

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Diesel Engine

with type designations(s)
C175

Issued to

Caterpillar, Inc.
IL Peoria, United States

is found to comply with

DNV GL Rules for classification, Ships - Pt.4, Ch.3, Sec.1, Reciprocating Internal Combustion Engines, DNV GL Offshore Standard, DNVGL-OS-D101, Marine and machinery systems and equipment

Application:

propulsion, multi engine plant / auxiliary / emergency

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL

This Certificate is valid until **1st June, 2021**

Issued at **Hamburg** on **2nd June, 2016**

DNV GL local station: New York

for **DNV GL**

Approval Engineer: Ralph Michael

Frank Lutz
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.

Job Id: **262.1-006953-5**
Certificate No: **TAM000008U**

Product description

four stroke, v-engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, pulsating pressure charging system, direct injection, injection operation electronically controlled, valve operation by cams, liquid fuel

Cylinder bore: 175 mm
Piston stroke: 220 mm

Additional place of production

not applicable

Application / Limitation

Rated power [kW/cyl.]	175	151.13	135.5	120.63
Rated speed [rpm]	1800	1500	1600	1200
Mean effective pressure [bar]	22.05	22.85	19.2	22.8
Max. firing pressure [bar]				
Definition	cont.	cont.	cont.	cont.

Type Approval documentation

08-183120, 12-125269, 13-042637, 14-094429, 262.1-006953-4

Tests carried out

Documentation:

Test report titel Caterpillar C175 Petro Engine - Marine Society Type Approval Test
Test report reference 262.1-006953-4, 2016-03-21
Place of test Automotiv Robotics Proving Labs Cell 5
Date of test 2016-02-10 until 2016-02-14

Test engine:

Model C175
Serial no. M6A01008
No. of cylinders 16
Power [kW/cyl.] 175
Speed [rpm] 1800

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, DNV GL shall perform a Periodical Assessment every second year and before the expiry date of this certificate.

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.

In case 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.



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Other conditions

1. Engine safety, control and monitoring systems, including cables, 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 DNV GL Rule Pt.4 Ch.9 Sec.1/ Item 1
2. Exhaust gas turbochargers are not covered by this type approval certificate.
Documentation shall be submitted for approval according to DNV GL Rule Pt.4 Ch.3 Sec.1/ Item 11
3. The flexible hoses with couplings in piping containing flammable liquids shall be DNV GL approved according to DNV GL Rule Pt.4 Ch.6 Sec.9/ Item 4-4.1.3

END OF CERTIFICATE