



CERTIFICATE OF TYPE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	Zodiac Hurricane Technologies Inc.
Address	7830 Vantage Way Delta, British Columbia, V4G 1A7 Canada
Product Type	RESCUE BOATS
Product Description	6 persons inboard powered davit-launched rigid/inflated rescue boat - Type: "P561DJ Proluxe"
Specified Standards	SOLAS 74, as amended, Regulations III/4, 34 and X/3 IMO Resolution MSC.48 (66), LSA Code, Regulations I/1.2 and V/5.1 IMO Resolution MSC.97 (73), 2000 HSC Code, Regulation 8.1 IMO Resolution MSC.81 (70), Part 1

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue 8 September 2004

Expiry date 7 September 2009

Certificate No. SAS S040108

Signed

Sheet No 1 of 4

Name

S. Marsh
Surveyor to Lloyd's Register EMEA
A Member of the Lloyd's Register Group

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 Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate.

DESIGN APPRAISAL DOCUMENT

Date 8 September 2004	Quote this reference on all future communications LPA/FSS/SSS/LSA/RA
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS S040108

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

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APPROVAL DOCUMENTATION

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Status</u>	<u>Date</u>
SM561003(1A)	24.10.2003	General arrangement	A	31.08.2004
CC56100(1A)	06.11.2003	Custom cover	A	31.08.2004
SM561003X(1B)	30.10.2003	Battery system schematic	A	31.08.2004
SM561001(3A)	-	Buoyancy foam	RI	31.08.2004
DN561001(1A)	25.04.2002	Deck cover	RI	29.10.2003
SM561001C(1A)	12.04.2002	Console arrangement	RI	29.10.2003
SM561001C(1B)	12.04.2002	Dash arrangement	RI	29.10.2003

Proluxe 560 Diesel/Jet, Technical Manual No. M-B-10182 of, dated 26th November 2003.

TEST REPORTS

Zodiac Hurricane Technologies Inc., Evaluation and Test Report of Serial No. XDC 56027 I304 dated 20-24 November 2003, witnessed by Lloyd's Register North America Inc., Vancouver Office.

Zodiac Hurricane Technologies Inc., letter dated 3rd September 2004 confirming compliance with LSA Code Regulation I/1.2.2.6.

CONDITIONS OF CERTIFICATION

- | | |
|------------------------------------|---------------------------|
| Maximum weights:- | Dimensions:- |
| Lightweight: 1052 kg | 5.69 x 2.49 x 0.75 metres |
| Equipment & fuel weight: 146 kg | |
| Persons weight: 450 kg (6 persons) | |
| Fully laden weight: 1648 kg | |
- Inboard engine and propeller details:-**

Engine manufacturer:	Yanmar Norge AS
Engine type:	4JH3-DTE (91.9 kW @ 3800 rpm)
Propeller type:	Twim disc TDJ085 water jet
Maximum Towing Power:	4.45 kN

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3. **Materials of GRP hull construction:-**

	<i>Type</i>	<i>Manufacturer</i>
Fire-retardant resin:	DION FR 9300	Reichhold, Inc.
Chopped Strand Mat:	M723	Owens Corning
Buoyant Material:	Plastazote LD15/LD18	Zotefoams PLC

Note: Other materials than those specified above could be used for the hull construction subject to acceptance on a case by case basis. Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials such as plastic, rubber, neoprene based compounds or equivalent materials. Provisions shall also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities.

4. **Inflated tube material:** Tissu 544 1470 g/m² tested by Central Laboratory of Zodiac International, Test Report No. ZIT/99/130 dated 13th February 2002.
5. This rescue boat is not approved for use on Ro-Ro Passenger ships in accordance with SOLAS Regulation III/26.3.1.
6. This rescue boat is capable of being righted by manual initiation of an installed righting system comprising an inflatable bag and a compressed air system mounted on an aluminium frame. The air cylinder is to be manufactured and tested to an appropriate recognised international standard and all pressure system shall be periodically inspected in service according to the manufacturer instructions and tested at intervals not exceeding five years and/or to the satisfaction of the Administration.
7. The rescue boat is provided with a central lifting/sling arrangement for launching from a ship at sea. The launching appliance is to be capable of recovering the rescue boat from the water with its full rescue boat complement of 6 persons and equipment at a rate of not less than 0.3m/s.
8. 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".
9. This rescue boat is provided with a fixed VHF radio installation connected to the batteries used to provide power for engine starting, this arrangement being subject to acceptance by the Administration.
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. Detailed instructions for use, maintenance and installation of the vessel complying with SOLAS Regulations III/35 and 36 and also instructions for use and maintenance of all machinery and equipment shall be provided to each purchaser and be available on board.
12. The equipment on board shall be kept in good working order at all times and checked at regular intervals according to the manufacturer's instructions.
13. Water-resistant instructions for starting and operating the engine shall be provided and mounted in a conspicuous place near the engine starting controls. Each marking of control, gage or display shall be permanent and weatherproof.

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14. Batteries shall be provided with casings which form a watertight enclosure around the bottom and sides and having a tight fitting top which provides for necessary gas venting.
15. When delivered to vessels registered in a European Union country or any country that has agreed to apply the Marine Equipment Directive to their flagged vessels, in addition to being supplied with equipment which is type approved to SOLAS, equipment items listed on the current version of Annex 1 of the Marine Equipment Directive are to be delivered with their own Declaration of Conformity issued by the corresponding manufacturer.
16. **Installation onboard:** 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.
17. **Variants of the Approved design:** Where a "P561DJ Proluxe" is proposed to be supplied to a purchaser's specification which requests omission of one or more of the facilities necessary to meet the SOLAS performance requirements referred to above, the purchaser is required to request the Administration to consider issue of an Exemption Certificate to omit such facilities. Only when the exemption has been granted by the Administration may a variant of the approved "P561DJ Proluxe" design be supplied under this certificate.
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 a quality control system which shall be maintained to ensure compliance with SOLAS Regulation III/5.
20. Should a change of Place of Production from that stated below be required, i.e. where the final 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.



Stuart Marsh
Surveyor
Fire & Safety Section
Statutory & Structures Services
London Plan Approval
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).