



DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2002/75/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-B-2294

This Certificate consists of 3 pages

This is to certify that the product
Lifeboat/rescue boat propulsion engine


with the type designations
L2.093LB, L3.139LB, L4.186LB, L4.186T LB

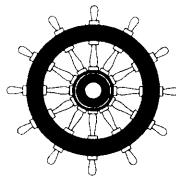
Manufactured by
Sabb Motor AS
BERGEN, Norway

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/1.36-1.37 and Annex B, Module B in the Directive and as applicable
SOLAS 74 Regulation III/4 & III/34 and LSA Code.

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


Place and date
Høvik, 2004-03-30
for DET NORSKE VERITAS AS


Henning B. Karlsen
Manager, MTPNO370
Department Systems & Components



Notified Body No. 0575

This Certificate is valid until
2009-06-30

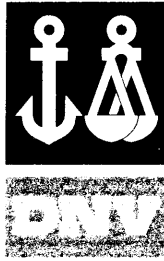

Hans-Kristian Eriksen
Surveyor

DNV local office:
DNV Bergen

Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: MED-B-2294
Case No.: EC-LE-2
File No.: A.1/1.36
and 1.37

Product description

Four stroke diesel engine with reduction gear

Cylinder bore : 86 mm

Piston stroke : 80 mm

No. of cylinders : 2,3 and 4

Engine Model	Rating (kW)	Engine speed (RPM)	Gearbox (Hurth)
L2.093LB	14.2	3000	HBW 100
L3.139LB	21.6	3000	HBW 125
L4.186LB	29	3000	HBW 125
L4.186T LB	40.2	3000	HBW 250

Electric starter : Nippondenso (2 kW)

Applications/Limitations

The engine models are approved for use in life/rescue boats

Type Approval documentation

The following drawings and documentation :

- 988108 General Arrangement Dwg. of L2.093LB with Hurth HBW 100
- 988363 General Arrangement Dwg. of L3.139LB with Hurth HBW 125
- 988365 General Arrangement Dwg. of L3.139LB with Hurth HBW 125 + emergency spring start
- 988369 General Arrangement Dwg. of L4.186LB with Hurth HBW 125
- 988379 General Arrangement Dwg. of L4.186T LB with Hurth HBW 250
- Form 977.395 Parts list (Marinizing parts)
- Form 977.396 Parts list (Original parts)
- Form 977.371 Operators handbook L2.086LB, L3.139LB, L4.186LB
- Form 977.602 Operators handbook L4.186TGR-LB

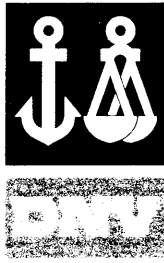
Tests carried out

Test report for L3.139 LB dated 1989-02-15 (stamped by DNV Bergen 1989-02-22), the test is considered valid also for engine models L2.093LB and the L4.186LB

Test report for L4.184 GR-LBT dated 1997-09-19 (stamped by DNV Bergen same date)

Cold start test (-15 deg. C) for L2.093LB dated 1990-01-23

Cold start test (-15 deg. C) for L4.186LB dated 1990-01-09




Cert. No.: MED-B-2294
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and 1.37

Marking of product

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

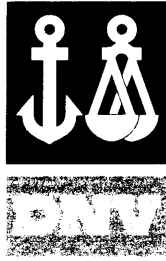
Mark of conformity

The manufacturer is allowed to affix the Mark of Conformity  according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

- Module D: The quality system for production and testing shall be approved by the Notified Body.
- Module E: The quality system for inspection and testing shall be approved by the Notified Body.
- Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

END OF CERTIFICATE





DET NORSKE VERITAS

QS - CERTIFICATE OF ASSESSMENT - EC

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2002/75/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-D-481

This Certificate consists of 2 pages

This is to certify that the Quality System for the product
Lifeboat/rescue boat propulsion engine
with product designation(s) as specified in the Appendix to this certificate

Manufactured by

Sabb Motor AS
BERGEN, Norway

is found to comply with the requirements applicable to it.

The quality system for the product, defined in Annex A.1, Item No. A.1/1.36 has been assessed with respect to the procedure of conformity assessment described in Annex B, Module D in the directive.

Limitations:

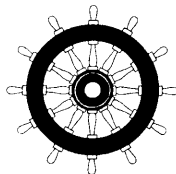
Modifications made to the Quality System shall immediately be reported to Det Norske Veritas AS in order to examine whether this Certificate remains valid. Annual periodical audits will be held to verify the validity of the certificate.

Place and date

Høvik, 2004-04-01

for DET NORSKE VERITAS AS

H/ Henning B. Karlsen
Manager, MTPNO370
Department Systems & Components



Notified Body No.: 0575

DNV local office:
DNV Bergen

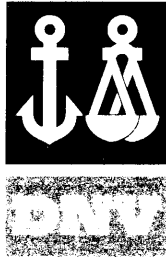
This Certificate is valid until

2009-06-30

Hans-Kristian Eriksen
Surveyor

Notice: The certificate is subject to terms and conditions, if any, overleaf. Any significant changes in design or construction of the product, the quality system or amendments to the Directive or Standards referenced above, may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: MED-D-481
Case No.: EC-LE-2
File No.: A.1/1.36
and 1.37

APPENDIX, REV. NO. 0

QS - Certificate of Assessment - EC, Certificate No. MED-D-481

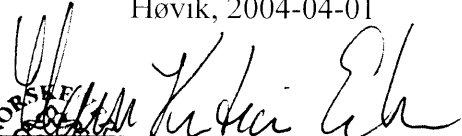
<i>Product designation</i>	<i>EC Type-Examination Cert. No.</i>	<i>DNV Case no.:</i>	<i>DNV QS Assessment Report dated</i>
L2.093LB, L3.193LB, L4.186LB, L4.186T LB	MED-B-2294	EC-LE-2	99-05-04
SABB Iveco Aifo 8045 M08, 8065 M12, 8061 SRM25, 8061 SRM33	MED-B-1099	EC-LE-2	99-05-04

The manufacturer complies with the Council Directive 96/98/EC on Marine Equipment and is allowed to affix the Mark of Conformity followed by the DNV identification number 0575 and the two last digits of the number of the year in which the product is produced.

Example:  0575/03

The manufacturer shall issue a Declaration of Conformity for each product with reference to the EC Type-Examination Certificate and this QS – Certificate of Assessment – EC.

Place and date
Høvik, 2004-04-01


Hans-Kristian Eriksen
Surveyor

