State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-86-109
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

MITSUBISHI MOTORS CORPORATION

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 Mitsubishi Motors Corporation 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
LMM0201EAA0 I-4	3.3	(201)	Engine Modification Direct Injection Turbocharger Charge Air Cooler
LMM0302EAAX I-6	5.0	(302)	Engine Modification Direct Injection Turbocharger
LMM0400EAA8 I-6	6.7	(400)	Engine Modification Direct Injection Turbocharger
LMM0400EAB9 I-6	6.7	(400)	Engine Modification Direct Injection Turbocharger
LMM0460FAA8 I-6	7.5	(460)	Engine Modification Direct Injection Turbocharger Charge Air Cooler

Engine models and codes are listed on attachments.

The following are the 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:

Engine Family	Hydrocarbons gm/bhp-hr	Carbon Monoxide gm/bhp-hr	Nitrogen Oxides gm/bhp-hr	Particulates gm/bhp-hr
LMM0201EAA0	0.9	2.4	5.0	0.56
LMM0302EAAX	1.1	2.8	5.5	0.52
LMM0400EAA8	0.9	2.4	5.1	0.44
LMM0400EAB9	0.9	2.8	5.0	0.44
LMM0460FAA8	0.6	2.3	5.4	0.40

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 (Health and Safety Code Section 43205.5).

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 22nd day of May, 1989.

K. D. Drachand, Chief
Mobile Source Division

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HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer Mitsubishi Motors Corporation Engine Family LMM0201EAA0

Liter (CID) 3.3 Liter (201 CID) Eng. Type Direct Injection Turbocharged Diesel

Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & TC

Engine Code	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm³/stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm³/stroke (lbs/Hr)
4D310AT-C	ME016329	ME016306	114 hp @ 3500 rpm	62 mm³/stroke 48.6 lbs/hr	203 ft-lb @ 2000rpm	64 mm³/stroke 28.6 lbs/hr
4D310AT-D	ME016330	ME016306	114 hp @ 3500 rpm	62 mm³/stroke 48.6 lbs/hr	203 ft-lb @ 2000rpm	64 mm³/stroke 28.6 lbs/hr

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HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer Mitsubishi Motors Corporation Engine Family LMM0302EAAX
Liter (CID) 5 Liters (302 CID) Eng. Type Direct Injection Turbocharged Diesel
Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & Turbocharged

Engine Code	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)
6D310AT-A	ME086582	ME086584	145 hp @ 3200 rpm	56 mm^3/stroke 60.2 lbs/hr	265 ft-lb @ 2000 rpm	55 mm^3/stroke 36.9 lbs/hr
6D310AT-B	ME086583	ME086584	145 hp @ 3200 rpm	56 mm^3/stroke 60.2 lbs/hr	265 ft-lb @ 2000 rpm	55 mm^3/stroke 36.9 lbs/hr

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HEAVY-DUTY DIESEL ENGINES

MHDD

Manufacturer Mitsubishi Motors Corporation Engine Family LMM0400EAA8

Liter (CID) 6.7 Liters (400 CID) Eng. Type Direct Injection Turbocharged Diesel

Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & Turbocharged

Engine Code	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm³/stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm³/stroke (lbs/Hr)
6D142AT-A	ME076456	ME076250	185 hp @ 2900 rpm	79 mm³/stroke 75.8 lbs./hr	408 ft-lb @ 1600 rpm	86 mm³/stroke 45.6 lbs./hr

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HEAVY-DUTY DIESEL ENGINES

MHDD

Manufacturer Mitsubishi Motors Corporation Engine Family LMM0400EAB9

Liter (CID) 6.7 Liters (400 CID) Eng. Type Direct Injection Turbocharged Diesel

Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & Turbocharged

Engine Code	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)
6D142AT-B	ME076455	ME076250	170 hp @ 2900 rpm	72 mm^3/stroke 69.2 lbs/hr	333 ft-lb @ 1600 rpm	70 mm^3/stroke 37.1 lbs/hr
6D142AT-C	ME076460	ME076250	170 hp @ 2900 rpm	72 mm^3/stroke 69.2 lbs/hr	333 ft-lb @ 1600 rpm	70 mm^3/stroke 37.1 lbs/hr

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HEAVY-DUTY DIESEL ENGINES

MHDD

Manufacturer Mitsubishi Motors Corporation Engine Family LMM0460FAA8

Liter (CID) 460 Eng. Type Direct Injection Aftercooled Diesel

Emission Control Sys. and (Special Features) Engine Modification (DID, TC & IC)

Engine Code	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)
6D160AT2	ME076342	ME076434	220 hp @ 2700 rpm	97 mm^3/stroke 86.7 lbs/hr	470 ft-lb @ 1400 rpm	91 mm^3/stroke 42.2 lbs/hr

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