

EMISSIONS COMPLIANCE WORLDWIDE

**Cummins MerCruiser Diesel**  
The New Wave in Diesel Marine Power





## Emissions Compliant with EPA • RCD • IMO

Cummins MerCruiser Diesel is a vanguard of the environment, earning the first EPA Tier 2/IMO emission standards certification for our new wave of power – the Quantum Series.

Not all Diesel manufacturers are ready to meet 2006 worldwide environmental standards. Cummins MerCruiser Diesel is compliant. Cummins MerCruiser Diesel's commitment to deliver fuel efficient, quieter, virtually smoke free engines, with a marked reduction in emissions goes well beyond 2006. CMD is the first marine engine manufacturer to earn EPA Tier 2 Certification with the release of our QSM-11 450 horsepower engine.

In August 2004, CMD once again led the industry by being the first diesel manufacturer to successfully complete an RCD emissions test under the witness of International Marine Certification Institute.

Our engineers continue to advance this new wave of diesel power built around fuel systems that provide better power-to-weight ratios, cleaner starting, less noise and virtually eliminating smoke and odor traditionally associated with diesel engines.



### What Does it Mean?

- First to earn EPA Tier 2 Certification
- First to complete RCD emissions testing
- Quantum Compliant 2006-2007 EPA – RCD – IMO Standards

*In a competitive global marketplace, can your company afford to take a chance with power providers who are not EPA, IMO and RCD certified?*



# IMO

## **International Maritime Organization:**

Established by the United Nations, is comprised of 156 member countries. Their objective to reduce pollution from diesel powered vessels focuses on nitrogen oxides, referred to as NOx. These emissions, commonly known as smog or ground level ozone formation, are formed by nitrogen reacting with oxygen during combustion. IMO regulations apply to all diesel engines above 174Hp (130kW).

# EPA

## **Environmental Protection Agency:**

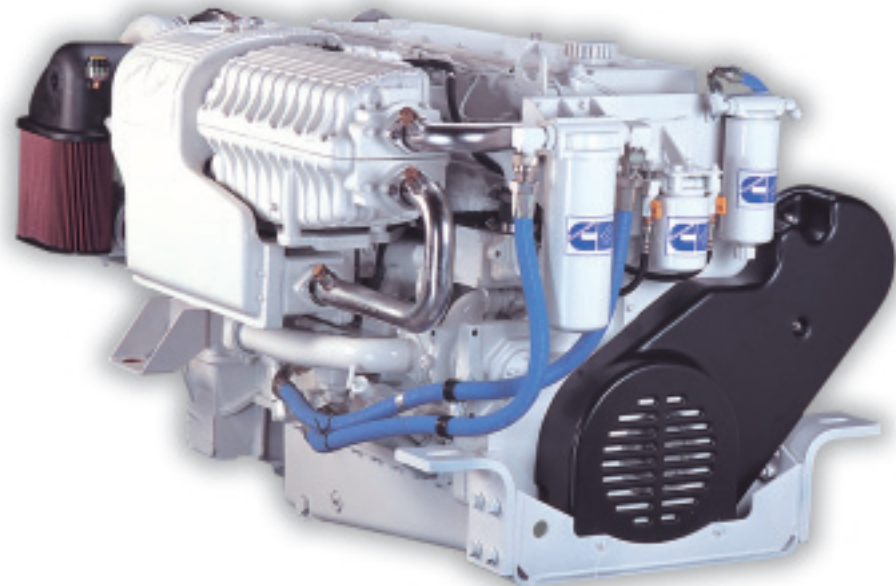
Stemming from the U.S. Clean Air Act and Clean Water Act, EPA Tier 2 regulations first took effect in 2004 and will continue to be applied to various size engines through 2007 and beyond. Tier 2 standards for marine diesel engines aim to reduce by nearly a third, nitrogen oxides (NOx), hydrocarbons (HC), PM and CO emissions.

# RCD

## **Recreational Craft Directive:**

Currently in effect for engines entering EU markets, the European Union has issued broad standards for all types of engines, gas and diesel, outboard, stern drive and inboard, along with jet propulsion. Both exhaust and noise emission reductions are the focus of the RCD. Monitored testing is required before EU certification. Quantum Series engines boast over 80% reduction in noise at idle.

*EPA Tier 2 regulations first took effect in 2004 and will continue to be applied to various size engines through 2007.*



# CUMMINS MERCUISER DIESEL ENGINE LISTING AND EMISSIONS COMPLIANCE

Model	Rating	EPA	IMO	RCD
QSB5.9-230	HD	Yes	Yes	No
QSB5.9-230	HO	Yes	Yes	Yes
QSB5.9 ES 230	GS	Yes	Yes	No
QSB5.9 ES 230	INT	Yes	Yes	No
QSB5.9 ES 230	HO	Yes	Yes	Yes
QSB5.9-230	INT	Yes	Yes	No
QSB5.9-305	MCD	Yes	Yes	No
QSB5.9-305	HO	Yes	Yes	Yes
QSB5.9-330	HO	Yes	Yes	Yes
QSB5.9-355	INT	Yes	Yes	No
QSB5.9-355	HO	Yes	Yes	Yes
QSB5.9-380	GS	Yes	Yes	No
QSB5.9-380	HO	Yes	Yes	Yes
QSB5.9-425	GS	Yes	Yes	No
QSB5.9-425	HO	Yes	Yes	Yes
QSC8.3-490	INT	Yes	Yes	No
QSC8.3-490	HO	Yes	Yes	Yes
QSC8.3-500	HO	Yes	Yes	Yes
QSC8.3-540	GS	Yes	Yes	No
QSC8.3-540	HO	Yes	Yes	Yes
QSL9-285	CON	Yes	Yes	No
QSL9-285	HO	Yes	Yes	Yes
QSL9-330	HD	Yes	Yes	No
QSL9-330	HO	Yes	Yes	Yes
QSL9-405	MCD	Yes	Yes	No
QSL9-405	HO	Yes	Yes	Yes
QSM11-300	CON	Yes	Yes	No
QSM11-300	HO	Yes	Yes	Yes
QSM11-355	CON	Yes	Yes	No
QSM11-355	HO	Yes	Yes	Yes
QSM11-405	HD	Yes	Yes	No
QSM11-405	HO	Yes	Yes	Yes
QSM11-455	MCD	Yes	Yes	No
QSM11-455	HO	Yes	Yes	Yes
QSM11-610	INT	Yes	Yes	No
QSM11-610	HO	Yes	Yes	Yes
QSM11-645	HO	No	Yes	Yes
QSM11-670	GS	Yes	Yes	No
QSM11-670	HO	Yes	Yes	Yes

Model	Rating	EPA	IMO	RCD
1.7 MS 120	PC	No	N/A	Yes
1.7 MI 120	PC	No	N/A	Yes
1.7 MJ 120	PC	No	N/A	Yes
2.8 ES 170	PC	No	N/A	Yes
2.8 EI 170	PC	No	N/A	Yes
2.8 EJ 170	PC	No	N/A	Yes
2.8 ES 200	PC	No	Yes	Yes
2.8 EI 200	PC	No	Yes	Yes
2.8 EJ 200	PC	No	Yes	Yes
4.2 MS 200	LC	No	Yes	Yes
4.2 MI 200	LC	No	Yes	Yes
4.2 MS 230	PC	No	Yes	Yes
4.2 MI 230	PC	No	Yes	Yes
4.2 ES 250	PC	No	Yes	Yes
4.2 EI 250	PC	No	Yes	Yes
4.2 EJ 250	PC	No	Yes	Yes
4.2 ES 270	PC	No	Yes	Yes
4.2 EI 270	PC	No	Yes	Yes
4.2 ES 320	PC	No	Yes	Yes
4.2 EI 320	PC	No	Yes	Yes
4BT (130-155)	MCD	No	N/A	No
6B (115-120)	MCD	No	N/A	No
6BT-180	MCD	No	Yes	No
6BT-210	INT	No	Yes	No
220B	HO	No	Yes	Yes
6BTA-225	MCD	No	Yes	No
6BTA-260	INT	No	Yes	No
270B	HO	No	Yes	Yes
6BTA-280	MCD	No	Yes	No
6BTA-315	INT	No	Yes	No
330B	HO	No	Yes	Yes
370B	HO	No	Yes	Yes
6C-255	CON	No	Yes	No
6C-350	INT	No	Yes	No
6C-430	INT	No	Yes	No
450C	HO	No	Yes	Yes
N14-360	CON	No	Yes	No
N14-400	CON	No	Yes	No
N14-440	CON	No	Yes	No
N14-480	HD	No	Yes	No
N14-525	MCD	No	Yes	No

**Continuous Duty (CON)**  
**Heavy Duty (HD)**  
**Medium Continuous Duty (MCD)**  
**Intermittent Duty (INT)**

**High Output (HO)**  
**Pleasure Craft (PC)**  
**Light Commercial (LC)**  
**Government Service (GS)**

For Rating Definitions and Specifications visit [www.cmdmarine.com](http://www.cmdmarine.com)



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