



Certificate No:
TAM00001BJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Outboard Engine

with type designation(s)
Mercury/Mariner 60

Issued to

Mercury Marine - Division of Brunswick
Fond Du Lac, WI, USA

is found to comply with
SOLAS 74 as amended, Regulation III/4, III/34 & X/3 and LSA Code
Transport Canada Life Saving Equipment Regulations, TP14475 and TP14612

Application :

outboard propulsion engines for rescue boats and fast rescue boats.

Issued at **Høvik** on **2023-08-17**

This Certificate is valid until **2028-08-16**.

for **DNV**

DNV local unit: **Houston Offshore Services**

Approval Engineer: **Dag Harald Williksen**

Olaf Drews
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.

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.



Product description

4-cylinder, 4-stroke, water cooled, spark ignited, gasoline fuelled outboard engine with electronic controlled fuel injection (EFI)

Engine model	Mercury/Mariner 60
Rating, [kW]	44,1
Corresponding speed, [rpm]	6000

Place of Production

Mercury Marine, Suzhou, China, Plant 58

Application/Limitation

The engines are approved for use as propulsion engines for:

- Rescue boats and fast rescue boats

To enable the engine to comply with the LSA Code requirements for fast rescue boats, the engine must be equipped with a "post immersion restart system" (PIRS). The two systems approved for this purpose are the E.P. Barrus PIRS and E.P. Barrus Fast PIRS - systems, both manufactured by E. P. Barrus Ltd., Oxfordshire, UK.

This certificate covers the design of the outboard engine. Owner is responsible to cover installation-specific Canadian requirements referred to in the Life Saving Equipment Regulations and TP14475E.

Type Approval documentation

Reference to MED-B approval folder MEDB0000821/344.1-012187

Technical File for 0,995L 4-cylinder engine, 40, 50 and 60Hp

8M0160118, eng Operation and maintenance manuals in English

8M0169675, fra Operation and maintenance manuals in French

Applicable Mercury outboard brochures

Tests carried out

Passed the following tests for rescue boats propulsion and fast rescue boats propulsion as follows:

- Visual inspection, LSA Code 1.2, 4.4.6; MSC.81(70) 1 / 7.7
- Power test, LSA Code 5.1.1.8; MSC.81(70) 1 / 7.7.2 - 7.7.3
- Water drench test, LSA Code 5.1.1.8; MSC.81(70) 1 / 7.7.4
- Hot start test, LSA Code 5.1.1.8; MSC.81(70) 1 / 7.7.5
- Manual start test, LSA Code 5.1.1.8; MSC.81(70) 1 / 7.7.6 - 7.7.7
- Cold start test, LSA Code 4.4.6.2; MSC.81(70) 1 / 7.7.8 - 7.7.9
- Engine-out-of-water test, LSA Code 4.4.6.2; MSC.81(70) 1 / 7.7.10
- Extra test for outboard engine for fast rescue boats, MSC/Circ. 809, 4.1.8

Lifeboat/ rescue boats tests were carried out on the 2012-04-25/26 at Brunswick EMEAs premises in Verviers, Belgium and witnessed by personal from DNV Antwerp office, engine type tested 60 Hp SeaPro, model 60PT4S, serial no 0F578555, DNV report ANT12-1240-5.

Inversion test for fast rescue boats were carried out on the 2020-02-11 at Barrus Ltd., Bicester, Oxfordshire, UK and witnessed by personal from DNV UK office, engine type tested 60 Hp, model 7F60453BZ, serial no 1C583325, DNV report N141Z9M9.

Marking of product

The product is to be indelibly marked with name, address of manufacturer and type designation.

Periodical assessment

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>.

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

END OF CERTIFICATE