

MARPOL / THE EPA AND EIAPP CERTIFICATES



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WHAT IS MARPOL?

- MARPOL is the International Convention for the Prevention of Pollution from Ships.
- The MARPOL Convention was adopted at the International Maritime Organization (IMO) on November 2, 1973, and has seen a variety of revisions over time.
- One of the revisions includes the addition of Annex VI to the Convention, which entered into force internationally for signatory countries on **May 19, 2005**. Vessels entering the waters of signatory countries after May 19, 2005, are required to demonstrate compliance with Annex VI.

UNITED STATES ENTRY INTO FORCE

- On October 8, 2008, the United States ratified MARPOL Annex VI.
- MARPOL Annex VI, went into force in the United States on **January 8, 2009**.
- Ratification triggers the requirement for all US vessels and foreign flagged vessels entering in to US waters, and the diesel engines installed on them, to be certified to meet the Annex VI requirements.



WHAT IS ANNEX VI?

- Annex VI sets emission limits for ozone depleting substances, and outlines international requirements for vessel (and engine) air emissions and pollution prevention measures.
- In the United States, vessel engine certification is conducted by the Environmental Protection Agency (EPA) and compliance is demonstrated by a **Certificate of Conformity**, and where required, an **Engine International Air Pollution Prevention (EIAPP) Certificate**.

WHAT IS AN EIAPP CERTIFICATE?

- An EIAPP Certificate is an internationally recognized document that demonstrates an engine's compliance with MARPOL Annex VI.
- The EPA is the only agency that is authorized to issue EIAPP Certificates for US flagged vessels.
- The following slide shows a sample EIAPP Certificate issued by the EPA. All EIAPP Certificates issued by the EPA will look similar.

SAMPLE EIAPP CERTIFICATE ISSUED BY THE EPA

	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF TRANSPORTATION AND AIR QUALITY ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE	
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Manufacturer: MTU DETROIT DIESEL, INC. Engine Family: 7MDDM31.8MRA Certificate Number: MDD-IMO-07-01.1 Date Issued: 5/15/2009
 Karl J. Simon, Director Compliance and Innovative Strategies Division Office of Transportation and Air Quality

This is to certify that the manufacturer of the above mentioned marine diesel engine has provided information to the U.S. Environmental Protection Agency that demonstrates:

1. this engine has been tested in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, and,
2. the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or service on board a ship, fully comply with the applicable regulation 13 of Annex VI to MARPOL 73/78

This certificate is valid for the life of the engine subject to surveys in accordance with regulation 5 of Annex VI to MARPOL 73/78, installed in ships under the authority of this Government.

Issued at U.S. Environmental Protection Agency, Office of Transportation and Air Quality, Washington, DC

	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF TRANSPORTATION AND AIR QUALITY ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE	
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This is to certify that this record is correct in all respects. Issued at U.S. Environmental Protection Agency, Office of Transportation and Air Quality Washington, DC

Karl J. Simon, Director
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality

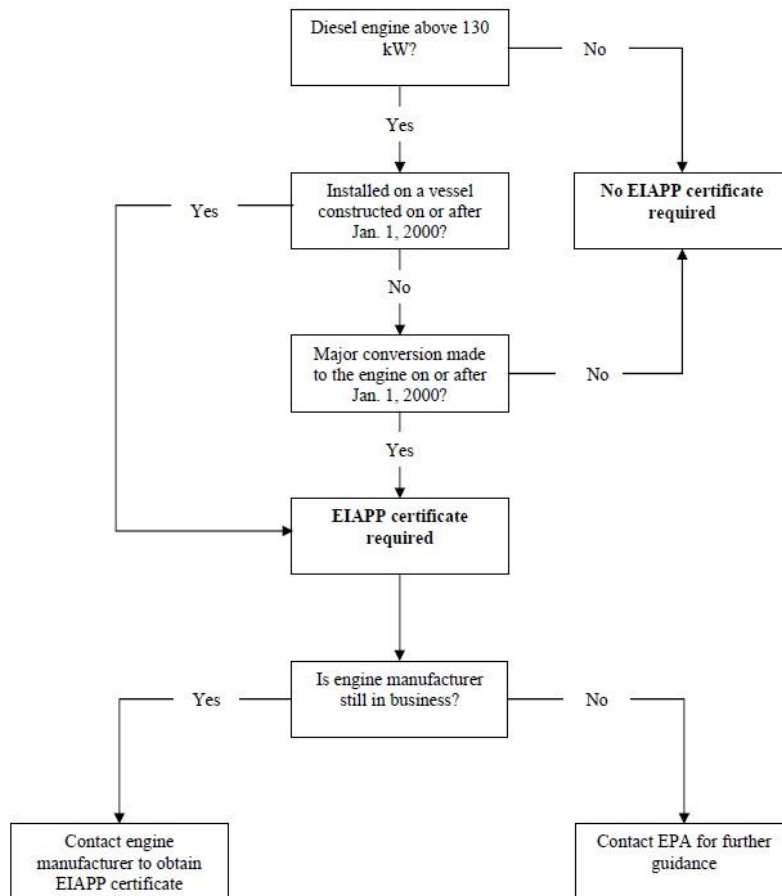
1. Particulars of the engine 1.1 Name & address of manufacturer: MTU Detroit Diesel 13400 W. Outer Drive Detroit, MI 48239-4001	1.8 Test cycle: E3 General cycle (propulsion engine, fixed-pitch prop), E2 Variable-Pitch and Electrically-Coupled props (constant-speed propulsion engines)
1.2 Place of engine build: MTU Friedrichshafen GmbH 88040 Friedrichshafen Germany	1.9 Rated Power(kW) & Speed(RPM): 525 2100
1.3 Date of engine build: 9/1/1999	1.10 Engine certificate number: MDD-IMO-07-01.1
1.4 Place of pre-certification survey: MTU Friedrichshafen GmbH 88040 Friedrichshafen Germany	1.11 Test fuel: Distillate Diesel [ISO 8217, DM-Grade]
1.5 Date of pre-certification survey: 9/30/1999	1.12 NOx reducing device?: No
1.6 Engine family: 7MDDM31.8MRA	1.13 Applicable NOx Emission Limit(g/kW-hr): 9.8
1.7 Models: 8V 2000 M60, 12V 2000 M60, 16V 2000 M60, 8V 2000 M70R, 8V 2000 M70, 12V 2000 M70, 16V 2000 M70, 12V 2000 M70A, 8V 2000 M80, 12V 2000 M80, 16V 2000 M80, 8V 2000 M90, 12V 2000 M90, 16V 2000 M90, 12V 2000 M91, 16V 2000 M91	1.14 Engine NOx Emission Value(g/kW-hr): 8.0 8.1
2. Particulars of the Technical File: 2.1 Technical File number: V08 1B21/1D21 TFI 01 - EPA 2.2 NOx verification number: See Technical File	

WHAT ENGINES ARE REQUIRED TO HAVE AN EIAPP CERTIFICATE?

- Any engine (including a generator engine) that has an output power of greater than 130kW and is installed on a vessel constructed on or after January 1, 2000, is required to have an EIAPP Certificate.
- Also, engines that have undergone a major conversion on or after January 1, 2000 (including replacement), are required to have an EIAPP Certificate.
- Some exclusions apply, such as engines installed on vessels only operating in domestic waters.

EPA FLOW CHART FOR EIAPP CERTIFICATE REQUIREMENT

Flowchart for Obtaining EIAPP Certificate



ADDITIONAL REQUIREMENTS

- In addition to an EIAPP Certificate, each qualifying engine must have a **Technical File** for the engine that goes with the EIAPP Certificate. Both documents must be maintained onboard the vessel.
- Also, each engine must have a **Record Book of Engine Parameters** for recording all changes to the engine parameters, components and engine settings.

C32 Marine Engine Technical File for IMO II

(Engine Family ACPXW32.1PA2)

CAT	Ser. No. RPM00266	Engine Model C32
	Ar. No. 3637036	Rotation CCW
	Core Ar.	Max 300 M
		Alt 984 FT
FLS (Intercept)	-42	Perf Spec 3704865
FTS (Slope)	36	ECM Software 4597316
Fuel Timing		mm Injector 2768307
Bare Eng High Idle	2415 RPM	Turbo 3759994
Power 1800	BHP 1342	BAW at 2300 RPM
Using service tool to verify current engine settings		
		
349-3350 PubRls 115-0852		

This document meets the requirements of IMO NOx Technical Code Regulation 2.4.1. Caterpillar does not consent to the use of the information contained here to obtain additional or further IMO approvals (i.e. IMO Tier III), per guideline 3.1.2 of IMO Guidelines MEPC 198(62)

**Do Not Discard
This Document is to be kept on board.**

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LEXM0062-00

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FOREIGN VESSELS ENTERING US WATERS

- Foreign vessels entering US waters must also be compliant with MARPOL Annex VI.
- Compliance is demonstrated by having an EIAPP Certificate, Technical File and Record Book of Engine Parameters, for each qualifying engine.
- EIAPP Certificates are issued on behalf of the vessel's flag state. Each flag state has identified the party or parties authorized by the flag state to issue EIAPP Certificates. Generally, Classification Societies such as Lloyds and DNV-GL issue EIAPP Certificates on behalf of the various flag states for foreign flagged vessels.

A SAMPLE EIAPP CERTIFICATE ISSUED FOR A FOREIGN FLAGGED VESSEL

DNV GL

Certificate No. EIAPP-F-056057-0004

ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.175(58) in 2008, to amend the INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention")

under the authority of the Government of the

CAYMAN ISLANDS[†]

by DNV GL

PARTICULARS OF THE ENGINE:

Engine manufacturer: **MAN Truck & Bus AG**
 Model number: **D2848LE423**
 Serial number: **6301946061945**
 Test cycle(s): **E3**
 Rated power [kW] and speed [rpm]: **662 @ 2300**
 Engine approval number: **EIAPP-F-056057-0004**

THIS IS TO CERTIFY:

- That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines 2008 made mandatory by Annex VI of the Convention; and
- That the pre-certification survey shows that the engine, its components, adjustable features, and technical file, prior to the engine's installation and/or service on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This certificate is valid for the life of the engine, subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at Hamburg, 23rd October, 2015



Stine Mørstel
 Head of Section Environmental Certification



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Work no. 5 657 498 / 1

Technical File

According to Marpol 73/78 Annex VI and Nox Technical Code

Data of engine

Engine manufacturer	MAN Truck & Bus AG Vogelweierstraße 33 90441 Nuremberg
Name of engine family	D28 Main CR / 56057-05 HH
Engine type	D2848LE423
Engine serial number	630 1946 806 1945
Date of production of engine	17.04.2008
Place of engine production	Nuremberg

Use of engine

Use of engine	Main engine
Test cycles to be applied	E3

Contents

- 1.) Technical data of the engine
- 2.) Emission relevant components
- 3.) Emission relevant settings and operating values
- 4.) On-board verification procedure
- 5.) Emission test report of the parent engine

Signature of manufacturer

Signature of inspector

*This Technical File was
 drawn up by computer and is valid
 without a signature*

MAN Truck & Bus AG

Marine Sales Engineering (Nassbeck)
 MAN part no. (51903900488)



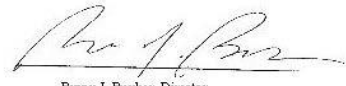
Printed by: b4002
 Date: 21.09.2015

[†] This certificate is issued by or on behalf of the Cayman Islands under the responsibility of the United Kingdom as Flag State under the Convention.

IMPORTING OR OTHERWISE ENTERING AN ENGINE INTO US COMMERCE

- In order to import, or otherwise enter an engine into US commerce, (and obtain an EIAPP Certificate issued by the EPA if applicable), the engine must be compliant with EPA emission requirements for the ***engine's category*** and ***required tier of compliance***.
- An engine's compliance with EPA emission requirements is demonstrated by a Certificate of Conformity.
- A Certificate of Conformity looks very similar to an EPA issued EIAPP Certificate.

BELOW IS A SAMPLE CERTIFICATE OF CONFORMITY ISSUED BY THE EPA

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF TRANSPORTATION AND AIR QUALITY WASHINGTON, DC 20460			
CERTIFICATE OF CONFORMITY 2013 MODEL YEAR			
Manufacturer:	JOHN DEERE POWER SYSTEMS		
Engine Family:	DJDXN045146		
Certificate Number:	JDX-MCI-13-16		
Intended Service:	AUXILIARY		
Intended Service Fuel:	DIESEL		
FELs:	NOx: N/A	THC+NOx: N/A	PM: N/A
Effective Date:	1/3/2013		
Date Issued:	1/3/2013		
			
Byron J. Bunke, Director Compliance Division Office of Transportation and Air Quality			
<p>Pursuant to Section 213 of the Clean Air Act (42 U.S.C. § 7547) and 40 CFR Part 1042, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following marine engines, by engine family, more fully described in the documentation required by 40 CFR Part 1042 and produced in the stated model year.</p> <p>This certificate of conformity covers only those new marine compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 1042 and which are produced during the model years stated on this certificate of the said manufacturer, as defined in 40 CFR Part 1042.</p> <p>It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR Part 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 1042. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 1042.</p> <p>This certificate does not cover marine engines sold, offered for sale, introduced, or delivered for introduction into commerce in the U.S. prior to the effective date of the certificate.</p>			

WHAT CATEGORY ENGINE DO YOU HAVE?

- Category 1 means relating to a marine engine with a rated power greater than or equal to 37 kilowatts and a specific engine displacement less than 5.0 liters per cylinder. [*yacht engines generally fall into this category*]
- Category 2 means relating to a marine engine with a specific engine displacement greater than or equal to 5.0 liters per cylinder but less than 30 liters per cylinder
- Category 3 means relating to a marine engine with a specific engine displacement greater than or equal to 30 liters per cylinder.

MARPOL TIER I, TIER II AND TIER III COMPLIANCE

- Annex VI Tier I standards apply to engines installed on vessels constructed on or after January 1, 2000.
- Annex VI Tier II standards apply to engines installed on vessels constructed on or after January 1, 2011.
- Annex VI Tier III standards apply to engines installed on vessels constructed on or after January 1, 2016.
- There is also Tier IV which we have not included in our presentation.

US TIER I COMPLIANCE

- MARPOL Annex VI did not enter into force in the US until January 8, 2009. As this was the case, engines on US flagged vessels were not required to comply with the MARPOL Annex VI requirements unless the vessel traveled to a signatory country.
- However, in 1999, the EPA adopted voluntary emission standards for commercial marine diesel engines smaller than 30 liters per cylinder (Category 1 and Category 2).
- Also, prior to MARPOL Annex VI entering into force, the EPA adopted equivalent MARPOL Tier I standards for category 1, 2 and 3 engines manufactured on or after January 1, 2004, and installed on on US vessels.

US TIER II COMPLIANCE

- The US also adopted Tier II compliance standards earlier than the MARPOL Tier II compliance date of January 1, 2011, per below table which specifies the year Tier II compliance standards took effect for certain engines:

TABLE 1 TO § 1042.1—PART 1042 APPLICABILITY BY MODEL YEAR

Engine category	Maximum engine power ^a	Displacement (L/cyl) or application	Model year
Category 1	kW < 75	disp. < 0.9	^b 2009
	75 ≤ kW ≤ 3700	disp. < 0.9	2012
		0.9 ≤ disp. < 1.2	2013
		1.2 ≤ disp. < 2.5	2014
		2.5 ≤ disp. < 3.5	2013
		3.5 ≤ disp. < 7.0	2012
	kW > 3700	disp. < 7.0	2014
Category 2	kW ≤ 3700	7.0 < disp. < 15.0	2013
	kW > 3700	7.0 ≤ disp. < 15.0	2014
	All	15 ≤ disp. < 30	2014
Category 3	All	disp. ≥ 30	2011

^a See § 1042.140, which describes how to determine maximum engine power.

^b See Table 1 of § 1042.101 for the first model year in which this part 1042 applies for engines with maximum engine power below 75 kW and displacement at or above 0.9 L/cyl.

US TIER III COMPLIANCE

- The below table specifies the year Tier III compliance started in the US for category 1 engines:

Table 1 to §1042.101— Tier 3 Standards for Category 1 Engines Below 3700 kW ^a

Power Density and Application	Displacement (L/cyl)	Maximum Engine Power	Model Year	PM (g/kW-hr)	NOx+HC (g/kW-hr) ^b
All	disp.< 0.9	kW <19	2009+	0.40	7.5
		19 ≤ kW < 75	2009-2013	0.30	7.5
			2014+	0.30	4.7
Commercial engines with kW/L ≤ 35 ^b	disp.< 0.9	kW ≥ 75	2012+	0.14	5.4
	0.9 ≤ disp. < 1.2	all	2013+	0.12	5.4
	1.2 ≤ disp. < 2.5	kW < 600	2014-2017	0.11	5.6
			2018+	0.10	5.6
		kW ≥ 600	2014+	0.11	5.6
	2.5 ≤ disp. < 3.5	kW < 600	2013-2017	0.11	5.6
			2018+	0.10	5.6
		kW ≥ 600	2013+	0.11	5.6
	3.5 ≤ disp. < 7.0	kW < 600	2012-2017	0.11	5.8
			2018+	0.10	5.8
kW ≥ 600		2012+	0.11	5.8	
Commercial engines with kW/L > 35 and all recreational engines ^b	disp. < 0.9	kW ≥ 75	2012+	0.15	5.8
	0.9 ≤ disp. < 1.2	all	2013+	0.14	5.8
	1.2 ≤ disp. < 2.5		2014+	0.12	5.8
	2.5 ≤ disp. < 3.5		2013+	0.12	5.8
	3.5 ≤ disp. < 7.0		2012+	0.11	5.8

^a No Tier 3 standards apply for commercial Category 1 engines at or above 3700 kW. See §1042.1(e) and paragraph (a)(7) of this section for the standards that apply for these engines.

^b The applicable NOx+HC standards specified for Tier 2 engines in Appendix I of this part continue to apply instead of the values noted in the table for commercial engines at or above 2000 kW. FELs for these engines may not be higher than the Tier 1 NOx standard specified in Appendix I of this part.

US TIER III COMPLIANCE

- There are also tables of compliance for Category 2 and Category 3 engines that are not displayed in this presentation.

**GUIDELINES AS REQUIRED BY REGULATION 13.2.2 IN RESPECT OF
NON-IDENTICAL REPLACEMENT ENGINES NOT REQUIRED
TO MEET THE TIER III LIMIT**

1 When it becomes necessary to replace an engine to which regulation 13 of MARPOL Annex VI applies in principle (power output of more than 130 kW) the non-identical replacement engine shall comply with the standards set forth in paragraph 5.1.1 of the respective regulation (Tier III) when operating in an area designated under regulation 13.6 of MARPOL Annex VI if the replacement takes place on or after 1 January 2016 unless:

- .1 a replacement engine of similar rating complying with Tier III is not commercially available; or
- .2 the replacement engine, in order to be brought into Tier III compliance, needs to be equipped with a NO_x reducing device which due to:
 - .1 size cannot be installed in the limited space available on board; or
 - .2 extensive heat release could have adverse impact on the ships structure, sheeting, and/or equipment whilst additional ventilation and/or insulation of the engine-room/compartments will not be possible.

2 In making the determination that a Tier III engine is not a feasible replacement engine for a ship, it should be necessary to evaluate not just engine dimensions and weight but may also include other pertinent ship characteristics. These pertinent characteristics could include:

- .1 downstream ship components such as drive shafts, reduction gears, cooling systems, exhaust and ventilation systems, and propeller shafts;
- .2 electrical systems for diesel generators (indirect drive engines); and
- .3 such other ancillary systems and ship equipment that would affect the choice of an engine.

3 Restrictions should also be considered concerning engine adjustment/matching needed to meet boundary conditions and performance data necessary for SCR operation at all relevant mode points.

4 If the replacement engine is part of a multi-engine (twin-engine) arrangement and it is replacing an engine that is not a Tier III compliant engine due to it having been installed prior to the Tier III implementation date, a need to match a replacement engine within a multi-engine arrangement should be part of the criteria to be considered. In such cases, if it were decided to exempt a replacement engine in multi-engine arrangements it must be clear that is where engines are installed as matched pairs (or more) as propulsion engines and that matching is necessary to ensure comparable manoeuvring/drive response rather than where multiple engines are installed such as in the case of generators.

5 A replacement engine that meets the Tier III limit should be installed provided it does not incur an increase in the ship's electrical demand beyond the installed capacity.

6 In no case should modification to the ship's structure be allowed which weakens its structural stability below the acceptable level.

7 The Administration should consider how far the shipowner's specification of the device will determine whether a non-identical replacement engine is not required to meet the Tier III limit (for example, by requiring an excessive urea storage capacity – relative to bunker capacity – or that the SCR device is not to increase engine weight/volume by more than an unjustifiably low percentage).

8 There may be differences between a Tier III and a Tier II engine that should not affect the determination of whether a non-identical replacement engine should not be required to meet the Tier III limit, such as:

- .1 warranty period or life expectancy;
- .2 cost; or
- .3 production lead time.

9 The shipowner should provide evidence to the Administration that a Tier III engine cannot be installed and should report specifically what prevents a Tier III compliant engine from being installed, taking into account the provisions of these guidelines. The shipowner should document the search for compliant Tier III engines and explain why the closest available engine with respect to size or performance is not appropriate for the ship. The search should include engines produced by manufacturers other than the original engine's manufacturer. This documentation, duly endorsed by the Administration, should be kept with the replacement engine's EIAPP Certificate.

HOW DO YOU DETERMINE IF THE ENGINES ARE COMPLIANT IN THE US?

- The first question to ask is does the engine have a Certificate of Conformity issued by the EPA? If yes, obtain a copy as this will assist in obtaining an EIAPP Certificate (if required) and will otherwise serve to demonstrate the compliance if the engine is not required to have an EIAPP Certificate.
- Otherwise, ask for a photograph of the engine's EPA Emissions Label. Having a label is required by US law. Therefore, if there is no US EPA Emissions Label there will be a problem bringing the engine into US commerce. The label will help you assess if the engine is compliant with US emissions requirements.

BELOW IS A SAMPLE US EPA TIER I EMISSIONS LABEL



BELOW IS A SAMPLE US EPA TIER II EMISSIONS LABEL

MARINE ENGINE EMISSION CONTROL INFORMATION

THIS ENGINE CONFORMS TO U.S. EPA REGULATIONS FOR NEW MARINE COMPRESSION IGNITION ENGINES AT OR ABOVE 37 KW.

THIS ENGINE IS CERTIFIED TO OPERATE ON DIESEL FUEL.

ENGINE FAMILY: CMDDN35.7MNR

MODEL YEAR: 2012

ENGINE CONFIG.: PROPULSION

DISP.: 2.23 L/CYL.

INIT. IGNIT. TIMG.: 6 DEG.BTC

MODEL: 16V2000CR

US EPA U.L.: 10 YRS OR 10000 HRS

IDLE SPEED: 575-800 RPM

CERTIFIED TO: TIER 2

VALVE LASH: EXHAUST 0.40 MM

INLET 0.30 MM

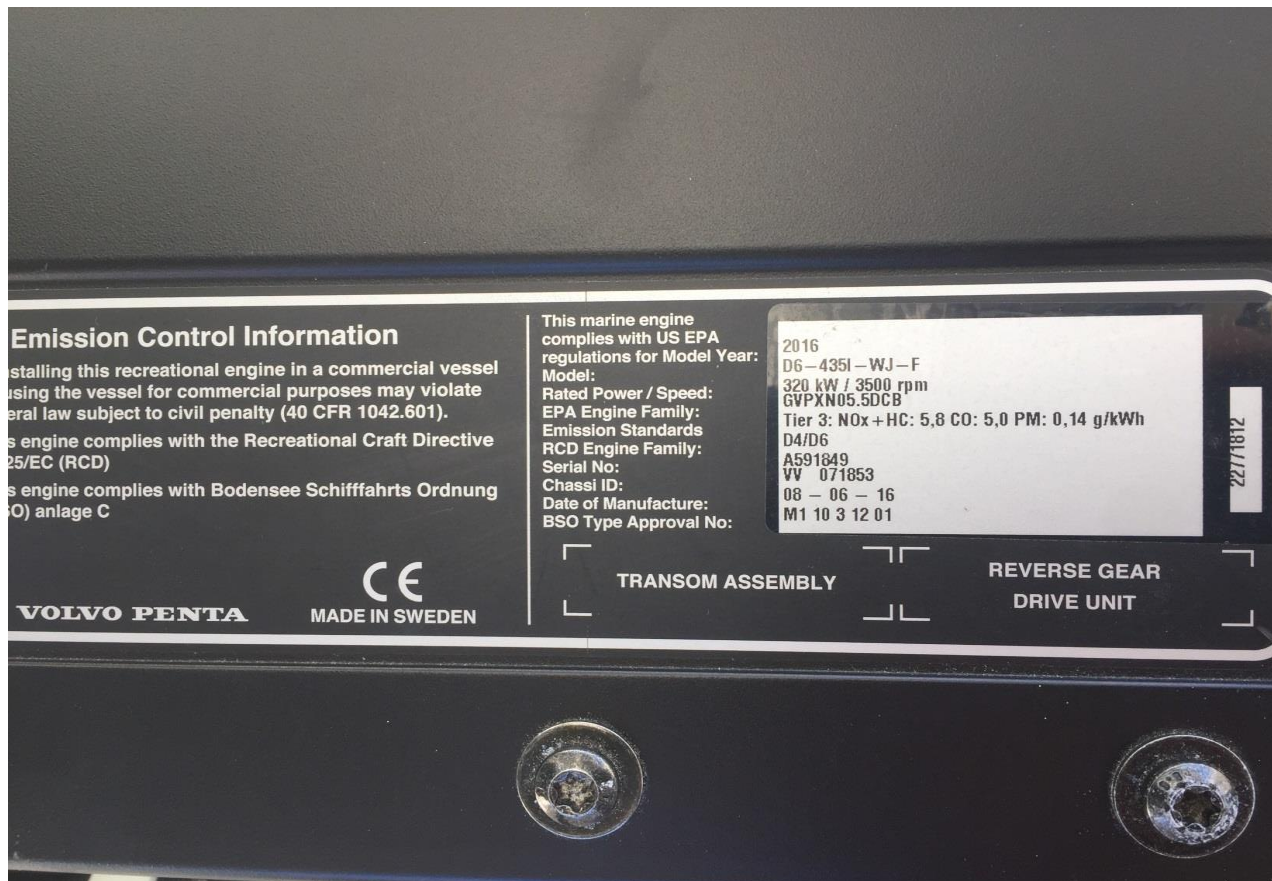
The logo for MTU, consisting of the lowercase letters 'mtu' in a bold, italicized, sans-serif font.

UNIT: 516100447

Tognum America Inc.

66.1 MMN 425

BELOW IS A SAMPLE US EPA TIER III EMISSIONS LABEL



BELOW IS A SAMPLE NON US COMPLIANT EMISSIONS LABEL

- Engine built for export:



DETERMINE COMPLIANCE CONTINUED

- Work with a local dealer for the engine manufacturer. The dealer should be able to assist and advise if the engine has a Certificate of Conformity and/or an EIAPP Certificate.
- If the local dealer is unable to assist you will have to reach out to the engine manufacturer directly to determine if the engine was ever issued a Certificate of Conformity and/or an EIAPP Certificate.

DETERMINING COMPLIANCE CONTINUED

- INFORMATION TO ASK FOR TO ASSIST IN DETERMINING COMPLIANCE INCLUDES:
 - Engine Manufacturer
 - Model / Engine Family
 - Serial Number
 - Model Year
 - Output Power kW
 - Displacement

Engine Emissions Data

For Emissions / Certification feedback and questions, please submit a ticket via our ERC [Request Portal](#)

This emission data is Caterpillar's best estimate for this rating. If actual emissions are required then an emission test needs to be run on your engine.

Serial Number (Machine)	
Serial Number (Engine)	RPM00266
Sales Model	C32
Regulatory Build Date	10-JUL-2014
Interlock Code Progression	No Interlock Code Progression
As Shipped Data	
Engine Arrangement Number	3637036
Certification Arrangement	
Test Spec Number	3704865
Regulatory Status	EPA Marine Tier 3 Recreational
Regulatory Status	EU Marine Inland Waterway
Regulatory Status	IMO Compliant
Labeled Model Year	2014
EPA Family Code	ECPXN32.1ER3
EU Type Approval	e1*97/68VC*2004/26*0019*03
Flash File	4597318
Flash File Progression	5614370
CORR FL Power at RPM	1,800 HP (1,342.0 KW)2300 RPM
Advertised Power	1,800 HP 2,300RPM
Per / Cylinder Displacement	2.68




Disclaimer: The information provided has been compiled from third party sources and is accurate to the best of Caterpillar's knowledge. However, Caterpillar cannot guarantee the accuracy, completeness, or validity of the information and is not liable for any errors or omissions contained therein. All information provided should be independently verified and confirmed, including by examining the emissions label located on the engine.

[Need emission replacement label? Click here!](#)

DETERMINING COMPLIANCE CONTINUED

- With the information on the previous slide, you should be able to determine (for example based on the model year) whether the engine is required to comply with any US EPA emissions requirements and to what Tier level of compliance is required.
- You should also be able to determine whether or not the engine is non complying.
- It is important to remember that just because the engine has an EIAPP Certificate that it may not be compliant with US requirements. The engine may only be compliant with MARPOL IMO standards, which are less stringent than US standards, or the EIAPP CERTIFICATE may be outdated for the new Tier compliance required.

BELOW IS AN EXAMPLE OF AN OUTDATED EIAPP CERTIFICATE WHICH IS DATED IN 2014 FOR AN ENGINE WITH A MODEL YEAR OF 2016 AND NOW REQUIRED TO ADHERE TO TIER III REQUIREMENTS

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF TRANSPORTATION AND AIR QUALITY ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE 	
Manufacturer:	AB VOLVO PENTA
Engine Family:	AVPXW05.5DAI
Certificate Number:	VPX-IMO-10-06.4
Date Issued:	10/23/2014
 Byron J. Bunker, Director Compliance Division Office of Transportation and Air Quality	
<p>This is to certify that the manufacturer of the above mentioned marine diesel engine has provided information to the U.S. Environmental Protection Agency that demonstrates:</p> <ol style="list-style-type: none">1. this engine has been tested in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, and,2. the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or service on board a ship, fully comply with the applicable regulation 13 of Annex VI to MARPOL 73/78 <p>This certificate is valid for the life of the engine subject to surveys in accordance with regulation 5 of Annex VI to MARPOL 73/78, installed in ships under the authority of this Government.</p>	

Where can I get more information?

Copies of MARPOL Annex VI and the NOX Technical Code are available on the Office of Transportation and Air Quality marine web sites at:

www.epa.gov/otaq/marine.htm
www.epa.gov/otaq/oceanvessels.htm

Information on EPA's Tier 1 marine diesel engine standards is available at:

<http://www.epa.gov/otaq/regs/nonroad/marine/ci/f03001.pdf>

Guidance for Marine Engine and Vessel Manufacturers can be found at:

<http://www.epa.gov/otaq/regs/nonroad/marine/ci/imolettr.pdf>

You can contact EPA, regarding EIAPP certificates:

Justin G. Greuel
E-mail address: Greuel.Justin@epa.gov

You can contact U.S. Coast Guard, regarding IAPP certificates:

LCDR Scott W. Muller
E-mail address: Scott.W.Muller@uscg.mil