nitrogen Oxides	Particulates
TMK728EJDARA	0.0 (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 7th day of December 1995.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

E.O.# A-27-69

199 6 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page 1
HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer: MACK TRUCKS, INC. Engine Family: 45 (TMK728EJDARA)

Displacement: 11.9 / Liters 728 / Cubic Inches

All Eng Codes in Eng Family: CA___ 49S___ 50S X Strokes/Cycle: 4 Valves/Cylinder: 4

Ignition: Compression X Compression with Glow Plug___ Spark___

Fuel Type(s): Dedicated X Flex-Fuel___ Dual-Fuel___ Bi-Fuel___ Diesel X CNG___

LNG___ LPG___ M85___ M100___ Other (specify)___

Diesel Cert Fuel: 13 CCR 2282___ 40 CFR 86.1313-90___ 40 CFR 86.1313-94 X

Maximum Rated Power: 454 HP @ 1800 RPM Engine Configuration: I-6

Exhaust ECS (e.g., OC, EGR, PTOX, IFI, TC, CAC): EM,TC,CAC,ECM,~~DI~~

(Use abbreviations per SAE J1930 SEP91)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm^3 / stroke (lbs/hr)	Fuel Pump & Injector Part No. 313GC/1146C	ECM/PCM Part No. 1MS	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
E7-454	454 @ 1800	249.3 (156.1)	5205-P3/ 324A-P4 5217-P2/ 324A-P6	536-P9 543-P9 549-P9	N/A	N/A
E7-427	427 @ 1800	230.2 (144.4)	5305-P3/ 324A-P4 5217-P2/ 324A-P4 5217-P3 324A-P4	536-P8,P23, P27 543-P8 549-P8	N/A	N/A
E7-400	400 @ 1800	214.3 (134.2)	5205-P1/ 324A-P4 5217-P1/ 324A-P4	536-P7,P22 541-P7 543-P7 549-P7	N/A	N/A
E7-375	375 @ 1800	198.5 (124.3)	5205-P1 324A-P4 5217-P1/ 324A-P4	536-P10,P21 543-P10 549-P10	N/A	N/A
E7-350	350 @ 1800	184.2 (115.3)	5205-P1/ 324A-P3 5217-P1/ 324A-P3	536-P6,P17, P20 541-P6 543-P6 549-P6	N/A	N/A
E7 330/350	330 @ 1800	174.6 (109.3)	5217-P1/ 324A-P3	543-P11 549-P11	N/A	N/A

Date Issued:

Revisions:

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(Use abbreviations per SAE J1930 SEP91)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm^3 / stroke (lbs/hr)	Fuel Pump & Injector Part No. 313GC/114GC	ECM/PCM Part No. IMS	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
E7-325	325 @ 1800	169.9 (106.4)	5205-P1/ 324A-P3 5217-P1/ 324A-P3	536-P5, P15 543-P5 549-P5	N/A	N/A
E7-300	300 @ 1800	156.4 (97.9)	5205-P1/ 324A-P5 5217-P1/ 324A-P5	536-P4,P16, P19 543-P4 549-P4	N/A	N/A
E7-300	300 @ 1700	164.0 (97.0)	5205-P1/ 324A-P5 5217-P1/ 324A-P5	536-P14 543-P14 549-P14	N/A	N/A
EM7-300	300 @ 1750	163.0 (99.2)	5205-P1/ 324A-P5 5217-P1/ 324A-P5	536-P3,P18 541-P3 543-P3 549-P3	N/A	N/A
EM7-275	275 @ 1750	149.8 (91.2)	5205-P1/ 324A-P5 5217-P1/ 324A-P5	536-P2 543-P2 549-P2	N/A	N/A
EM7-250	250 @ 1750	137.3 (83.6)	5205-P1/ 324A-P5 5217-P1/ 324A-P5	536-P1 543-P1 549-P1	N/A	N/A

Date Issued:

Revisions: