DAIMLERCHRYSLER AG

EXECUTIVE ORDER U-R-016-0055 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

| MODEL YEAR | ENGINE FAMILY | DISPLACEMENT (liters) | FUEL TYPE | USEFUL LIFE (hours) |
|---------------|--|---------------------------------|--------------------------|------------------------|
| 2003 | 3MBXL12.0RJB | 12.0 | Diesel | 8000 |
| SPECIAL | FEATURES & EMISSION | CONTROL SYSTEMS | TYPICAL EQUIPMENT | APPLICATION |
| Direct Dies | el Injection, Turbocharge Engine Control Mo | er, Charge Air Cooler, odule | Loader, Tractor and Indu | strial Equipment |

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

| RATED POWER | EMISSION STANDARD | | | Į. | EXHAUST (g/kw-l | nr) | | OF | PACITY (% | 6) |
|------------------------|----------------------|------|-----|-----|-----------------|-----|------|-------|-----------|------|
| CLASS | CATEGORY | | нс | NOx | NMHC+NOx | co | PM | ACCEL | LUG | PEAK |
| 225 <u><</u> KW<450 | Tier 2 | STD | N/A | N/A | 6.4 | 3.5 | 0.20 | 20 | 15 | 50 |
| | | CERT | | | 5.2 | 0.5 | 0.08 | 9 | 2 | 12 |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this _______ day of December 2002.

Allen Lyons, Chief

Mobile Source Operations Division

U-R-016-0055

Process Code: New Submission

ATTACHMENT OF I LARGE ENGINE MOLL SUMMARY

Manufacturer: DaimlerChrysler AG

| 5.Fuel Rate: 5.Fuel Rate: 7.Fuel Rate: 8.Fuel Rate: 9. (for diesels only) 150.7 145.1 14415 @ 1200 241 117.9 117.9 117.9 5.Fuel Rate: 8.Fuel Rate: 8.Fuel Rate: 8.Fuel Rate: 111.7 1489 @ 1200 284 111.7 14415 @ 1200 241 95.2 110.9 | EPA Engine Family: | nily: 3MBXL12.0RJB | | | Manufacturer Family Name: | Family Name: | A A | | |
|---|--------------------|--------------------|-----------------|--|--|--------------|--|---|---|
| OM 457LA 449 @ 1800 33C 255 150.7 1489 @ 1200 284 111.7 CM 457LA 422 @ 1800 224 111.7 CM 457LA 396 @ 1800 200 117.9 1285 @ 1200 241 95.2 CM 457LA 349 @ 1800 200 117.9 1285 @ 1200 241 95.2 CM 457LA 325 @ 1800 242 KW 188 110.9 1175 @ 1200 224 88.2 | 1.Engine Code | 2.Engine Model | | 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) | 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) | | 7.Fuel Rate: mm/stroke@peak torque | 8.Fuel Rate: 9.F (lbs/hr)@peak torque Devi | 9.Emission Control evice Per SAE J1930 |
| OM 457LA 422 @ 1800 246 145.1 1489 @ 1200 284 111.7 OM 457LA 396 @ 1800 227 134.1 1415 @ 1200 265 104.6 DM OM 457LA 349 @ 1800 242 kw 188 110.9 1175 @ 1200 224 88.2 | 457LA.E2/1 | OM 457LA | 449 @ 1800 3 3. | | 150.7 | ` | 284 | 111.7 ↑ T | C, ECM, CAC |
| OM 457LA 396 @ 1800 227 134.1 1415 @ 1200 265 104.6 DW OM 457LA 349 @ 1800 242 kw 188 110.9 1175 @ 1200 224 88.2 | 457LA.E2/2 | OM 457LA | 422 @ 1800 | | 145.1 | 1489 @ 1200 | 284 | | C, ECM, CAC |
| OM 457LA 349 @ 1800 200 117.9 1285 @ 1200 241 95.2 / OM 457LA 325 @ 1800 242 kw 188 110.9 1175 @ 1200 224 88.2 | 457LA.E2/3 | OM 457LA | 396 @ 1800 | 227 | 134.1 | 1415 @ 1200 | 265 | A A | C, ECM, CAC |
| OM 457LA 325 @ 1800 342 Kw 188 110.9 1175 @ 1200 224 88.2 ♦ | 457LA.E2/4 | OM 457LA | 349 @ 1800 | 200 | 117.9 | 1285 @ 1200 | 241 | | C, ECM, CAC |
| | 457LA.E2/5 | OM 457LA | 325 @ 1800 24 | ななが188 | 110.9 | 1175@ 1200 | 224 | → | TC, ECM, CAC |