

GUIDANCE NOTE NO: 10/94

REVISION NO: 12

## Hire & Drive Vessels - Inspection Requirements for Powerboats, less than 7 Metres Propelled by Outboard Motors.

(Vessels less than 7 metres will not be allowed to operate outside gazetted sheltered waters (Guidance Note No: 33/98).

### GENERAL:

This guidance note should be read in conjunction with Northern Territory Marine (Hire and Drive Vessel) Regulations. Information as required by Section 8 of the Regulations is given below.

1. **INITIAL INSPECTION:** A vessel will be required to comply with:

- (a) **BUOYANCY:** Sufficient approved buoyancy foam (solid buoyancy) must be fitted into each vessel to enable it to remain afloat with the weight of the engine, fittings, equipment and maximum load permitted. Air buoyancy is not acceptable.

The quantity of buoyancy material in litres shall be determined by Marine Safety Branch using the following calculation:

$$F = \frac{1000 \times (M_h K + G + 0.25W)}{(1000 - D)} \text{ litres}$$

where:

**F** = Quantity of buoyancy material in litres.

**M<sub>h</sub>** = Weight of the dry hull with all equipment and fittings but without the engine and batteries.

**K** = a factor depending upon the hull material.

**K** = 0.62 for aluminium

**K** = 0.87 for steel

**K** = 0.375 for GRP

**K** = As per ABYC /AS 1799.1 for other materials

**G** = submerged mass of the largest engine + portable fuel tanks + batteries, for which the boat is rated (taken from the table below).

**W** = the maximum load capacity in kilograms.

**Note:** Vessels with  $D > 0.55$  may use:

**W** = (Number Passengers on ABP plate x 90)

**D** = density of the buoyancy material which shall be not less than  $32 \text{ kg/m}^3$

Table for submerged Mass G in Buoyancy calculation

Power (kW)	Power (hp)	Submerged Mass (kg)
up to 3.0	up to 4.4	10
3.0 to 4.0	4 to 5.5	15
4.0 to 7.5	5.5 to 10	30
7.5 to 25.0	10 to 35	50
25.0 to 40.0	35 to 50	75
40.0 to 55.0	50 to 75	90
55.0 to 115.0	75 to 150	110

**Note:** The above are for petrol outboards. Diesel outboards will be considered based on the manufacturer's catalogue.

(b) **Max Load Capacity** - shall be calculated from :-

$$W = 67.5 \times L_{OA} \times \sqrt{B} \times \left(\frac{D}{0.55}\right) \text{kg}$$

**Note:**  $\left(\frac{D}{0.55}\right)$  only to be used when  $D < 0.55\text{m}$

where

**W** = the maximum load capacity in kg

**L<sub>OA</sub>** = the overall length of the vessel measured on the centerline

**B** = the maximum breadth of the vessel.

**D** = depth to lowest point of water entry in m

- i. To calculate the maximum number of persons, the maximum load capacity shall be divided by 90 and the result rounded down to the nearest whole number. Production model vessels which are modified will be considered on a case by case basis e.g. vessels fitted raised seating, canopies/side curtains will be required to show stability compliance to USL CAT T/ AS 1799.1/ABYC requirements.
- ii. If the owner desires to carry a greater number of persons than calculated by the above formula the vessel will be subject to a stability heel test to USL CAT T/ AS 1799.1/ABYC requirements. However the maximum number of persons allowed will not be greater than recommended on any compliance plate fitted by the builder/information provided by builder [leaflets/pamphlets].

(c) The principal dimensions of dinghies and motor boats shall not be less than :

Overall length (L <sub>OA</sub> )	3.4m
Maximum breadth	1.4m

**Note.** Punts will not be allowed outside smooth waters, that is, will not be allowed in partially smooth waters like Darwin Harbour. For details of sheltered waters, smooth and partially smooth waters, refer to **Guidance Note: [No. 33/98]**. Additionally, Punts will be subjected to simple stability checks as decided by the surveyor.

(d) The total maximum power shall be determined by the Marine Safety Branch and must not exceed :-

i. For vessels with no remote steering, hand tiller arrangement:

$$\text{Maximum Power} = (6.5 \times L_{OA} \times \text{Transom width} - 20) \text{ kW}$$

ii. For vessels with side/centre console:

$$\text{Maximum Power} = (16 \times L_{OA} \times \text{Transom width} - 67) \text{ kW}$$

**Note: Power capacity increases to next multiple of 5**

(e) The bow shall be decked in for a length of not less than 400mm measured from the forward end of the vessel.

(f) Rowlocks with rowlock pipes or plates shall be fitted, if oars are carried.

(g) Minimum height of railings/gunwhale shall be 700mm from standing position/deck. Decks with less than 700mm railings/gunwhale may be permitted with the condition **“No person allowed on raised deck when vessel underway”**, and/or **“No persons to be standing on main deck when vessel underway”**, as applicable.

(h) Reboarding arrangements shall be provided for persons to enter the vessel from the water without assistance from anyone onboard, e.g. Ladder

(i) Where the vessel up to 6m length has a permit to operate in partially smooth waters the following equipment shall be carried :

- (i) 1 Pair of oars or buoyant paddles (applies only for vessels less than 5metres).
- (ii) 1 Anchor of 13lbs [6 kg] attached to 3metres of 6 mm diameter chain connected to 50 metres of 8mm rope.
- (iii) Bilge pump of minimum 4000 litres/hour capacity
- (iv) 1 Waterproof torch
- (v) 1 fire extinguisher of 10B capacity for vessels up to 5metres (See **Note 1:**) and 20B for vessels greater than 5metres
- (vi) 1 Lifejacket or PFD to AS 1512 for each person onboard
- (vii) 2 Orange smoke signals and 2 Red hand held flares
- (viii) Freshwater - 1 litre per person
- (ix) 1 'V' Sheet
- (x) Approved navigation lights for operation outside daylight hours
- (xi) An EPIRB is required for vessels which operate in “All Inland” **and/or** “All sheltered waters {smooth & partially smooth waters}”. Note: Boats operating in “one river system and within a limited area “, may not be required to carry EPIRB.

**Note 1:** An open vessel of less than 5 metre, not fitted with batteries and having no underdeck spaces shall not be required to carry fire extinguisher.

- (j) For smooth waters operations (inland waters) a vessel may carry a reef anchor of 7 lbs attached to 3 metres of 6mm diameter chain connected to 20 metres of 8mm rope and may be required to carry all or part of the safety equipment listed in paragraph (h) above depending on the type and size of vessel and area of operation
- (k) Under deck fuel tanks must conform to USL Code requirements including tank within tank etc. for details see Guidance Note No. 1/89.

**Note:** The above are the minimum requirements; **an inspector may require additional equipment to be carried.**

## **(I) PERIODIC INSPECTION PROCEDURES**

### **Inspectors shall:**

- i. Check general condition of the vessel;
- ii. Safety equipment in particular, condition of lifejackets/PFD ;
- iii. Flares and fire extinguishers are 'in date';
- iv. Ensure buoyancy is in place and in good condition;
- v. The general condition of the vessel and safety equipment must be satisfactory, with no damage to the structure of the vessel. Vessels will be checked to ensure that they have not been modified and that there are no sharp edges; and/or cracking of welds in aluminium craft.
- vi. Hire and Drive Register will be inspected;
- vii. The vessel identification number will also be verified and checked to see that it is clearly visible;
- viii. Check any markings and measurements;
- ix. Inspect fuel tank, fuel lines and connections and ensure they are in serviceable condition;
- x. Check motor mounting arrangement;
- xi. Oars, if any, should be attached to the vessel;
- xii. Inspect drain plug;
- xiii. Inspect Stowage and connection of battery for safety;
- xiv. As part of an inspection the vessel **may** need to be taken for a trial run with full load (passenger and loose gear).

Signed by: Sri Srinivas  
Date Issued: 9<sup>th</sup> July 2009

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### **For further information contact Marine Safety Branch:**

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