



Certificate no.:
TAM00001DJ

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Diesel Engine

with type designation(s)
RT-flex72R

issued to
Wärtsilä Services Switzerland AG
Frauenfeld, TG, Switzerland

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.3 Sec.1 Reciprocating internal combustion engines

Application:
propulsion

Issued at **Hamburg** on **2024-09-18**

This Certificate is valid until **2029-09-17**.

DNV local unit: **Augsburg**

for **DNV**

Approval Engineer: **Sven Neddenien**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2023-09

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Product description

Converted engine from RT-flex96C-B to RT-flex72R

two stroke, in-line engine, reversible, crosshead, with supercharging, with charge air cooling, constant-pressure charging system, valve operation electronically controlled

MDO, HFO, direct injection, injection operation electronically controlled

Following integrated sub-systems are approved to be part of the engine:

- Engine control system, WECS 9520, type approval TAA00001M7

Cylinder bore [mm]	720
Piston stroke [mm]	2500
No. of cylinders	12, 14

Application/Limitation

Rated power [kW/cyl.]	3086
Rated speed [rpm]	89
Mean effective pressure [bar]	21 20.5
Max. firing pressure [bar]	200

Additional place of production

not applicable

Type Approval documentation

Tests carried out

2023-12-26, MS "MSC RIKKU", Zhoushan Huafeng Shipyard, Zhoushan, China, sea trial, initial type approval
test engine 14RT-flex72B, serial no. AA2855, 1886 kW/cyl at 70.5 rpm
DNV reference 262.1-040765-1

Marking of product

The product is to be marked with the manufacturer's name or trademark, the engine model designation, the engine serial no. and the output rating (kW at rpm).

Periodical assessment

Meetings on regularly basis and at least every second year with the Type Approval applicant (hereof: the Engine Designer) shall be arranged with the objective to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued, and to keep DNV updated with regard to:

- The latest development status and design as covered by the Type Approval certificate.
 - Damages and failures of products certified by DNV leading to break down or other malfunctions in service.
- The causes and reasons for the failure and results from investigations are to be made available to DNV upon request. Failure to inform DNV may lead to suspension of this Type Approval certificate.

In cases where the Type Approved design is manufactured at other companies, DNV shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors.

Other conditions

Documentation for engine safety, control (including speed governing), and monitoring systems shall be submitted for approval according to DNV Rules Ships Pt.4 Ch.9 Sec.1 table 5 and/or as listed in relevant Type Approval certificate.

END OF CERTIFICATE