



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	Maridis Maritime Diagnostic & Service GmbH
PLACE OF PRODUCTION	Friedrich-Barnewitz-Strasse 4c 18119 Rostock Germany
DESCRIPTION	Condition Monitoring System Portable hand-held unit for analysing and monitoring of: - Engine load equalisation - Optimization of fuel consumption - Determination of cylinder heat condition - Injection-, Valve timing and Valve leakage (MarPrime Ultra)
TYPE	MarPrime (cylinder pressure measurement) MarPrime Ultra (cylinder pressure and ultrasonic sound measurement) Software Version: V1.11 PC based "Condition Monitoring Software" Version: V3.2.x
APPLICATION	Marine and offshore applications for use in environmental categories ENV1, ENV2 and ENV4 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2002, as a portable device without being installed on a fixed position.
STANDARD	Manufacturers Specification.
Certificate No.	14/20029(E1)
Issue Date	09 December 2014
Expiry Date	27 May 2019
Sheet	1 of 2

Lloyd's Register EMEA
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RATINGS

- Power Supply via Battery 7,4V/2200mAh (Varta Li-Ion 2sLIC18650)
- LAN Interface (10Mbit) for connection to PC
- Integrated 2 channel ADC (12bit)
- Measurement at RPM (2-stroke: 20-150rpm) or (4-stroke: 250-2000rpm)
- max. Cylinder: 20

Cylinder Pressure Sensor "HTT04":

- Measurement range: 0...300bar
- Sensor output signal: 4...20mA
- Temperature range: 50...300°C

Ultrasonic Sensor "VS 900M":

- Measurement range: 100...900kHz
- Temperature range: -50...100°C

OTHER CONDITIONS

Type Approval of products according to Test Specification No.1 is essentially a Type Approval of hardware.

The use of the MarPrime and the MarPrime Ultra as a condition monitoring tool under the Lloyd's Register survey regime is subject to special consideration and approval.

Final arrangements of the system have to be in compliance with Lloyd's Register Rules and Regulations.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HTS/ETS 30774-14 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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