



## EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that :

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), specified as a "notified body" under the terms of The Merchant Shipping (Marine Equipment) Regulations S.I. 1999 No. 1957, did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Life Saving Appliance requirements of Marine Equipment Directive (MED) 96/98/EC as modified by Commission Directives 98/85/EC, 2001/53/EC, 2002/75/EC, 2002/84/EC, 2008/67/EC, 2009/26/EC, 2010/68/EU, 2011/75/EU, 2012/32/EU, 2013/52/EU and 2014/93/EU subject to any conditions in the Design Appraisal Document attached hereto.

<b>Manufacturer</b>	Zodiac Hurricane Technologies Inc.
<b>Address</b>	7830 Vantage Way Delta, British Columbia, V4G 1A7 Canada
<b>Annex A1 Item</b>	A.1/1.20 - Fast Rescue Boat - (C) Rigid Inflated
<b>Product Type</b>	RIGID/INFLATED FAST RESCUE BOATS
<b>Product Description</b>	6 Persons davit launched rigid/inflated fast rescue boat - Type "H638 DJ & H638 IO"
<b>Specified Standard</b>	IMO Resolution MSC.81 (70) Part 1, as amended by MSC.226 (82), MSC.274 (85) MSC.323 (89) & MSC.321 (89) IMO MSC/Circ. 1006 ISO 15372:2000

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

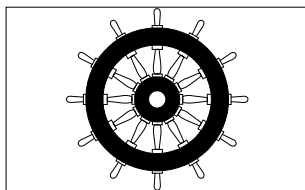
Date of issue      15 October 2015      Expiry date      14 October 2020

Certificate No.      MED 1550240      Signed

Sheet No      1 of 6      Name      N. Ramos  
For and on behalf of Lloyd's Register Verification  
LRV EC Distinguishing No. 0038

**Note:**

This certificate is not valid for equipment; the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.



0038/yy

Subject to compliance with the conditions in the attached Design Appraisal Document (schedule), which forms part of this certificate, and those of Articles 10.1(i) and 11 of the Directive, the Manufacturer is allowed to affix the "Mark of Conformity" to the Product described herein.  
yy      Last two digits of year mark affixed.

**This certificate is issued under the authority of the MCA.**

Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK.  
A subsidiary of Lloyd's Register Group Limited.



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## Lloyd's Register Verification Limited

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### DESIGN APPRAISAL DOCUMENT

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#### ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1550240

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

#### EXAMINED DOCUMENTATION

H638 SOLAS Fast Rescue Boat, Technical Manual No. MB10245, dated 2 September 2015.

<u>Drawing No.</u>	<u>Rev. No</u>	<u>Title</u>	<u>Date</u>
S638H-2012 (#2)	1	General Arrangement - IO	09/11/2015
S638H-2012 (#3)	1	General arrangement - JET	09/11/2015
S638H-2012 (#4)	1	Console Arrangement	09/11/2015
S638P-2012 (#5)	1	Self-Right System	12/01/2015
S638P-P2012 (#6)	1	Engine/Jet Installation	12/01/2012
S638P-2012 (#7)	1	Engine/Outdrive Installation	12/01/2012
GF6300192 (1A)	1.03	Flotation Foam	28/05/2004
GH6380103 (1A)	1.04	Hull/Deck Construction Materials List	05/04/2006
GH6380103 (3B)	1.02	Typical Hull Construction Section	05/04/2006
ZH638S103E (1B)	1.01	Transom Equipment	28/09/2007
SM638006 (3A)	1.02	Tow and Undertow Arrangement	28/05/2004
ST30425-1 (1A)	1.00	Emergency Tiller - Outdrive	16/09/2010
TC630002-0 (1A)	1.00	Orange Tube Cover	18/10/2005
SM638006 (2A)	1.01	Collar Dressing	25/09/2003
ZH638S6303 (1A)	1.02	Emergency Tiller - Water Jet	28/05/2004
SM638S-2010 (1B)	1.01	Docking Head GA	23/01/2015
SM638021H3-SS	1.00	High Lift Frame	07/07/2015
SM638025H3-SS	1.00	Low Lift Frame	07/09/2015
ZH6382215	1.00	Docking Head Lift Frame	18/09/2014

This Certificate is the renewal of Certificate No MED 1050286/M1.

#### TEST REPORTS

Zodiac Hurricane Technologies Inc., Evaluation and Test Report of Serial No. XDC 63297I304 dated November 2003, witnessed by Lloyd's Register North America Inc., Vancouver Office.

Mooring Out Test Report of "Zodiac Bombard SOLAS Boat 6E" dated August-September 1991, witnessed by Bureau Veritas.

Levelton Consultants Ltd., Laminate Material Test Report Nos. 01A, 01B & 01C dated 3 May 2004.

IMANNA Laboratory Inc. Certification Test Report No. 16471-1, NMMA Slosch test of 182 liter Fuel Tank FT4802, dated 19 May 2004.



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Operational Testing of Serial No. XDC63313J504 dated 20 January 2005, witnessed by Lloyd's Register North America Inc., Vancouver Office.

Overload Test of Serial No. XDC63316L405 dated 9 June 2005, witnessed by Lloyd's Register EMEA, Nantes Office.

Prototype Test Report with Steyr Motor Dated 22 Oct 2007 as witnessed by Lloyd's Register North America Inc.

Operational tests report for the persons inboard powered davit-launched rigid/inflated fast rescue boat - Type: "H638 DJ and H638 IO" dated 22.07.2010 as witnessed by an LR surveyor.

Righting Test report for the persons inboard powered davit-launched rigid/inflated fast rescue boat - Type: "H638 DJ and H638 IO" dated 23.07.2010 as witnessed by a LR surveyor.

Fire Test Report (for the Fire -Retardant material used for the construction of the rescue boat) performed as per MSC/Circular 1006 at EXOVA WARRINGTONFIRE - Doc. No WF190710 dated on 09.03.2010.

Overload Test Report, according to Res. MSC.81 (70) Part.1 sect.7.1.4 as amended, dated 19.10.2011 as witnessed by a LR surveyor.

**CONDITIONS OF CERTIFICATION**

**1. Maximum weights:-**

- Lightweight: 1950 kg
- Fully equipped: 2184 kg
- Complement weight: 495 kg (@ 6 Persons 82.5 kg)
- Recovery weight: 2679 kg
- Fully laden weight: 2679 kg

**Dimension (L x B x D):- 6.70 x 2.59 x 0.37 metres**

**2. Approved engine details:-**

<u>Engine</u>	<u>Manufacturer</u>	<u>Type</u>	<u>Rating (kW)</u>
Volvo D4	AB Volvo Penta	D4-225	165
Volvo D4	AB Volvo Penta	D4-260	191
Volvo D4	AB Volvo Penta	D4-300	221
Volvo D3	AB Volvo Penta	D3-200	141
Volvo D3	AB Volvo Penta	D3-220	155
Steyr	Steyr Motors GmbH	SE236E40	170
Steyr	Steyr Motors GmbH	SE266E40	195
Steyr	Steyr Motors GmbH	SE286E40	205



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**3. Survival Craft Materials:-**

	<u>Type</u>	<u>Manufacturer</u>
Gel Coat	LSFR31-3843M	Valspar Composite
	YG-FR-2031	Ashland Enguard
Resin	K022-CCK-18	Alpha Owens Corning
Chopped Strand Mat:	1oz	-
Woven Roving	18oz	-
Buoyant Material:	MPE15	Manuplas Ltd
	MPE18	Manuplas Ltd
	MPE33	Manuplas Ltd
Proof Fabric for Inflatable Crafts	ORCA 866	PENNEL & FLIPO

**4. Approved hook Release gear details:-**

Manufacturer: H. Henriksen AS  
 Type: HMK 3.5  
 SWL: 3.5 tons

5. This Rescue Boat is automatic-righting using manual initiation
6. This fast rescue boat is approved for use on Ro-Ro Passenger ships in accordance with SOLAS Regulation III/26.3.1
7. The launch and recovery appliance is to be capable of raising the rescue Boat from the water, with 6 persons and equipment at rate of not less than 0.8 m/s
8. The fast rescue boat is provided with a fixed single-point suspension arrangement for launching from a ship at sea and shall be equipped with an approved release mechanism certified for a maximum safe working load (SWL) of not less than the boat's maximum fully laden weight. In addition if the hook provided is different from the one stated on condition No 4; Overload Test in accordance with MSC. 81 (70) Part 1 section 7.1.4 should be performed to the satisfaction of the attending Surveyor, before installation
9. The boat is to be provided with "foul weather recovery strops". Additionally, if necessary for stowage without re-launching, provision is to be made for "hanging-off"
10. Each boat is to be clearly marked at least with the information required by the LSA Code, Regulations 1.2.2.9 and 5.1.3.4. All materials used to mark the inflated rescue boat shall be of a type which is compatible with the boat's coated fabric and approved by the manufacturer
11. For compliance with SOLAS Regulation III/35 and III/36 fully detailed operations and maintenance manual shall be supplied with each rescue boat
12. Equipment items listed on the current version of Annex 1 of the Marine equipment Directive which are supplied with the boat are to be delivered with their own Declaration of Conformity issued by the corresponding manufacturer when delivered to EC flagged vessels
13. The rescue boat is to be marked in blocks capitals of the Roman alphabet with the number of persons it is approved to carry, the name and port of registry of the ship to which the boat belongs; and means of identifying same from above, as required by SOLAS and LSA Code



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14. Alteration/modifications of the Type Approved rescue boat will invalidate the Type Approval Certificates which, in turn, will affect the validity of the related Statutory Certificate (of the vessel on which the rescue boat is installed). In such cases, where the equipment requires alterations/modifications, these are only to be carried out with the agreement/approval of the Flag State Administration (of the vessel on which the rescue boat is installed) on an installation-by-installation basis
15. **Installation on board:** The launching arrangements and installation of the boat are not part of this design appraisal or certificate. All such arrangements are to be to the satisfaction of the attending Surveyors
16. The inflated chamber is to be fitted with a highly visible orange cover with retro reflective markings
17. The hull is to be fitted with a highly visible orange "X" and retro reflective markings
18. If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply
19. Production items are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D) or Product Quality Assurance (Module E) or Product Verification (Module F) of the Marine Equipment Directive
20. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2 and be recorded by the manufacturer in accordance with either the approved Production Quality Assurance system (Module D) or Product Quality Assurance (Module E) or witnessed by the Notified Body (LRV) as required by the Product Verification (Module F) of the Marine Equipment Directive. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
21. Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity"
22. Should a change of Place of Production from that stated below be required i.e. where the stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained



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##### PLACE OF PRODUCTION

Zodiac Hurricane Technologies Inc.  
7830 Vantage Way  
Delta, British Columbia, V4 1A7  
Canada

Zodiac Espanolas S.A.U.  
Rosas (Girona)  
Spain



Fire & Safety  
Lloyd's Register

N. Ramos  
Specialist  
Fire & Safety  
Marine Technology and Engineering Services  
For and on behalf of Lloyd's Register Verification  
**LRV EC Distinguishing No. 0038**