

## TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAM000013B****This is to certify:****That the Diesel Engine**with type designations  
**6N165L-UW/-SW/-EW**

Issued to

**Yanmar Co., Ltd.**  
**Amagasaki 28, Japan**

is found to comply with

**DNV GL Rules for classification, Ships - DNVGL-RU-SHIP-Pt4 Ch3 Sec1, Reciprocating Internal Combustion Engines****Application :**

Auxiliary

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

This Certificate is valid until **2024-06-30**.Issued at **Høvik** on **2019-07-01**DNV GL local station: **KOBE**for **DNV GL**Approval Engineer: **Dag Harald Williksen**

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**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.

Job Id: **262.1-001108-4**  
Certificate No: **TAM000013B**

## Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging

|                    |     |
|--------------------|-----|
| Cylinder bore [mm] | 165 |
| Piston stroke [mm] | 232 |
| No. of cylinders   | 6   |

## Application/Limitation

|                               |       |      |      |      |      |      |      |      |
|-------------------------------|-------|------|------|------|------|------|------|------|
| Model                         | -UW   | -UW  | -SW  | -SW  | -SW  | -EW  | -EW  | -EW  |
| Rated power [kW/cyl.]         | 353   | 441  | 353  | 397  | 485  | 397  | 441  | 530  |
| Rated speed [rpm]             | 1000  | 1200 | 900  | 1000 | 1200 | 900  | 1000 | 1200 |
| Mean effective pressure [bar] | 14.23 | 14.8 | 15.8 | 16   | 16.3 | 17.8 | 17.8 | 17.8 |
| Max. firing pressure [bar]    | 147   | 147  | 147  | 147  | 147  | 147  | 147  | 147  |

## Type Approval documentation

### Tests carried out

Documentation:

|                   |                             |
|-------------------|-----------------------------|
| Test report title | Type Approval of 6N165      |
| Place of test     | Amagasaki / Japan           |
| Date of test      | 1994-04-05 until 1994-04-06 |

Test engine:

|                  |           |
|------------------|-----------|
| Model            | 6N165L-EN |
| Serial no.       | 5394FJC   |
| No. of cylinders | 6         |

## Marking of product

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

## Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

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.

## Other Conditions

Flexible hoses with couplings to be type approved by DNV GL.

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 the rules Pt.4 Ch.9 Sec.1 Table 5 - Documentation requirements.

Electric cables and cabling are not covered by this approval and must be verified to comply to the rules Pt.4 Ch.8 - Electrical Installation.

END OF CERTIFICATE