TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MERB0001N2B
Revision no.:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

that the **Lifeboat / rescue boat propulsion engine**

with type designation(s)
S30 ENT M23

issued to
Frydenbø Forward AS
Hauglandshella, **Norway**

is found to comply with the Regulation **(UK) MSN 1874 Amendment 10** for
Item no. **UK/1.36** (Row **2 of 2**)
according to the following requirements:
SOLAS 74 Reg. III/34, IMO Res. MSC.48(66)-(LSA Code) IV, IMO Res. MSC.48(66)-(LSA Code) V, IMO MSC.1/Circ.1630/Rev.2, SOLAS 74 Reg. III/4, SOLAS 74 Reg. X/3

Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2025-02-21**

Expiry date: **2029-12-08**

DNV local unit:
Bergen

Approval Engineer:
Dag Harald Williksen

Approved Body No:: 0097

for **DNV UK Ltd.**

Christine Mydlak-Röder
MER Service Responsible

Maritime & Coastguard Agency
UK Approved Body Authorised by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.
During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.
"The Mark of Conformity" may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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 USD 300 000.

Product description
Four stroke diesel engine with reduction gear.

Cylinder bore: 95,5 mm
Piston stroke: 104 mm
No. of cylinders: 4 in-line

Please see Appendix: Product Description

Application/Limitation
The engine model is approved for use in rescue boats and self-rightening lifeboats.

Type Examination documentation

Tests carried out
Passed the tests required in IMO Resolution A.689 (17) as amended by IMO Resolution MSC.81(70) with reference to MSC.1/Circ.1630 for lifeboat/rescue boat propulsion inboard engine as follows:

- 4.3.2.3 Cold start test, LSA Code 4.4.6.2; MSC.81(70) 1 /6.10.2 - 6.10.4
- 4.3.2.4 Engine-out-of-water test, LSA Code 4.4.6.3; MSC 81(70) 1/6.10.5
- 4.3.2.5 Submerged engine test, LSA Code 4.4.6.4; MSC.81(70) 1 /6.10.6
- 4.3.2.6 Engine inversion test, LSA Code 4.6.4.2; MSC.81(70) 1 /6.14.6 - 6.14.8

4.3.2.3, 4.3.2.4 and 4.3.2.5 were carried out by engine S30 ENT M23, serial no 4605420, on the 2024-07-05.
4.3.2.6 was carried out by engine S30 ENT M23, serial no 4605420, on the 2024-11-15.

Marking of product
The product is to be indelibly marked with name, address of manufacturer and type designation. The Mark of Conformity can be affixed when the conditions on page 1 have been met.

APPENDIX
Product Description

Certificate no.:
MERB0001N2B
Revision no.:
0

Product description
Four stroke diesel engine with reduction gear.

Cylinder bore: 95,5 mm
Piston stroke: 104 mm
No. of cylinders: 4 in-line

	Rating A	Rating B	Rating C	GEARBOX/STERN DRIVE*
Power, [kw]	169	129	85	ZF 45 A, 45 C, 45 I, 63 C, 68, 68 A, 68 IV, 220 & 220 A Mercruiser Bravo 1, 2 & 3
Speed, [rpm]	4000	3500	3500	

** Engine rating not to exceed gear/stern drive rating.*