

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Diesel Engine

with type designation(s)
TD/TCD 914 L06M

Issued to

DEUTZ AG
Köln, Germany

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application :

The approval is valid for auxiliary and emergency duty.

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Rating See page 2

This Certificate is valid until **2018-12-31**.

Issued at **Høvik** on **2015-08-12**

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Tage Olav Alexander Strøm**

Oddvar Deinboll
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Four stroke air cooled diesel engine
Cylinder bore: 102 mm
Piston stroke: 125 mm
No of Cylinders: inline 6 cylinder

Application/Limitation

The approval is valid for auxiliary and emergency duty with the following ratings:

Engine Type	Application	Nominal power - kW	Nominal speed
TD 914 L06M	Auxiliary (Pump Sets)	65,0	1500
TD 914 L06M	Auxiliary (Pump Sets)	79,0	1800
TD 914 L06M	Auxiliary (Pump Sets)	84,0	2000
TD 914 L06M	Auxiliary (Pump Sets)	98,0	2300
TD 914 L06M	On- board Genset (Emergency-/Harbour Genset)	73,0	1500
TD 914 L06M	On- board Genset (Emergency Genset)	87,0	1800
TD 914 L06M	On- board Genset (Emergency Genset)	77,0	1500
TD 914 L06M	On- board Genset (Emergency Genset)	93,0	1800
TD 914 L06M	On- board Genset (Emergency Genset)	99,0	1800
TCD 914 L06M	Auxiliary (Pump Sets)	74,0	1500
TCD 914 L06M	Auxiliary (Pump Sets)	88,0	1800
TCD 914 L06M	Auxiliary (Pump Sets)	105,0	2000
TCD 914 L06M	Auxiliary (Pump Sets)	132,0	2300
TCD 914 L06M	On- board Genset (Emergency-/Harbour Genset)	93,0	1500
TCD 914 L06M	On- board Genset (Emergency-/Harbour Genset)	112,0	1800
TCD 914 L06M	On- board Genset (Emergency Genset)	99,0	1500
TCD 914 L06M	On- board Genset (Emergency Genset)	119,0	1800
TCD 914 L06M	On- board Genset (Emergency Genset)	105,5	1800
TCD 914 L06M	On- board Genset (Emergency Genset)	129,0	1800

Tests carried out

Running test for verification of hot surfaces.

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey every second year and before the expiry date of this certificate to verify that the conditions of the type approval are complied with.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the

Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the Type Approval documentation and that this is still used as basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other conditions

Signboards according to the Rules Pt.4, Ch.3, Sec.1, C 406

Flexible hoses with couplings to be type approved by DNV.

Engine safety, control and monitoring systems, including sensors and actuators are not covered by this type approval certificate. Documentation for engine safety, control including speed governing and monitoring systems shall be submitted for approval according to Pt.4 Ch.9 Sec.1 Table C2 and/or as listed in relevant type approval certificates.

Electric cables and cabling are not covered by this approval and must be verified to comply with the requirement of DNV Rules for Ships/ High, Speed Light Craft and Naval Surface Craft Pt.4 Ch.8 - Electrical Installation.

Prime mover for emergency power supply, see Rules Pt.4, Ch.3, Sec.1 A101 regarding requirements to monitoring.

High pressure fuel oil piping to be double walled with leakage alarm.

Oil pan according to drawing Nos.: 0223-4520 or 0223-04522 to be used on engine for emergency duty.

DNV product certificate is not required.

The approval does not include driven member.

END OF CERTIFICATE