



CONDITION REPORT # B2913

"MASALA"

In accordance with instructions from Mr Grant DaCosta, an inspection was carried out on a 12.65 metre Radford designed cruising cutter known as *"Masala"*. The purpose of the inspection was to prepare a condition report for insurance purposes. The inspection was conducted whilst the vessel was in the water and on the hard stand at East Coast Marina, Manly on the 19th of March 2009. For the duration of our inspection the weather was fine and warm and did not impede any aspect of our work.



GENERAL SPECIFICATIONS			
Qld Registration	QW975Q	Fuel Capacity	300 litres
Length Overall	12.65 metres	Construction	steel
Beam	3.50 metres (Approx.)	Year Built	2002
Draft	1.75 metres (approx.)	Water Capacity	638 Litres (approx.)
Designer	Graham Radford	Builder	C-Stainless Boat builders
Aus. registration	857117	Engine	Diecon Nissan 44.7kW
Model	Radford 145 design no.61	Displacement	13,290 kgs

OVERALL CONDITION & SUITABILITY FOR SERVICE

The vessel appears to be structurally sound. There was no evidence found of major collision or grounding. The underwater area of the hull was visually inspected and percussion tested. Subject to safe and proper management practices, the carriage of recommended and regulated safety equipment and the implementation of recommendations within this report, the vessel represents, in our opinion, an acceptable risk for use in areas which we define as: *B - "OFFSHORE": Designed for offshore voyages where conditions up to, and including, wind force 8 and significant wave heights up to, and including 4 metres may be experienced.*



The vessel is not presently certified for commercial trade or the carriage of any fare paying passengers and is not currently registered as a commercial vessel to comply with requirements listed under the Uniform Shipping Laws Code (USL).

Note: As used in the balance of this report, the rating of the vessel, machinery and parts condition was determined upon completion and review of all reported survey information including recommendations and comparing vessels to the same or similar age models. Possible vessel condition ratings are as follows:

Excellent - essentially as new in appearance

Above Average - has had above average care with no obvious defects or limitations

Average - ready for sale but needs some maintenance or repairs, updates or cleaning

Below Average - needs significant maintenance, repair or service

We consider the vessel to be in **above average** condition for its age and model.

CONSTRUCTION

We previously inspected this vessel in June of 2007 and produced report #2278. At this time the vessel had no structural or system defects and had been maintained to a high standard.

The vessel is of a round bilged hull form, constructed of 4mm steel plate over transverse steel frames set at 600mm centres amidships and 650mm centres aft. Steel stringers are set at 300mm centres. The frames backbone and keel base are all 8mm plate. The rudder skeg, deck house, cockpit floor and deck are all 3mm plate. All stringers and frames have been fitted with limber holes to allow for drainage. No filler has been used below the waterline and if any has been used above the waterline, it is minimal. The hull plates have been rolled and the construction by C-Stainless boat builders of Melbourne, has been completed to the highest of standards.

All welds were inspected and found to be secure. We found no evidence of rust internally or externally apart from minor cosmetic spots which would be treated as part of routine maintenance.

50mm of foam has been sprayed on to the hull internally to provide insulation below the waterline. Four tonnes of lead ballast is encapsulated in the steel fin keel.

The vessel has been built to a proven design and to a professional standard.

A Sigma two pack marine paint has been used inside and out. The paint system was specifically designed by Mr. Phillip Evans of Watty's protective and marine coatings division.

Our visual inspection found the vessel in above average condition. The topsides of the vessel have dulled slightly but there is no indication of corrosion or adhesion problems.

The vessel was inspected out of the water at which time we carried out a visual inspection. The bottom of the vessel is in above average condition for its age.



We found no indication of corrosion, leaching or adhesion problems. The current owner advised that approximately 12 months ago he has applied 20 litres of Jotan Sea Guardian antifouling. This remains in top condition.

There is no evidence of collision or grounding.

The hull is fitted with two large block anodes on the hull, adjacent the aft end of the keel and the keel has two large rectangular block anodes fitted forward. A propeller shaft anode and a propeller hub anode are also fitted. All anodes are exhibiting wear but remain in serviceable condition.



There is no indication of stressing or movement at the hull/keel intersection or at the intersection of the hull and full length rudder skeg. The skeg carries the bottom rudder gudgeon and this was checked and found to be secure.



The current owner has fitted a new Autostream, 3 bladed feathering propeller. The grub screw fastenings have been wired on using stainless steel wire and the securing nuts are pinned. The propeller remains in good condition with no evidence of pitting or corrosion.

Where accessible, the interior structure was found to be secure. We lifted all floor boards and inspected all cabinets. There was no indication of stressing or movement.

ENGINEERING

The vessel is fitted with a Diecon Nissan SD25 44.7kW (60hp), fresh water cooled, 4 cylinder marine diesel engine which is showing 749 hours. It has completed 83 hours since our last inspection.



The engine is swinging a three bladed, feathering, Autostream propeller on a 38mm stainless steel shaft. The new propeller has been fitted in the last 12 months. The shaft is supported externally by a single strut which was inspected and found secure with no indication of stressing or movement internally or externally. The stern gland is a drip less, water injected, PSS shaft seal which exhibited no leaks. A TX single lever throttle/forward/reverse lever is fitted. The gear box is a Newage PRM Delta marine, hydraulic unit.

The engine mounts were inspected and found to be secure. The exhaust system and general engineering has been completed to a high standard. We found no indication of fuel or oil leaks and the engine is corrosion free. All shut off valves remain in good condition and are operational. The engine was started from cold in our presence. It started instantly and ran smoothly. The fuel filters are readily accessible and in good condition. All hoses used are of appropriate material and remain in good condition. Engine instrumentation is provided at the control panel in the cockpit.

The vessel's fuel tank system consists of four under-floor and one day tank which is located in the storage area accessed from the aft cabin. All tanks are stainless steel giving a total of 300 litres with the day tank holding 50 litres. All tanks are corrosion free and secure. Access is limited to the tops of the

tanks but all plumbing has been completed to a high standard and there is no indication of leaks. The bilge areas were clean and dry. The fuel filters are dual, inline Lucas CAV type.

The vessel is fitted with hydraulic wheel steering. The ram is located beneath the aft cabin double berth.



A TMQ AP50 autopilot is fitted but was not tested by us. An emergency tiller is carried. The top of the rudder post was inspected and we found no indication of stressing or movement. No leaks were evident around the rudder tube and the hydraulic ram installation was secure.

The vessel utilizes 12 volt DC ships power and 240 volt shore power. A new, approved, shore power fitting has been installed in the port side cockpit wall.



All wiring has been completed to a high standard with top a quality switch board located in the aft cabin.

Four house batteries and a separate (new) engine starting battery are located under the cockpit floor, aft of the engine. These are all corrosion free. The house batteries are 130 amp hour models giving a total of 650 amp hours. They were fitted new in April 2006. The engine start battery also powers the windless. Charging is provided by two engine alternators 1 x55 amp and the 2nd a 140 amp. They are connected to a smart regulator system. Two 64 watt Unisolar panels are mounted above the tender davits. These are charging the house bank. A solar regulator is fitted to the system.



A 240 volt galvanic isolator system is fitted and a 650 watt inverter has been installed. The vessels anodes have been listed previously in this report. We found no indication of stray current or galvanic corrosion.

Note: All vessels, recreational and commercial, are required to comply with the regulations prescribed in the Queensland Electrical Safety Act 2002 (revised March 2006). Substantial fines and/or gaol terms apply where breaches of the regulations result in injury or death. Where this report indicates possible electrical non-compliances, we strongly recommend an inspection by an electrical surveyor or a licensed electrical contractor is undertaken.

There are 10 stainless steel water tanks fitted amidships, under the saloon floor. These have been fitted with in the structural framing. Access is limited but all tanks appear corrosion free and there is no indication of leaks. A 12 volt pressurised water system is fitted. This was tested at each outlet and

found to be functional. The hot water system utilises a Woody's marine, 60 litre, and stainless steel cylinder. It is heated either by 240 volts or/and the engine heat exchanger.

Note: Fresh water tanks are likely to contain levels of bacteria or other contaminants that can cause disease. As a matter of course, all storage tanks, plumbing runs and filters should be drained, cleaned and disinfected prior to refilling.

A 50 litre grey water tank is fitted beneath the floor in the galley. This services the sink, hand basin and the shower.

A new, manual, Jabsco head has been fitted since our last inspection. This was tested and is working. It is fitted with a 60 litre holding tank and a manual pump out. We could not test this with in the confines of the marina. All valves are operable and we found no indication of leaks.

A Smev three burner LP gas stove is fitted. The gas bottles are located in separate, vented lockers on the transom. A BEP twin sensor gas detector is fitted and this controls the solenoid. The solenoid was fitted new in February 2008.

Note: *All combustion sources including propulsion engines (diesel and petrol), LP gas stoves, spirit and alcohol stoves and power generators (fixed and portable) have the potential to generate dangerous levels of carbon monoxide. Operating these in enclosed spaces or without adequate ventilation can result in death.*

Refrigeration is provided by a Cold logic SSR unit, a custom built 240 volt eutectic system runs off the 12 volt house batteries via the inverter when 240 volts is not available. This was not run during our inspection.

GROUND TACKLE

At the time of our inspection the vessel carried a 27kg plough anchor in the stem. It is fitted with approximately 100 metres of 10mm galvanised chain, this was not ranged. A Maxwell VWC1200, 12 volt, capstan is fitted. A single deck switch is fitted next to the unit. This was tested and operational.

NOTE: Users should be aware that due to the location of anchor motors and the increased moisture that occurs in these areas, along with previous use they may or may not have had, it is recommended that all "used" vessels have a regular service of the drum and electrical contacts.

LIFESAVING & SAFETY

- ☠ The vessel is fitted with a solid stainless steel guard rail which surrounds the entire vessel. This is secure.
- ☠ An Icom IC-N710 SSB radio is fitted and functional.
- ☠ A Silva 125-B, helm compass, is fitted and is functional but has a bubble and needs to be refilled.
- ☠ A GME, GX558 VHF radio is fitted and functional.
- ☠ The vessel has port and starboard navigation lights on the pulpit, a stern light and a tri-colour light on the masthead. All are functional.
- ☠ 8 PFD type 1 life jackets are carried.
- ☠ The vessels stereo is functional.
- ☠ A 406 EPIRB is carried. It is current until December 2010. UIF number BEEE69093C001A9.
- ☠ Coastal flares are carried, current until August 2009. Additional, out of date, flares are also carried.
- ☠ One solid life ring is carried on the pulpit along with a Dan buoy pole.
- ☠ A Rigid bottom inflatable is carried on Davits at the stern.
- ☠ A New 5 horse power Honda, 4 stroke, out board is carried on the pushpit.
- ☠ A TMQ autopilot is fitted.
- ☠ A Navman Multi M100 depth, speed, log is fitted and functional.
- ☠ A Garmin 128 GHPS is fitted in the navigation station and is functional.

BILGE & FIRE SYSTEMS

Three, 12 volt, electric submersible bilge pumps are fitted. One is located beneath the forward cabin sole and the remaining two are beneath the saloon cabin sole. Two of the pumps are fitted with float switches and the third has a manual switch. All were tested and working. A Manual bilge pump is also fitted in the head and is functional.



Three 1 kg dry powder fire extinguishers are fitted. One in the forward cabin, one in the workshop and one at the companionway bulkhead. All are current and charged. A 2kg dry powder unit is fitted at the

aft end of the double berth in the bow. This is current and charged. All units are corrosion free. A fire blanket is fitted in the galley.

RIGGING

The vessel is rigged as a masthead cutter with an aluminium section mast and boom. The mast is keel stepped. The base was inspected and found to be corrosion free. The mast has two sets of slightly swept spreaders with cap shrouds, dis-continuous intermediates and aft lower shrouds. The permanent forestay is fitted with a Reefit roller furling system. A fixed backstay is fitted. All rigging is 1 x 19, Dyform, stainless steel and appears in good condition. There is no indication of stressing or movement at the mast base or the chainplates, either internally or externally. All running rigging is appropriately sized and remains in good condition.



The picture above left shows an orange substance in the mast base well. This is fish oil residue, not rust. Fish oil is occasionally put in the well as a preventative measure, to ensure that inaccessible parts of the mast base remain corrosion free.

Note: The rigging was visually inspected from deck level to a height of 2 metres. Winches, blocks and turning sheaves have not been dismantled for detailed inspection, unless specifically mentioned. It is recommended that all winches be stripped for inspection and greased before re-assembly.

COMMENTS & RECOMMENDATIONS

1. We recommend the compass be refilled.
2. A new gas certificate must be obtained on transfer of ownership.
3. The vessel has been built and maintained to a high standard. We found no evidence of structural or system defects.

This survey has been prepared on the basis of information provided to us by the owner/agent and from our own investigation. Every effort has been made to ensure the accuracy of the information and to cover all areas of the vessel accessible to us. We did not remove any linings or destructively test areas of the vessel. We have not inspected woodwork or other parts of the structure which are covered,

unexposed or inaccessible and we are therefore, unable to report that any such part of the structure is free from defect. Accordingly, areas not readily accessible are voided from this report. Further exclusions from this survey include pressure testing of tanks, lines and plumbing; continuity and load testing; insulation resistance breakdown testing; strain checks of conductors, plumbing runs and connections; verification of the accuracy or range for any gauges, meters or navigation instruments; testing of solar or wind generators and water makers.

A full inventory of all included chattels was not undertaken.

This survey does not include research into any discrepancy between the year designator in the hull ID number and the claimed model year. It does not include verification of registration, title, or documentation; or check-off of any owner supplied inventory or listing sheet of "included gear". It does not include investigation into any direct representations, hearsay or questions about the vessels past usage (including charter), damage, replacements, repairs or age of any equipment and structures - especially the accuracy of hour meters or the validity of service records - all of which are impossible for the surveyor to research or independently verify. Nor does the survey include obtaining specifications from component and equipment manufacturers to determine any part's UL listing or suitability for marine use.

This report was prepared by Barry C. Colson, Senior Marine Surveyor, holder of the N.Z. RLL, and CLM Commercial Skipper's tickets, Australian Coxswain's Ticket, and a member of the New Zealand's Naval Architects Society, Marine surveyors association of Australia and an Associate member of the International Institute of Marine Surveying. Comments made in this report are based on standards adopted by the Uniform Shipping Laws Code (AUS), American Boat and Yacht Council (ABYC), the Australian Standard AS1799- Small Pleasure Boats code and the Recreational Craft Directive 2003/44/EC.

Report issued 19th March 2009 by the undersigned

Barry C. Colson

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