



DECEMBER 2021

## **The Specifications**

**These Specifications are part of the Competition Rules**

The Specifications of the Power Dinghy Racing Club Incorporated

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## **00 ADVENTURE CLASS**

### **05 Registration**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom;
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width;
- Each digit of the registration number shall be vertical and shall have a 10mm white surround.
- Registration sticker fixed to the port side next to the registration number.
- The identification plate (HIN plate) shall be affixed to the port (left) side of the transom on the inside of the boat.

### **10 Identification Numbers**

11 Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm;
- Be non-slanting and naturally spaced;
- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font;
- Be made from black Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent;
- Be on a painted white (cmyk0000) background or white (cmyk0000) Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent;
- Be on a minimum of 400mm wide by 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of white showing beyond each number;
- Not be displayed on a board on the craft;
- Be clearly visible on both sides of the craft with the entire number on a flat, vertical surface of the craft forward of amidships;
- Not be wrap around numbers;
- Be within 75 to 105 degrees from a flat bottom which is no more than 60mm either way of vertical over a 210mm height.

### **20 Dimensions**

21 The minimum length of a boat shall be 2450mm.

22 There is no minimum width of a boat.

### **25 Design and Construction**

26 The boat must be mass produced, generally available for sale to the public, and not custom made.

27 The boat may be constructed of any material.

28 The boat shall be of a safe design and construction.

29 Buoyancy may be added to a boat to ensure that it complies with Specification 700.

### **30 Transom**

31 The transom may be strengthened but shall otherwise be unmodified

32 The transom height must be fixed.

33 The anti-cavitation plate of the motor must be level with the bottom of the boat or as low as possible.

### **35 Tow Point**

36 Each craft shall have a tow point securely attached in a central fixed position that shall be:

- no more than 150mm to the rear of the furthestmost forward point of the bow.
- of a solid structure not less than 5mm and not more than 10mm in thickness.
- shaped in a closed half circle with not less than 30mm and not more than 60mm internal diameter.
- capable of supporting the craft under tow when it is fully immersed in water.

### **40 Motors**

41 The combined power of the total number of motors on the craft shall not exceed 15hp. (up to maximum of 300cc Engine capacity)

42 Specifications 900 – 979 apply.

### **50 Motor Restraint**

51 Each craft shall have a restraint that shall prevent the motor from tilting above a horizontal plane. See Specification 980.

### **60 Propellers**

61 Any manufacturer-supplied or aftermarket aluminium propellers for that make and model may be used.

62 Propellers must be of 'through hub exhaust' design and not manufactured for racing.

63 Propellers may be modified in any way provided the 'through hub exhaust' design feature is maintained.

64 Only three blade propellers may be used.

## **70 Same Craft to be Used**

- 71 The same craft with the exception of allowable replacement parts shall be used throughout an event.

## **80 – Allowable Modifications**

- 81 Only modifications listed below are allowed. If it is not on the list it cannot be modified.

- Straps for paddles, fuel tanks and equipment bags.
- Scupper deck drain or similar
- Modification of outboard motor as per Specification 950 -979.
- Removal of rowlock holders and other protrusions.
- Padding/protection/covering as and where required.
- Strengthening and repairs may be made while not affecting the overall original design characteristics of the craft.

## **100 STANDARD CLASS**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width.
- Each digit of the registration number shall be vertical and shall have a 10mm white surround.
- Registration sticker fixed to the port side next to the registration number.
- The identification plate (HIN plate) shall be affixed to the port (left) side of the transom on the inside of the boat.

## **110 IDENTIFICATION NUMBERS**

Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm
- Be non-slanting and naturally spaced
- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font
- Be made from black Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
- Be on a painted white (cmyk0000) background or white (cmyk0000) Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent
- Be on a minimum of 400mm wide by 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of white showing beyond each number
- Not be displayed on a board on the craft
- Be clearly visible on both sides of the craft with the entire number on a flat vertical surface of the craft forward of amidships  
**(NO WRAP AROUND NUMBERS)**
- Apply to each craft built after 09<sup>th</sup> July 2003,

- Except for inflatable's
- For the purpose is h) vertical shall mean within 15 degrees of the vertical position, i.e. Within 75 to 105 degrees from a flat bottom (60mm either way of vertical over a 210mm height)

120 **DIMENSIONS**

The minimum length of a boat shall be 2450mm. There is no minimum width of a boat.

125 **COMBINED POWER OF MOTORS**

The combined power of the total number of motors on the craft shall not exceed the power restriction of the class in which it is entered in any event.

130 **RESTRICTION**

The design shall be of a safe design and construction.

135 **PROPELLORS**

10hp standard class motors can only be fitted with aluminium propellers as supplied by the manufacturer for that make and model. After market brands may be used but restricted to aluminium propellers supplied for that make and model motors. These propellers must be through hub exhaust design and not manufactured for racing. They may be modified in anyway, maintaining the through hub exhaust feature. Only three (3) blade designs may be used.

140 **SAME CRAFT TO BE USED**

The same craft with the exception of allowable replacement parts shall be used throughout an event.

145 **TRANSOM**

The transom slide height may be adjusted by any means.

155 **MOTOR RESTRAINT**

Each craft shall have a restraint that shall prevent the motor from tilting above a horizontal plane. See specification 980.

160 **TOW POINT**

Each boat shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthest forward point of the bow. The tow point shall be of a solid structure not less than 5mm and not more than 10mm in thickness. It shall be shaped in a closed half circle with not less than 30mm and not more than 60mm internal diameter. It shall be capable of supporting the craft under tow when it is fully immersed in water.

161 **STANDARD CLASS MOTORS**

: Tohatsu and Nissan Engines C and D shall not be used.

Note (All motor's relevant to the rule proposed regarding C and D motors including the 22mm carby shall not be used.)

200 **SUPER STANDARD CLASS**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width.
- Each digit of the registration number shall be vertical and shall have a 10mm white surround.
- Registration sticker fixed to the port side next to the registration number.
- The identification plate (**HIN plate**) shall be affixed to the port (left) side of the transom on the inside of the boat.

210 **IDENTIFICATION NUMBERS**

Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm
- Be non-slanting and naturally spaced
- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font
- Be made from black Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
- Be on a painted light sky blue(cmyk461802) background or light sky blue (cmyk461802) Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent
- Be on a minimum of 400mm wide by 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of Skye Blue showing beyond each number.
- Not be displayed on a board on the craft
- Be clearly visible on both sides of the craft with the entire number on a flat vertical surface of the craft forward of amidships  
**(NO WRAP AROUND NUMBERS)**
- Apply to each craft built after 09<sup>th</sup> July 2003,  
Except for inflatable's
- For the purpose is h) vertical shall mean within  
15 degrees of the vertical position, i.e. Within 75 to 105 degrees from a flat bottom  
(60mm either way of vertical over a 210mm height)

220 **DIMENSIONS**

The minimum length of a boat shall be 2450mm. There is no minimum width of a boat.

225 **COMBINED POWER OF MOTORS**

The combined power of the total number of motors on the craft shall not exceed the power restriction of the class in which it is entered in any event.

230 **RESTRICTION**

The design shall be of a safe design and construction.

235 **PROPELLORS**

10hp Super Standard class motors can only be fitted with aluminium propellers as supplied by the manufacturer for that make and model. After market brands may be used but restricted to aluminium or stainless steel propellers supplied by Solas for that make and model motors. These propellers must be through hub exhaust design and not manufactured for racing. They may be modified without making larger from original sizes (no welded tips), maintaining the through hub exhaust feature. Only three (3) blade designs may be used. All hub branding on propellers must be maintained.

240 **SAME CRAFT TO BE USED**

The same craft with the exception of allowable replacement parts shall be used throughout an event.

245 **TRANSOM**

The transom slide height may be adjusted by any means.

255 **MOTOR RESTRAINT**

Each craft shall have a restraint that shall prevent the motor from tilting above a horizontal plane. See specification 980.

260 **TOW POINT**

Each boat shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthest forward point of the bow. The tow point shall be of a solid structure not less than 5mm and not more than 10mm in thickness. It shall be shaped

in a closed half circle with not less than 30mm and not more than 60mm internal diameter. It shall be capable of supporting the craft under tow when it is fully immersed in water.

**261 SUPER STANDARD CLASS MOTORS**

: Tohatsu and Nissan Engines C and D shall not be used.

Note (All motor's relevant to the rule proposed regarding C and D motors including the 22mm carby shall not be used.)

**300 SPORTS CLASS**

**305 Registration**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width
- Each digit of the registration number shall be vertical and shall have a 10mm white surround
- Registration sticker fixed to the port side next to the registration number.
- The registration plate (HIN plate) shall be affixed to the port (left) side of the transom inside the boat.

**310 IDENTIFICATION NUMBER**

Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm
- Be non-slanting and naturally spaced
- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font
- Be made from black Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
- Be on a painted yellow (cmyk0126851129) background or yellow (cmyk0126851129) Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent
- Be on a minimum of 400mm wide by 210mm high with 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of yellow showing beyond each number
- Not be displayed on a board on the craft
- Be clearly visible on both sides of the craft with the entire number on a flat vertical surface of the craft forward of amidships (NO WRAP AROUND NUMBERS)
- Apply to each craft built after 09<sup>th</sup> July 2003, Except for inflatable's
- For the purpose is h) vertical shall mean within 15 degrees of the vertical position, i.e. Within 75 to 105 degrees from a flat bottom (60mm either way of vertical over a 210mm height)

**320 DIMENSIONS**

The minimum length of a boat shall be 2450mm. There is no minimum width of a boat.

**325 COMBINED POWER OF MOTORS**

The combined power of the total number of motors on the craft shall not exceed the power restriction of the class in which it is entered in any event.

330 **DESIGN AND CONSTRUCTION**

There shall be no limit on the design or modification of a boat providing it is not of a dangerous or unsafe design.

335 **SAME CRAFT TO BE USED**

The same craft with the exception of allowable replacement parts shall be used throughout an event.

340 **TRANSOM**

The transom height maybe adjusted by any means.

345 **MOTOR RESTRAINT**

Each craft shall have a restraint that shall prevent the motor from tilting above a horizontal plane. See specification 880.

350 **TOW POINT**

Each boat shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthest forward point of the bow. The tow point shall be of a solid structure not less than 5mm and not more than 10mm in thickness. It shall be shaped in a closed half circle with not less than 30mm and not more than 60mm internal diameter. It shall be capable of supporting the craft under tow when it is fully immersed in water.

355 **10HP ALUMINIUM CRAFT**

Craft competing in either 10hp class in a river race may not be constructed primarily of aluminium. Aluminium craft shall be allowed to compete in 10hp class in either a circuit race or distant race.

360 The transom slide height may be adjusted by any means.

361 **SPORTS CLASS MOTORS**

: On Tohatsu D2 model engine (including the Mercury 10hp DT9.9 ) the 22mm Tohatsu Carburettor, as fitted on the C and D models may be Used.

Sports Class competitors wishing to enter all 3 (three) classes in a circuit event are reminded that they would have to use a D2 engine fitted with a 20mm carburettor to enter the standard and super standard class races. Carby checks will be carried out at Scrutineering .

400 **SOLO CLASS**

405 **Registration**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width
- Each digit of the registration number shall be vertical and shall have a 10mm white surround
- The registration plate (registration sticker) shall be affixed to the port (left) side of the transom inside the boat.

410 **IDENTIFICATION NUMBER**

Each boat shall display the identification number that shall:

- Be not less than 225mm x 35mm
- Be painted black on a painted bright canary yellow background or adhesive black "computer cut out" numbers on an adhesive canary yellow background. Adhesive numbers and background shall be made from Fuji CA12 long term vinyl 50 micron or equivalent seven (7) year vinyl



- Be on a yellow background that shall be a minimum of 240mm high by 350mm wide
- Be clearly visible on both sides of the solo craft towards the bow

415 **DESIGN AND CONSTRUCTION**

A solo craft may be made of any material and shall be of safe design and construction.

420 **DIMENSIONS**

421 Minimum length 2450mm.

422 Maximum length 3200mm.

423 No Minimum width.

425 **TRANSOM**

The transom may be capable of being adjusted while craft is underway.

430 **PROPELLORS**

Any propeller may be used.

435 **MOTOR RESTRAINT**

Each solo craft shall have a restraint that shall prevent the outboard motor from tilting above a horizontal plane. See specification 980.

440 **TOW POINT**

Each solo craft shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthest forward point of the bow. The tow point shall be of a solid structure not less than 5mm and not more than 10mm in thickness. It shall be shaped in a closed half circle with not less than 30mm and not more than 60mm internal diameter. It shall be capable of supporting the craft under tow when it is fully immersed in water.

**500 FORMULA 8 / FORMULA 10s**

Each Formula 8 / Formula 10 in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall be not less than 150mm in height and not less than 25mm in width
- Each digit of the registration number shall be vertical and shall have a 10mm white surround
- The identification plate shall be affixed to the port (left) side of the transom on the inside of the Formula 8 / 10.

**510 IDENTIFICATION NUMBER**

Each Formula 8 and Formula 10 shall display the identification number that shall:

- Be not less than 225mm high x 30mm wide
- Be made from black Fuji CA12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
- Be on painted canary yellow background or yellow Fuji CA12 long term adhesive vinyl or Management Committee approved equivalent that shall be a minimum of 250mm high by 310mm wide
- Be clearly visible on both sides of the craft with the entire number positioned on the flat vertical surface of the craft, behind the driver
- Shall not be mounted on a board mounted on the craft

- Be a minimum of 400mm wide and 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of yellow showing beyond each number
- Apply to each craft built after 09<sup>th</sup> July 2003, except for inflatable's
- For the purpose of h "vertical" shall mean within 15 degrees of the vertical position, i.e., within 75 to 105 degrees from a flat bottom (60mm either way of vertical over a 210mm height).

515 **DESIGN**

A Formula 8 / Formula 10 shall conform to the shape produced from the original Power Dinghy Racing Club hull and deck moulds.

520 **HULL AND DECK**

The hull and deck of a Formula 8 / Formula 10 shall be made from general purpose fibreglass and polyester resin.

525 **INTERNAL FRAME**

The internal frame shall be made of 50mm square and 3mm aluminium tubing. The frame supports shall be made of 18mm round and 1.6mm aluminium tubing. The frame and supports shall conform to the original Formula 8 configuration.

530 **STEERING WHEEL**

The steering wheel diameter shall have a minimum diameter of 300mm and a maximum diameter of 350mm.

535 **TRANSOM ANGLE**

The transom angle shall be between ten and fifteen degrees from vertical.

540 **DECK TO HULL**

The join of the deck to the hull shall be covered by a moulded rubber strip or other similar protective covering.

555 **TOW POINT**

Each Formula 8 / Formula 10 shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the further most forward point of the bow. The tow point shall be of a general "U" shape and of dimensions not less than 19mm x 20mm. It shall be capable of supporting the Formula 8 / Formula 10 under tow when it is fully immersed in water.

600 **BATHTUBS 10hp**

605 **Registration**

Each 10hp Bathtub in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom
- Each digit of the registration number shall be black and shall be not less than 150mm in height and not less than 25mm in width
- Each digit of the registration number shall be vertical and shall have a 10mm white surround
- The registration sticker shall be affixed to the port (left) side of the transom on the inside of the Bathtub

610 **IDENTIFICATION NUMBER**

Each bathtub shall display the identification number that shall:

- Be not less than 225mm high x 30mm high
- Be made from black Fuji CA12 long term adhesive vinyl 50 micron or Management Committee approved equivalent

- Be on a painted canary yellow background or Yellow Fuji CA12 long term adhesive vinyl or Management Committee approved
- Be clearly visible on both sides of the bathtub with the entire number positioned on the flat vertical side of the craft forward of amidships (no wrap around numbers)
- Shall not be displayed on a board mounted on the craft

615 **DESIGN**

A bathtub shall conform to the shape of a tub.

625 **FRAME**

The bathtub shall have a minimum length of 1250mm that shall be measured on a level plane from the highest inside point at the front of the tub to the inside of the transom end of the tub. It shall have a minimum width of 508mm that shall be measured on the inside top of the tub.

635 The complete rim of the tub shall be exposed except at the stern.

640 **VISIBILITY**

At least 150mm of the tub on each side elevation shall be visible and unobstructed from the apex of the rim down. Viewed from above at least 75% of the interior of the tub shall be visible and unobstructed.

645 **CONSTRUCTION**

A bathtub shall be of a safe construction and design.

650 **MOTOR RESTRAINT**

Each bathtub shall have a restraint that shall prevent the outboard motor from tilting above a horizontal plane. See specification 980.

655 **TRANSOM**

The transom height is to be fixed with 2 – 8mm bolts with nylock nuts.

660 **TOW POINT**

Each bathtub shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthest forward point of the bow. The tow point shall be of a general U shape and of dimensions not less than 19mm x 20mm. It shall be capable of supporting the bathtub under tow when it is fully immersed in water.

700 **BUOYANCY**

705 **QUANTITY**

The minimum requirement for buoyancy is:

Power Dinghy

& MiniJet 0.2 cubic metres (200,000 cubic centimetres – 7 cubic feet)

Solo Craft .15 cubic metres (150,000 cubic centimetres – 5.2 cubic feet)

Formula 8 & Formula 10 0.085 cubic metres (85,000 cubic centimetres – 3 cubic feet)

710 **POSITIONING**

The buoyancy shall be positioned so the craft (boat and motor) floats in a horizontal plane when immersed in water and is completely filled with water.

715 **TYPE**

Buoyancy may be of the following type:

- Polystyrene or similar
- Polyurethane or similar
- Closed cell foam (divinacell or similar)

- Inner tubes (no more than 20% of total)
- Air tanks (no more than 20% except for inflatables)
- Cork

800 **EQUIPMENT**

805 Personal Flotation Device (PFD)

806 Each craft entered in an event shall have one PFD per competitor that

- a) Bears the stamp of and conforms to Australian Standard AS1512-4758 or has been approved by the relevant government department as PFD type 1, level 150 and 100
- b) Bears the stamp of and conforms to Australian Standard AS1499 or has been approved by the relevant government department as a PFD type2, level 50 .
- c) Has been approved by and appears on a list produced by the Management Committee and Rules Committee

807 PFD'S do not require zips unless original.

808 Mae West style PFD'S are not approved

810 **HELMET**

Each craft entered in an event shall have one helmet per competitor that:

- Conforms with
  - Australian Standard (AS)1698:1988
  - Australian Standard/New Zealand Standard (AS/NZ)1698:2006
  - United Nations Economic Commission for Europe (UN ECE) 22.05
- Has been approved by and appears on a list produced by the Management Committee and Rules Committee
- Provides protection to the forehead, temples, ears, chin and mouth and shall be of a full face design
- Retaining straps shall be fitted with an effective serviceable and easily operated release mechanism

820 **SAFETY ROPE**

821 Each Craft entered into an event (except a circuit race in closed waters) shall have not less than 12 metres of poly or nylon rope in one unbroken length (unless correctly spliced) of not less than eight (8) mm in diameter. The rope shall be stowed towards the bow of the boat so as to not cause a hazard at any time and shall be readily accessible at all times. Natural fibre rope (e.g. manila, sisal, hemp etc.) is not approved.

822 No part of the craft including the method of stowage or attachment of the rope shall prevent the rope being deployed.

825 **PADDLES**

Paddles shall be carried in craft as follows:

<b>CRAFT</b>	<b>RIVER RACE</b>	<b>CIRCUIT RACE</b>
Power Dinghy	Two	None
Solo Craft	One	None
Formula 8	Not Applicable	
Formula 10	Not Applicable	
Bathtub	Not Applicable	
MiniJet	Two	None

827 The paddles shall be of a strong and safe construction. The blade shall be securely and safely attached to the shaft. No part of the paddle shall have sharp edges. Hollow shafted soft plastic paddles are not allowed. The blade surface area shall be 300 square centimetres (not including any portion of the shaft). The shaft length shall be not less than 600mm measured from the top of the shaft to where the blade starts.

830 **FOOTWEAR**

Footwear shall be strong and safe and shall not be thongs or sandals.

835 **SURVIVAL KIT**

If stated in the supplementary regulations each craft entered in an event shall have a survival kit that shall include not less than 400g of high calorific value food (e.g. glucose, chocolate, nuts etc.) and a box of waterproof matches and / or cigarette lighter, one compression bandage, one bandage, 30mls of saline solution (in date), all in one waterproof container.

840 **MAST AND FLAG**

Each craft entered in an ocean event shall have a mast, the top of which shall be a minimum of two (2) metres above the gunwales. It shall be firmly and securely attached to the boat and shall be sufficiently rigid to have no more than one metre of movement at its top. Attached to the top of this mast shall be a flag that is red or orange in colour. The flag may be rectangular or pennant shaped and shall measure not less than 600mm x 400mm.

845 **FLAGS**

Each craft entered in an ocean event shall have two (2) red and two (2) orange flares that shall meet the requirements of the government department responsible for marine safety. The flares shall be stowed so they are easily accessible.

52B **VESSELS TO BE EQUIPED WITH CERTAIN DISTRESS SIGNALS**

- The owner of a vessel must ensure that the vessel, while being navigated outside protected waters, is equipped with the following distress signals:
- Not less than:
  - Two (2) red hand held flares or
  - Two (2) parachute distress rockets

And

- Not less than
  - Two (2) hand held orange smoke signals or
  - One (1) orange smoke canister

850 **SAFETY LANYARD**

A club approved aftermarket kill switch / lanyard maybe used as a replacement to the manufacturer's lanyard. Maximum length fully stretched is to be no more than one (1) metre. Inc rule 950.

855 **CARRYBAG**

A carry bag (if used) shall have a maximum dimension of 250mm x 100mm and only be of a waist bag or money belt type.

860 **REPLACEMENT EQUIPMENT**

The Support Crew should carry the following items of replacement equipment to ensure that the boat meets the requirements of the specifications on each day of an event:

- Relivent replacement stickers to repair / replace identification numbers which have been scratched or abraded to the point of illegibility, as determined by the scrutineer.
- Stick on registration numbers to replace damaged stickers.
- Safety rope that complies with the specifications.
- Survival Kit that complies with the specifications.
- Paddlers that comply with the specifications.

865 **CONDITION OF EQUIPMENT**

All equipment shall be in good order and repair (buckles, straps etc.). Particular attention should be paid to equipment that may be salt or sun damaged.

870 **ACCESSIBILITY**

All equipment in each boat shall be securely stowed and easily accessible as required by regulation 52BA of the NWR.

52BA. Equipment to be maintained in a serviceable condition and readily accessible.

- All items of equipment required to be carried on board any vessel pursuant to regulations 51D, 52, 52A, 52B, 52AA, 52BAB and 52G shall be:
  - Maintained in a serviceable condition and
  - Situated so as to be readily accessible to all persons on board the vessel

900 **OUTBOARD MOTORS**

906 An outboard motor is defined as all parts including the power head, gears, shafts, casings, mounts, covers, handles as supplied by the manufacturer but excluding the propeller. Parts carried in the boat during an event are considered part of the outboard motor for this definition.

907 A power head is defined at the internal combustion engine including the block, head, pistons, carburettor, ignition systems, fuel pump, fuel metering devises, crankshaft, camshaft, stop switch as supplied by the manufacturer.

910 **HORSEPOWER ACCEPTED**

The horsepower of the power head shall be accepted as that designated by the manufacturer for that model.

915 **MODIFICATIONS NOT ALLOWED**

Re-shaping, enlarging, polishing, performance or reliability modifications, except as provided in 955 to any part of the outboard motor shall not be allowed.

920 **STANDARD MANUFACTURERS PARTS**

All parts of the Outboard Motor and all parts replaced shall be standard manufacturers' parts for that power rating that have not been altered, except as provided in 855, and shall meet the specifications for that model and serial number as published in the Technical Specifications of the manual or specified in Competition Rule 930.

921 **Non-standard** Mercury/Tohatsu/Osaka gear box parts may be used :

- 350-64301-0 Drive shaft
- 350-64020-0 Bevel gear
- 350-64010-0 Bevel gear
- 362-64211-0 Propeller shaft
- 362-64030-0 Bevel gear

952 **RACING MOTORS**

Motors specially manufactured or assembled for racing or equipped with racing or speed equipment or modifications shall not be used.

930 **SUPERSEDED PARTS**

Manufacturers' superseded parts may be used provided that the manufacturers' original tuning specifications are not altered by the use of the superseded parts.

935 **RE-TURNING**

The re-turning of a Power head from one power rating to another power rating shall be effected only by the manufactures' recommended conversion kit.

940 **ACCESSORIES**

Accessories listed by the manufacturer for the model and power rating only may be used. Parts and accessories for other models and power ratings, regardless of whether they may fit, shall not be used.

945 **EXHAUST RELIEF PORTING**

Exhaust relief porting (except where original) shall not be allowed.

950 **STOP SWITCH**

The power head can be fitted with an alternative manufacturer's safety switch assemble (stop switch, kill switch). It must be of a type which disallows the outboard motor to run if the "Plug Receptacle Assemble" (lanyard key) is detached. Both assemblies must be from the same manufacturer and only a single lanyard shall be used. Inc Rule 850.

955 **EXCEPTIONS**

956 A nonstandard water inlet tube guide sleeve shall not be fitted to the outboard motor (e.g. Mercury part number C-23-31792).

957 The outboard motor shall not be fitted with nonstandard swivel / clamp brackets. Strengthening only of these parts is permitted.

958 An electric start transfer port cover may only be used on a power head if an electric starter motor is used.

- 959 The following external modifications and attachments shall be permitted, providing they are not in the form of deletions or removals from the outboard motor, except where stated:
- Handles
  - Measuring and testing gauges
  - Propeller guards
  - Remote steering mechanisms
  - Casing guards and strengthening which may be welded, bolted, tied and/or wired on
  - Power head cover straps or locks
  - Security chains or other securing devices
  - Transom mounts
  - Extended skegs
  - External polishing or lower housings (includes removal of paint)
  - External water pickups may be attached to the outboard motor.(e.g. remote water pickups, tubes attached by any means, removal of thermostat, motor flush holes may be used, water scoop may be mounted, holes may be drilled to mount fittings for all classes.
  - providing no modification is made to the gear housing
  - Gearbox/gear casing/gear housing guard and/or cover.
- 960 Any device or mechanism that locks any part of the outboard motor or prevents it from tilting must be removed, providing an approved hold down strap is fitted.
- 961 Non-standard bolts, studs, washers and nuts may be used throughout the outboard motor, excluding internal power head components.
- 962 The hardness of gears and shafts may be altered
- 963 Non-standard spark plugs may be used.
- 964 Any electric coils listed by the manufacturer as being for that model, either as standard, an accessory or as a replacement part may be used.
- 965 A non-standard cowl (motor cover) may be used provided it is of similar shape to the manufacturer's original cowl. The cowl does not have to include any standard manufacturer's parts, fittings or decals. Holes may be drilled through the cowl.
- 966 The carry handle of the outboard motor may be removed.
- 967 Holes may be drilled in any casing or bracket provided it is not for the purpose of exhaust relief porting.
- 969 The bearing carrier assembly in a gearbox may be secured to the gear housing assembly.
- 970 Standard Mariner/Mercury 8hp outboard motor gear change parts may be fitted to a Mariner/Mercury 8hp outboard motor.
- 971 A sleeve may be fitted over the carburettor throttle lever on a mercury power head (part number A-86213).
- 972 Non-standard mounts connecting the drive housing (trunk) to the saddle assembly (saddle bracket) may be fitted (e.g. Mercury part number A-79896A1).
- 974 Oversized pistons as supplied by the outboard manufacturer for that make and model only may be used.
- 975 Tuning specifications that are adjustable (ignition, timing and carburettor butterfly) may be adjusted within limits of their linkage, Plastic Carburettor Filter/Silencer Boxes may have three 6mm holes drilled into the bottom, for water drainage purposes only.
- 976 Mercury Seapro 10hp and Mariner Marathon 10hp cylinder blocks that have rectangular ports and are fitted with carburettor type WMC50, 50A or 50B may be fitted with exhaust adaptor plate – part number 413449 or 41344A6 (including exhaust tube)



- 977 A 1/8" bypass hole may be drilled in the thermostat rim so the tell-tale emits water when the outboard motor is started from cold.
- 979 Exhaust tube part number 41344A3 may be fitted to 8hp mariner/mercury outboard motors.

**980 MOTOR RESTRAINTS**

The motor restraining strap shall consist of webbing double around the lower trunk/upper gearbox area. It shall be secured at the front of the motor by a shackle which passes through commercially sewn eyelets. This is to avoid the strap spreading, or any up or down movement.

The two strap ends shall be attached separately to transom slide block, or an angle welded to the side, by the shackles or eyebolts or both.

**DEFINITIONS:**

SLIDE- The fixed, non-moving, part of the transom which carries the side block.

SLIDE BLOCK – The part of the transom to which the outboard motor is attached.

PARTS SPECIFICATION (MINIMUM):

WEBBING – 50mm wide polyester, minimum 4 tonne breaking strain.

STITCHING – Polyester twine.

SHACKLE – 8mm Stainless steel.

EYE BOLT – 10mm stainless steel. A 20mm diameter washer shall be positioned on the eye bolt shall be secured by a nylock nut.

ANGLE WELDED TO THE SLIDE – 12mm angle with holes no less than 12mm surrounding sides.

TILLER HANDLE – The length of the tiller handle may be extended.

All parts of the restraining strap shall be commercially manufactured by a manufacturer to Australian Standards.

**981 HYDRAULIC JACK RESTRAINTS**

The slide block must have two 10mm bolts going through a block minimum of 12mm x 20mm x 20mm attached to the lower half, and one on either side. The slide must have a bar of 3mm minimum thickness, weld or bolted with 8mm bolts to either side so that with the craft in the upside position the two bolts will strike the bar to prevent the slide block from exiting the side.

**982 ROPE PULLEY RESTRAINTS**

A) Rope pulley sets must be attached by a minimum of three 6mm bolts on each pulley and such that the slide block cannot be removed or by a hydraulic jack restraint system.

All motors must be bolted to the slide block with minimum of two 8mm bolts or 8mm eyebolt.

B) New style Ronson pulleys require 8mm and 6mm bolts through each pulley.

All of the above must be done to the satisfaction of the scrutineer.

Refer to Competition Rule 829.

**1000 FUELS, FUEL LINES and FUEL TANKS**

**1005 NO LIMITS ON TYPE**

There shall be no limitation on the type or brand of fuel, fuel additives or lubricants used.

**1010 SUPPLEMENTARY REGULATIONS NOT TO LIMITS TYPE**

Any supplementary regulation purporting to limit fuel to any one brand or type shall be invalid.

**1015 FUEL TANK TO BE SECURE.**

- The fuel tank shall be firmly secured to the boat by non-elastic material (i.e. no ockie straps or similar) so that it cannot move in swapping or role over.
- 1020 **APPROVED FUEL TANK**  
The fuel tank and fuel line shall be of an approved type and in good condition and repair. (Approved by the rules committee).
- 1025 **FUEL CONNECTOR TO BE STANDARD**  
The fuel line attached to the fuel tank and the primer bulb and fuel connectors attached to the fuel line are not part of the motor and may be non-standard parts. The fuel connector attached to an outboard motor shall be a standard part, in its standard position, for that model.
- 1030 **FUEL CONNECTOR NOT TO BE BYPASSED**  
In an outboard motor the fuel line from the tanks shall be connected to the fuel connector fitted to the outboard motor. This outboard motor fuel connector shall not be removed or bypassed (by connecting the fuel line from the fuel tank direct to the fuel pump) except as an emergency repair.
- 1035 **FUEL FILTER**  
An in-line fuel filter shall not be fitted to an outboard motor (i.e. under the cowl) unless standard as supplied by the manufacturer. An in-line fuel filter or any type may be fitted to the fuel system prior to a motor.
- 1100 **REPLACEMENT/REPAIRS**
- 1105 **MULTI STAGE EVENTS**  
In a multi-stage event (e.g. Nannup Cup, Sunnyside sprint, Avon Descent, The River Race, Blackwood Classic 250) any part of the motor, except the power head, may be replaced or repaired while a craft is being timed. If stated in the supplementary regulations this repair/replacement may occur in the pit area while being timed. If the provision concerning replacement in the pit area is not stated in the supplementary regulations, then the replacement may occur only while the craft is being timed on the course.
- 1110 **EVENT COMPRISED OF HEATS**  
In an event comprised of heats (e.g. circuit race) any part of the motor, except the power head (see definitions) may be replaced in the pit area between heats without penalty.
- 1115 **ALLOWABLE REPLACEMENT PARTS**  
In other Events, if stated in the supplementary regulations, allowable replacement parts shall be restricted to:
- Start Rope
  - Spark Plugs
  - Propeller nuts, washers and split pins
  - Shear pins
  - Propellers
  - Fuel Lines
  - Motor Cover (cowling)
  - Gaskets
  - Any bolts, studs, washers and/or nut except internal power head components.
- 1120 **PROVISIONS CONCERNING THE REPLACEMENT OF PARTS**  
If not stated in the supplementary regulations that the replacement of parts is restricted, then the provisions concerning the replacement of parts shall be as described in 1105 for “point to point” of river races and as ion 1110 for an Event conducted by heats.
- 1125 **PARTS TO BE CARRIED IN BOAT**  
Allowable replacement parts may be carried in the boat. No other parts may be carried.
- 1130 **MOTOR MAY BE REPAIRED BY ANY MEANS**

During an event the motor may be repaired by any means other than welding subject to 1005.

**1135 BOAT MAY BE REPAIRED BY ANY MEANS**

During an event a boat shall not be replaced but may be repaired by any means including welding. Planning surfaces shall not be replaced. Only the original parts of boat may be repaired.

**1140 LOG GUARDS**

A guard (e.g. "log guard" or "motor guard") may only be removed in the pit area unless it is damaged that its removal is necessitated outside the pit area (i.e. while racing) in which case it shall be carried in the boat to the pit area.

**1200 MiniJet CLASS**

**1205 Registration**

Each craft in an event shall be registered with the government department responsible for licensing marine vessels and comply with their requirements as follows:

- The registration number shall be displayed on each external side of the hull adjacent to the transom;
- Each digit of the registration number shall be black and shall not be less than 150mm in height and not less than 25mm in width;
- Each digit of the registration number shall be vertical and shall have a 10mm white surround.
- Registration sticker fixed to the port side next to the registration number.
- The identification plate (HIN plate) shall be affixed to the port (left) side of the transom on the inside of the boat.

**1210 IDENTIFICATION NUMBERS NOVICE Class**

1211 Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm
- Be non-slanting and naturally spaced
- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font
- Be made from Yellow Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
- Be on a painted Black background or Black Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent
- Be on a minimum of 400mm wide by 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of white showing beyond each number
- Not be displayed on a board on the craft
- Be clearly visible on both sides of the craft with the entire number on a flat vertical surface of the craft forward of amidships
- **(NO WRAP AROUND NUMBERS)**

**1215 IDENTIFICATION NUMBERS EXPERT Class**

1216 Each craft shall display an identification number that shall:

- Be not less than 180mm x 40mm
- Be non-slanting and naturally spaced

- Be formed in Helvetica Condensed Bold font or other Management Committee approved similar font
  - Be made from Fluorescent Green Fuji Ca 12 long term adhesive vinyl 50 micron or Management Committee approved equivalent
  - Be on a painted Black background or Black Fuji Ca 12 long term adhesive vinyl or Management Committee approved equivalent
  - Be on a minimum of 400mm wide by 210mm high with a 20mm radius to each corner (vinyl background only) and have a minimum of 10mm of white showing beyond each number
  - Not be displayed on a board on the craft
  - Be clearly visible on both sides of the craft with the entire number on a flat vertical surface of the craft forward of amidships
- (NO WRAP AROUND NUMBERS)**

**1220 DIMENSIONS**

The minimum hull length shall be 2450mm and the maximum hull length shall not exceed 4000mm.

**1230 DESIGN and SAFETY**

- The design shall be of a safe design and construction.
- Hull and propulsion supporting structure shall be made from aluminium.
- Buoyancy must be added to a boat to ensure that it complies with Specification 700.
- Must be 2 occupants.
- UHMWPE under-sheet for protection of hull shall be fitted.
- Paint and unpainted hulls are permitted - colour is free
- Craft shall have a minimum of 1 dead man safety ignition cut to the driver of the vessel
- A fire extinguisher of not less than 1KG is to be fitted in a safe and easily accessible location
- Batteries must be of a fully sealed type and must be secured to the hull or bulkhead in a design fit to support the battery weight in the event of an accident or roll over
- Fuel tank to be compliant with Specification 1015.
- Fuel tank capacity is limited to maximum of 60L
- Fuel filling points must be of OEM type or those found acceptable for marine use. Fillers must have an oring seal and be non-venting type.
- A minimum of 2 x Grab rails shall be fitted to the hull to allow for recovery and manoeuvring whilst on water.
- Each craft shall carry a minimum first aid kit in line with the PDRC regulations whilst including items from St John Medium Leisure Kit Part number 7652.
- Each Vessel shall have a safety tow rope. The tow rope must be not less than 20M in length and rated to not less than 1.5T @ 20mtrs. It is recommended that a load rated snap hook be fitted to one end of the rope for quick attachment to the tow point / points
- Exhaust outlet point must be rearward of the bulkhead by no less than 500mm and as low as practically possible in the hull. The exhaust exit must face in a direction opposite to that of the normal direction of movement

**1240 TOW POINT**

Each MiniJet craft shall have a tow point securely attached in a central fixed position no more than 150mm to the rear of the furthestmost forward point of the bow. The tow point shall be of a solid structure not less than 5mm and not more than 10mm in thickness. It shall be shaped in a closed half circle with not less than 30mm and not more than 60mm internal diameter. It shall be capable of supporting the craft under tow when it is fully immersed in water.

**1250 SAME CRAFT TO BE USED**

The same craft with the exception of allowable replacement parts shall be used throughout an event.

**1260 ADDITIONAL EQUIPMENT**

Mini Jet Boats are shall comply with Specification 800 – 870 inclusive.

**1270 PROPULSION SYSTEMS**

- Jet drive units to only be used
- Fabricated/cast inlet tunnels are permitted
- The use of aftermarket jet impellers is permitted
- The maximum internal diameter of any housing including wear ring is 156mm
- Steering nozzles are free - modification to internal diameters and hinge points are not allowed
- Intake screens are free
- Ride plates are free
- Trim of the steering nozzle is free
- The shortening of the drive coupler intermediate shaft is permitted
- Rubber drive couplers and flanges are free
- A maximum of 12 veins may be used in the impeller duct assembly
- It is permitted to block the tell-tale outlet

**1280 ENGINES**

- Any two or four stroke purpose built marine power plant is acceptable.
- Removal of automatic oil injection systems is permitted.
- The power plant shall have a manufacturers placarded maximum output up to 160hp.
- Exhaust systems are free in design, shape and size
- A wet exhaust muffler system (waterbox) shall be installed. The exhaust outlet shall be ducted to exit at the transom. No dry piped or side exit exhausts are permitted.

**1290 MiniJet CLASSES**

MiniJet craft will be live tracked for the following maximum speeds for river events using the PDRC approved GPS tracking system (refer Competition Rule 1016).

- I. MiniJet NOVICE - 50Km/hr
- II. MiniJet EXPERT - 60Km/hr



## **Technical Specifications**

**These Technical Specifications are part of the  
Competition Rules**

Make and Model – Mariner 10hp / 95  
 Mariner Marathon 10, Mercury Seapro 10  
 Authorised Date – 02<sup>nd</sup> March 2006

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	60.33mm		
S	Stroke	45.72mm		Two Stroke
CC	Capacity per Cylinder	13.3mm		Measured at top of spark plug hole when piston is THC - INDICATOR
TC	Total Cylinder Capacity (swept volume)	131cc		GUIDE ONLY
C1	Cylinder head height	N/A	N/A	
CH	Cylinder head capacity with spark plug fitted	N/A	N/A	Use of standard plug to measure only
N	Number of piston rings	2	0	
P1	Length of Piston (less deflector)	Mm	Min	
P2	Length of Piston (including deflector)	Mm	Min	
P3	Distant from Little End Centreline to lower edge of piston	Mm	Min	
P4	Distant from Little End Centreline to Piston Crown	Mm		
P5	Piston Diameter			
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	Mm		
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	Mm		
ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port			
D1	Shape and Size of Transfer Ports	Square H:15.9 W:24mm	0.1mm	
D2	Shape and Size of Exhaust Ports	Square H: 16.1 W:24.4-23.1mm	0.1mm	Measure each port separately
D3	Number of Transfer Points	3	0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face	N/A	N/A	
ET	Exhaust Tube Length	341mm	2mm	
ES1	Exhaust Tube Shape and Size at Open End	36.36mm	0.5mm	
ES2	Diameter of Top of Bell on Exhaust Tube			Inside
ES3	Length of Bell on Exhaust Tube			
FW	Weight of Flywheel	9	0.01	
L	Reed Stop Setting	7.6mm	Max	Measured rod (drill bit) not to pass in more than halfway
C	Carburettor Type	WM 50A,B & c		
J1	Size of Main Jet	0.52"	Max	
V	Venturi Diameter (also known as intake or open end)	20mm	0.1mm	
TB	Throttle Bore (also known as crankcase or Throttle End)			
W	Water Pump Impeller Blades	6	0	

G1	Forward Gear Ratio	2.00:1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Clearance	N/A	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY

MAKE AND MODEL – MARINER 10HP/94  
MARINER MARATHON 10, MERCURY SEAPRO 10  
AUTHORISED DATE – 02<sup>ND</sup> MARCH 2006

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	60.3mm		
S	Stroke	45.72mm	0.1mm	Two Stroke
CC	Capacity per Cylinder	12.2mm		Measured at top of spark plug hole when piston is TDC - INDICATOR
TC	Total Cylinder Capacity (swept volume)	131cc		GUIDE ONLY
C1	Cylinder head height	N/A	N/A	
CH	Cylinder head capacity with spark plug fitted	N/A	N/A	Use of standard plug to measure only
N	Number of piston rings	2	0	
P1	Length of Piston (less deflector)	mm	Min	
P2	Length of Piston (including deflector)	mm	Min	
P3	Distant from Little End Centreline to lower edge of piston	mm	Min	
P4	Distant from Little End Centreline to Piston Crown	mm		
P5	Piston Diameter			
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	mm		
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	mm		
ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port			
D1	Shape and Size of Transfer Ports	Circle H:63 W:84mm	0.1mm	
D2	Shape and Size of Exhaust Ports	Circle H:64 W: 95-87mm	0.1mm	
D3	Number of Transfer Points		0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face		Min	
ET	Exhaust Tube Length	341mm	2mm	
ES1	Exhaust Tube Shape and Size at Open End	36.86mm	0.5mm	
ES2	Diameter of Top of Bell on Exhaust Tube			Inside
ES3	Length of Bell on Exhaust Tube			
FW	Weight of Flywheel	g	0.01	
L	Reed Stop Setting	7.6mm	Max	Measured rod (drill bit) not to pass in more than halfway
C	Carburettor Type	WM 42mm		
J1	Size of Main Jet	0.64"	Max	



V	Venturi Diameter (also known as intake or open end)	25.4mm		
TB	Throttle Bore (also known as crankcase or Throttle End)			
W	Water Pump Impeller Blades	6	0	
G1	Forward Gear Ratio	2.00:1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Compression	mm	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY

MAKE AND MODEL – SUZUKI 10HP  
AUTHORISED DATE – 02<sup>ND</sup> MARCH 2006

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	59MM		0.25 & 0.5mm oversize allow see p5
S	Stroke	52mm	0.1mm	Two Stroke
CC	Capacity per Cylinder	cc		Measured at top of spark plug hole when piston is TDC - INDICATOR
TC	Total Cylinder Capacity (swept volume)	142cc	0.5cc	GUIDE ONLY
C1	Cylinder head height	21mm	0.1mm	INDICATOR
CH	Cylinder head capacity with spark plug fitted	17cc		Use of standard plug BR6HS to measure only
N	Number of piston rings	2		
P1	Length of Piston (less deflector)	mm	Mmm	
P2	Length of Piston (including deflector)	N/A	N/A	
P3	Distant from Little End Centreline to lower edge of piston	mm	Min	
P4	Distant from Little End Centreline to Piston Crown	mm		
P5	Piston Diameter			
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	mm		
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	mm		

ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port	35.2mm	0.1mm	
D1	Shape and Size of Transfer Ports	H:12.7 W:t-28.5 BP W:21.2 H:15	0.1mm	BP=Boost Port
D2	Shape and Size of Exhaust Ports	H:18mm W:35.5mm	0.1mm	
D3	Number of Transfer Points	3	0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face	148.5mm	0.2mm	
ET	Exhaust Tube Length	285mm	2mm	Cast
ES1	Exhaust Tube Shape and Size at Open End	36mm	1mm	Inside Measurement
ES2	Diameter of Top of Bell on Exhaust Tube			Inside
ES3	Length of Bell on Exhaust Tube			
FW	Weight of Flywheel	9	Min	
L	Reed Stop Setting	4.6mm	Max	Measured rod (drill bit) not to pass more than halfway
C	Carburettor Type	Mikuni 931D1		
J1	Size of Main Jet	1.10mm		Type 110
V	Venturi Diameter (also known as intake or open end)	15mm	0.1mm	
TB	Throttle Bore (also known as crankcase or Throttle End)			
W	Water Pump Impeller Blades	6	0	
G1	Forward Gear Ratio	1.92:1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Compression	mm	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY

MAKE AND MODEL – TOHATSU 10HP TYPE D2  
AUTHORISED DATE – 06<sup>TH</sup> JULY 2010

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	55mm	0.03mm	0.5mm oversize
S	Stroke	52mm		Two Stroke
CC	Capacity per Cylinder	123.5cc	1.0cc	Measured at top of spark plug hole when piston is TDC - INDICATOR
TC	Total Cylinder Capacity (swept	247.1cc	1.0cc	

	volume)			
C1	Cylinder head height			
CH	Cylinder head capacity with spark plug fitted	11.5cc	0.5cc	Use of standard plug B7HS to measure only
N	Number of piston rings	2		
P1	Length of Piston (less deflector)	57mm	0.4mm	
P2	Length of Piston (including deflector)	59.45mm	Min	
P3	Distant from Little End Centreline to lower edge of piston	29mm	Min	
P4	Distant from Little End Centreline to Piston Crown	28mm	0.3mm	
P5	Piston Diameter	54.95mm	Min	
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	Main 119.5mm 3 <sup>rd</sup> 111.5mm	1.0mm	
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	116mm	1.0mm	
ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port	35.4mm	0.5mm	
D1	Shape and Size of Transfer Ports	Main 23mm x 12mm 3 <sup>rd</sup> 19mm x 13mm	1.5mm	
D2	Shape and Size of Exhaust Ports	34mm x 17mm	1.5mm	
D3	Number of Transfer Points	3	0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face	152.0mm	0.3mm	
ET	Exhaust Tube Length	266mm	2mm	
ES1	Exhaust Tube Shape and Size at Open End	Circle 36.5mm	1mm	Inside
ES2	Diameter of Top of Bell on Exhaust Tube	30mm		Inside
ES3	Length of Bell on Exhaust Tube	40mm		
FW	Weight of Flywheel	4100gm	Min	
L	Reed Stop Setting	6.2mm	Max	Measured rod (drill bit) not to pass in more than halfway
C	Carburettor Type	Butterfly Valve		TK Carburettor
J1	Size of Main Jet	110	Max	
V	Venturi Diameter (also known as intake or open end)	20mm		
TB	Throttle Bore (also known as crankcase or Throttle End)	27.0mm	Max	
W	Water Pump Impeller Blades	8	0	
G1	Forward Gear Ratio	2.1:1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Compression	Mm	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY

Make and Model – Tohatsu 10hp Type C & D

Authorised Date – 06<sup>th</sup> July 2010

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	54.9mm		0.25&0.5mm oversize allow seeP5
S	Stroke	52mm		Two Stroke
CC	Capacity per cylinder	12.5cc	0.5cc	Measured at top of spark plug hole when piston is TDC-INDICATOR
TC	Total Cylinder Capacity (Swept Volume)	123.5cc		GUIDE ONLY
C1	Cylinder Head Height	21.75mm	0.1mm	
CH	Cylinder head capacity with spark plug fitted	10.5cc		Use of standard plug B7HS to measure only
N	Number of Piston Rings	2		
P1	Length of piston (less deflector)	mm	Min	
P2	Length of Piston (including deflector)	mm	Min	
P3	Distant from Little End Centreline to lower edge of piston	mm	Min	
P4	Distant from Little End Centreline to Piston Crown			
P5	Piston Diameter			
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	mm		
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	mm		
ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port	40.5 mm	0.1mm	
D1	Shape and Size of Transfer Ports		Max	
D2	Shape and Size of Exhaust Ports	34mm x 17mm	1.5mm	
D3	Number of Transfer Points	3	0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face	152.0mm	0.2mm	
ET	Exhaust Tube Length	266mm	2mm	
ES1	Exhaust Tube Shape and Size at Open End	Circle 36.5mm	1mm	
ES2	Diameter of Top of Bell on Exhaust Tube			Inside
ES3	Length of Bell on Exhaust Tube			

FW	Weight of Flywheel	G	Min	
L	Reed Stop Setting	6.2mm	Max	Measured Rod (drill bit) not to pass in more than halfway
C	Carburettor Type			
J1	Size of Main Jet	1.16mm	Max	
V	Venturi Diameter (also known as intake or open end)	22mm		
TB	Throttle Bore (also known as crankcase or Throttle End)	27.00mm	Max	
W	Water Pump Impeller Blades	8	0	
G1	Forward Gear Ratio	2.1.1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Clearance	Mm	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY

MAKE AND MODEL – MERCURY 10HP Type DT-9.9

(The Old Tohatsu D2)

AUTHORISED DATE –Aug 2015

REF	DESCRIPTION	SPEC	+/-	REMARKS
B	Bore	55mm	0.03mm	0.5mm oversize
S	Stroke	52mm		Two Stroke
CC	Capacity per Cylinder	123.5cc	1.0cc	Measured at top of spark plug hole when piston is TDC - INDICATOR
TC	Total Cylinder Capacity (swept volume)	247.1cc	1.0cc	
C1	Cylinder head height			
CH	Cylinder head capacity with spark plug fitted	11.5cc	0.5cc	Use of standard plug B7HS to measure only
N	Number of piston rings	2		
P1	Length of Piston (less deflector)	57mm	0.4mm	
P2	Length of Piston (including deflector)	59.45mm	Min	
P3	Distant from Little End Centreline to lower edge of piston	29mm	Min	
P4	Distant from Little End Centreline to Piston Crown	28mm	0.3mm	
P5	Piston Diameter	54.95mm	Min	
T	Distant from Crankshaft Centreline to Top Edge of Transfer Ports	Main 119.5mm 3 <sup>rd</sup> 111.5mm	1.0mm	
E	Distance from Crankshaft Centreline to Top Edge of Exhaust Ports	116mm	1.0mm	
ME	Distance from Cylinder Block Mating Face to Top off Exhaust Port	35.4mm	0.5mm	
D1	Shape and Size of Transfer Ports	Main 23mm x 12mm	1.5mm	

		3 <sup>rd</sup> 19mm x 13mm		
D2	Shape and Size of Exhaust Ports	34mm x 17mm	1.5mm	
D3	Number of Transfer Points	3	0	
F	Distance from Crankshaft Centreline to Cylinder Block Mating Face	152.0mm	0.3mm	
ET	Exhaust Tube Length	266mm	2mm	
ES1	Exhaust Tube Shape and Size at Open End	Circle 36.5mm	1mm	Inside
ES2	Diameter of Top of Bell on Exhaust Tube	30mm		Inside
ES3	Length of Bell on Exhaust Tube	40mm		
FW	Weight of Flywheel	4100gm	Min	
L	Reed Stop Setting	6.2mm	Max	Measured rod (drill bit) not to pass in more than halfway
C	Carburettor Type	Butterfly Valve		TK Carburettor
J1	Size of Main Jet	110	Max	
V	Venturi Diameter (also known as intake or open end)	20mm		
TB	Throttle Bore (also known as crankcase or Throttle End)	27.0mm	Max	
W	Water Pump Impeller Blades	8	0	
G1	Forward Gear Ratio	2.1:1	0	
G2	Reverse Gear Fitted	Yes	N/A	
SB	Squish Band Compression	Mm	N/A	GUIDE ONLY
C	Compression Pressure	HPa		GUIDE ONLY