

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-86-97  
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 1989 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
KMM0201EAA1 <i>J-8</i>	3.3 (201)	Engine Modification (Turbocharger) (Diesel Injection - Direct)
KMM0302EAA0 <i>J-8</i>	5.0 (302)	Engine Modification (Turbocharger) (Diesel Injection - Direct)
KMM0400EAA9 <i>J-8</i>	6.6 (400)	Engine Modification (Turbocharger) (Diesel Injection - Direct)
KMM0400EABX <i>J-8</i>	6.6 (400)	Engine Modification (Turbocharger) (Diesel Injection - Direct)

Engine models and codes are listed on attachments.

The following are the emission standards for these engine families:

<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
1.3	15.5	6.0	0.60

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

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
KMM0201EAA1	0.9	2.4	5.0	0.56
KMM0302EAA0	1.1	2.8	5.5	0.52
KMM0400EAA9	0.9	2.4	5.1	0.44
KMM0400EABX	0.9	2.8	5.0	0.42

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 regulations (Title 13, California Administrative Code, Section 2036).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

BE IT FURTHER RESOLVED: That if the manufacturer exceeds the 5% limit stipulated in 40 CFR 86.088-10(a)(3)(1), penalties as specified in California Health and Safety Code Section 43154 shall apply.

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

Executed at El Monte, California this 2<sup>nd</sup> day of May, 1988.



K. D. Drachand, Chief  
Mobile Source Division

E.O. # A-86-97

Page 1

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer Mitsubishi Motors Corporation Engine Family KMM0201EAA1  
 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 mm <sup>3</sup> /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)
4D310AT-C	ME016329	ME016306	114 hp @ 3500 rpm	62 mm <sup>3</sup> /stroke 48.6 lbs/hr	203 ft-lb @ 2000rpm	64 mm <sup>3</sup> /stroke 28.6 lbs/hr
4D310AT-D	ME016330	ME016306	114 hp @ 3500 rpm	62 mm <sup>3</sup> /stroke 48.6 lbs/hr	203 ft-lb @ 2000rpm	64 mm <sup>3</sup> /stroke 28.6 lbs/hr

Date of Issue \_\_\_\_\_

Revisions:

E.O. # A-86-97

Page 2

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer Mitsubishi Motors Corporation Engine Family KMMO302EAA0  
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 <sup>3</sup> /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)
6D310AT-A	ME086566	ME086567	145 hp @ 3200 rpm	56 mm <sup>3</sup> /stroke 60.2 lbs/hr	265 ft-lb @ 2000 rpm	55 mm <sup>3</sup> /stroke 36.9 lbs/hr

Date of Issue \_\_\_\_\_ Revisions:

E.O. # A-86-97Page 31989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINESMHDD

Manufacturer Mitsubishi Motors Corporation Engine Family KMMQ400EAA9  
 Liter (CID) 6.6 Liters (400 CID) Eng. Type Direct Injection Turbocharged Diesel  
 Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & Turbocharged

<i>Engine Model</i>	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)
<i>6D14-2AT</i>	ME076128	ME076250	185 hp @ 2900 rpm	79 mm <sup>3</sup> /stroke 75.8 lbs./hr	408 ft-lb @ 1600 rpm	86 mm <sup>3</sup> /stroke 45.6 lbs./hr

Date of Issue \_\_\_\_\_

Revisions:

E.O. # A-86-97

Page 4

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

MHON

Manufacturer Mitsubishi Motors Corporation Engine Family KMM0400EABX  
Liter (CID) 6.6 Liters (400 CID) Eng. Type Direct Injection Turbocharged Diesel  
Emission Control Sys. and (Special Features) Engine Modification/Direct Injection & Turbocharged

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)
6D14-2AT2	ME076127	ME076250	170 hp @ 2900 rpm	72 mm <sup>3</sup> /stroke 69.2 lbs/hr	333 ft-lb @ 1600 rpm	70 mm <sup>3</sup> /stroke 37.1 lbs/hr

Date of Issue \_\_\_\_\_ Revisions: \_\_\_\_\_