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GENERAL CONDITION SURVEY REPORT

For Motor Yacht

This is to Certify that the undersigned carried out a Condition Survey on the above vessel atEngland on the January 2008 at the request of Mr.for the purpose of reporting on the vessels condition subject to the limitations below. This Pre purchase survey is carried out on the understanding that I am legally liable to the above client only and not to any subsequent holder of the said report. Such liability must be constructed as a contract under British law and jurisdiction and any dispute arising hereunder shall be submitted to the exclusive jurisdiction of the courts of England and Wales.

CONDITIONS/FACTORS LIMITING SURVEY

- ÿ The reason for the survey was to carry out a structural and mechanical evaluation of the vessel for pre-purchase, mortgage and or insurance purposes.
- ÿ The vessel was ashore supported on chocks/slings. This allowing access to the hull bottom, apart from the chocking/sling positions.
- ÿ Machinery installations, auxiliary and ancillary equipment, gas and other service systems, electronic equipment, pumping and plumbing, sanitation systems, navigational aids and other sundry items were visually inspected only. None of these items were dismantled nor were specific test applied except in the case of electrical systems where simple switch tests were used.
- ÿ The steering gear installation was given a simple 'hard over to hard over test' only.
- ÿ Twin diesel engines and Genset examined externally only.
- ÿ All tanks were inspected where visible but not internally and they have not been pressure tested; their contents have not been tested for contamination.
- ÿ Windows hatches and external doors have not been tested for water tightness.
- ÿ Skin fittings and valves have not been dismantled.
- ÿ The gas system was not tightness tested.
- ÿ No testing of the 240 Volt AC system was undertaken.
- ÿ No liability whatsoever is accepted for any injury, death or damages arising from those parts of the vessel to which access could not be gained at the time of the survey and on the strength of which I am unable to comment.
- ÿ This survey is not undertaken with any intention to ascertain that the vessel would comply with any rule or code of practice as may be required by any authority under whose jurisdiction the vessel may be operated. Due to over coatings joiner work, installations alike, access to certain parts of the vessel were difficult or impossible and therefore no responsibility can therefore be accepted for failure to discover or report on these defects which may exist in

these areas.

- Y The vessel was not tested for transverse or longitudinal metacentric stability or buoyancy and this report must not be taken to imply that the vessel has sufficient stability or buoyancy for the intended purpose. In this respect, it cannot be confirmed that the vessel meets the Essential Safety Requirements of the Eu Recreational Craft Directive 94/25/CE. It was not possible to ascertain the maximum allowable load of the vessel. It is the owners responsibility to ensure that basic stability information is placed on board the vessel and understood and that she is never overloaded.
- Y Matters of design were not considered to be part of the brief.

Definition of terms & ratings.

1. The use of the word *appears/appeared* indicates that a very close inspection of that component/system/area was not possible due to constraints imposed upon the surveyor (e.g. no power available, inability to remove panels).
2. The use of the word *serviceable/adequate* indicates that particular system, component or item is sufficient for a specific requirement.
3. The use of the word *good condition* indicates that the component /system is nearly new with only minor cosmetic or structural discrepancies noted.
4. The use of the word *fair* indicates that the component/system is functional as is with minor repairs and should be monitored often to see if its condition deteriorates.
5. The use of the word *poor* indicates that the component/system is unsuitable as is and will need to be replaced or repaired for it to be considered functional.
6. *Readily accessible* means cable of being reached for operation, inspection or maintenance without removal of any craft structure or use of any tools or removal of any item.
7. *Urgent Recommendation* must be done urgently, preferably before re-floating and certainly before any use is made of the vessel.
8. *Recommendation* should be done at the earlier of next docking or within six months or such other time scale as may be specified.
9. *Suggestion / advisory comment* for information and consideration, or may be necessary to comply with waterways standards or regulations on inland waterways, but not of particular significance to safety or insurability at this stage.

Seller's liability: "in the course of a business"

By virtue of section 14(2) and (3) of the Sale of Goods Act 1979, terms relating to the satisfactory quality and fitness for purpose of goods are implied into contracts of sale only where goods are sold "in the course of a business".

The words "in the course of a business" are to be interpreted widely and the nature of the goods sold has no bearing on whether a transaction can be said to have taken place "in the course of a business". As such, the sale of a good which is incidental to a seller's normal business, such as the sale of a fishing vessel by a fisherman, or the sporadic sale of a piece of equipment which is no longer required by a business, will be held to have taken place "in the course of a business".

Craft sold in the course of business will be covered by the Sale of Goods Act and the purchaser will be able to enforce certain legal rights against the vendor in the event of the goods being faulty or not fit for their intended purpose. Private sales are not subject to the same safeguards, apart from misrepresentation.

VESSEL PARTICULARS

Name of vessel: *Confidential*.

Hail Port: Not observed.

Owner: (Stock boat/ see Sellers Liability overleaf).

Intended use: Recreational / Private.

Navigation Limits: Seagoing. Category B offshore.

Date of Survey: 2008.

Type: Princess.

Model Year: 415 GRP Fly Bridge Motor Yacht.

Builder/designer: Princess Yachts, Plymouth, England.

Year Built: 1990.

LOA: 41'0" Beam: 13'11" Draft: 3'8" Air Draft: 14'2"

Gross Tons: 15.5 tonnes. (approximated).

Engine: Volvo TAMD 71B 380HP inboard diesels with shaft drives.

Hull ID number: (embossed on transom)

Broads Authority: Index Number: NA.

Yard Number: Not observed. **NB:** The vessel was Registered as a Small Ship and bore the Number The name of the vessel should be clearly painted on either side of the bow section.

The above information, including engine information is gathered from various sources, that is Brokers details, and neither confirmed nor guaranteed.

DESIGN AND CONSTRUCTION

A precise specification for the structural lay up was not available at the time of the survey and this cannot be confirmed, however the hull construction appeared to be of typical solid polyester laminate with fibreglass matt and woven roving. The internal hull structure consisted of cored fibre glass floor stringers, partitions, plywood bulkheads and joinery bonded to the hull, and deck moulding.



There was accommodation for six persons, with two berths in a spacious fwd cabin, two in the mid berth and two more in the wheelhouse. The semi displacement hull was medium to deep vee with a dead rise of approximately 16 degrees at the transom, honing up to 20 degrees amidships. The chine was toed-in, and knuckles in the topside appeared to keep spray at bay.

The hull was fitted with a separate fibre reinforced plastic deck moulding and upper steering position, of similar construction bolted to the main hull with the bottom and sides of the hull strengthened internally by encapsulated stringers and encapsulated foam transverse bottom frames. The scantlings may be considered to be average and typical for this type and size of vessel but no guarantee can be given as to their suitability in this particular case.

The vessel generally appeared to have been built to accepted recreational marine industry production standards and practices at the time of its construction, using commonly accepted materials.

EXTERNAL HULL EXAMINATION

The vessel was not tested for transverse or longitudinal metacentric stability or buoyancy. It was not possible to ascertain the maximum allowable load for the vessel.

The vessel was lifted ashore and placed on blocks on a hard stand at the above site. There was good external access except in way of the keel blocks, shores and other supporting structures. There was reasonably good internal access except in way of fuel and water tanks and similar fitted items. The vessel was not 'stripped out' for survey she had been washed off and was in generally good clean condition. The vessel was viewed from a distance at various angles and no apparent or obvious signs of major longitudinal or transverse deformation or structural failure which might indicate earlier serious damage or poor repairs observed.

The side, bottom and transom panels were generally in good order, fair and free of obvious moulding and pigment defects but it was noted that there were a number of minor scratches and contact abrasions on the topsides. The stem and transom quarters were particularly examined and no significant contact gouges or abrasions noted. There was some ultra-violet light deterioration of the topside gelcoat surface but this to be of no structural



consequence. The bottom and side panels of the hull were lightly hammer tested using an engineers ball hammer to test to see if there were any obvious voids in the lay up but none were discovered. This was particularly carried out at acute points of the hull form or at points of contra flexure where such voids may be expected. No guarantee can be given, however, that such voids do not exist. The hull was sounded all over by this means with no indications of soft spots being noted in the gelcoat and, judging by the general hard resonance, the structure appeared to have been solidly built to a good standard. The hull was especially examined at the points where the bulkheads were fitted and no sign of a hard spot in these areas were noted nor were there any signs of gel coat cracking indicating that the shell was 'hinging' seen.

The vessels bottom was cleaned of weed, crustaceans and other marine growth and the antifouling coating was found generally in a fair condition, with the remaining adhering well to the shell suggesting compatible paints had been used. Where considered necessary in the circumstances at the time of the survey, paint coatings were removed from the shell (in sample areas only) in order to evaluate the local gel coat condition in those areas. This was done to allow the surveyor to form an overall impression of the general status of this. It should be noted however, that, unless a hull has been completely cleaned back to the bare gel coat prior to the survey, I cannot confirm the detailed condition of the shell gel coat surface, fastenings etc. My conclusion therefore based on the evidence of the sample areas examined. Where this process has exposed the gelcoat on the hull no osmotic defects or gelcoat blistering was observed. The undersigned surveyor has made every effort to determine the presence of blisters short of destructive testing, and that blisters were not found. This, however, does not mean that blisters won't develop at a later date.

SUPERSTRUCTURE / COCKPIT/ FLYBRIDGE / CANVAS

Deck: Main deck was cored FRP with moulded non-skid pattern.
Wheelhouse/coachroof: Moulded cored fibreglass.

The deck and superstructure were formed from one fibre reinforced plastic moulding, apparently of the same grade and construction as the main hull though this could not be confirmed. This was specially examined and found generally weather tight, free of moulding and pigment defects and it also appeared to be satisfactory secured to the hull moulding. Where it was possible to examine the deck fastenings these were found adequate, in generally good order and the unit was well secured. The deck and superstructure unit was particularly examined for star crazes in highly stressed areas and under the side stanchion feet for stress crazing but none of these defects were found. The deck was tested in a number of places with the Surveyors weight and no undue flexing of the structure noted.

The hull to superstructure joint was formed at the gunwale. It was secured by steel through fixings, and was concealed on the exterior by 50mm x 20mm Alloy fender strake with rubber inserts, which was found to be in a good condition and firmly attached. Where it was accessible on the interior the joint was secure, encapsulated and showed no evidence of any leakage.

BILGE PUMP INSTALLATION / BILGE AND ACCESS

Electric pumps: One 12 volt DC electric pump and float switch.
Manual pump: Whale gusher type with three pump station.

The vessel was subdivided by non watertight screen bulkheads. Oil and water separation was provided for. The engine bay hatches and traps located on the floor in the companionway allowed access to the bilge. Various other traps were accessible through out. Apart from the small amounts of standing water on either side bilge in the lazarette, the bilge areas were relatively clean and dry.



One electric bilge pump was visibly inspected between the engines. All parts of the systems, which were accessible without removal of bulkheads, panels, etc; were carefully examined. Every effort was made to determine the systems installation compliance compared to similar existing systems. The system had been sensibly installed and was found to be in a good operating condition.

The manual pump appeared to have been competently installed and was found to be in a good/serviceable condition and although it was not possible to survey all the associated pipework in detail such as I was able to inspect appeared satisfactory with the connections and worm drives clamps in a serviceable condition.

INTERNAL STRUCTURE

The internal hull structure consisted of plywood bulkheads, foam cored stringers, floors, partitions and joinery bonded to the hull, and deck moulding. Most of the bonding was hidden by lining and cabinetry and could not be inspected. Where visible, the bondings, bulkheads and stringers appeared to be secure and free of defects and the laminates all appeared to be fully and satisfactorily 'wetted out'.

DECK FITTINGS

A pulpit was firmly fitted around the anchor platform with railings extending aft. There were also stainless steel hand rails secured on either side of the coach roof and wheelhouse sections. The bathing platform and boarding ladder were firmly secured to the transom, thus allowing a person in the water a way to re-board the vessel unassisted. Each mooring cleat was hammer tested and found in good condition, structurally secure and without undue rope wear, and as far as possible to establish without dismantling the remaining fittings including all guard wires were securely fastened and suitable for the Motor Yacht.

SEA VALVES / SKIN FITTINGS

Material: Gunmetal.

Valves: Ball.

Hoses: Reinforced PVC.

Emergency wood plugs: None observed.

Transducers: PVC.



The skin fittings were not drawn or opened for inspection but were examined in situ externally by hammer and scrape testing. The fittings were of the gunmetal ball valve type with bronze skin fittings, and the valves appeared to be in a serviceable condition, satisfactorily operational, with no obvious signs of water ingress in way of seals or glands. Although it was not possible to survey all the other associated pipework in detail such as I was able to inspect appeared satisfactory with the connections and worm drives clamps in a serviceable condition.

The topsides and transom were fitted with a number of non-ferrous and plastic skin fittings, all of which appeared to be sound where examined externally and were considered to be a reasonable height above the water line.

ELECTRICAL INSTALLATION

Ship's system voltage: 12V/ 240Volt.

Batteries: Four main heavy duty lead-acid batteries.

Generator: Engine alternators/battery charger.

The batteries were installed between the engines and were properly secured and covered over. The battery terminals were clean and tidy and there was no evidence of over-filling. The batteries were considered adequately ventilated for the charging facilities installed onboard and the batteries appeared to be in reasonably good condition.

The DC system was fitted with electronic master isolator switches. They were

considered to be installed as close to the batteries as practicable, and were checked to see if they functioned correctly and found in good order

The DC system was fitted with a marine type breaker panel correctly installed. The breakers, wiring and associated equipment where accessible were found in good order and generally operational, with none of the wiring found to run in the bilge area and clear of any source of direct heat or fuel or gas piping. The wiring was PVC insulated, and in the limited places for inspection, the wiring was adequately clipped up and fitted where necessary with bulkhead glands and crimped end fittings and found in good order. The cable sizes all appeared to be adequate for the circuits examined and the DC cables were all of the multi-strand type.



The navigational lights were tested, and appeared to comply with the appropriate regulations, however the starboard light was not powering, and the bulb may require replacement.

A 240 Volt AC system was also installed onboard, with associated RCD trip units incorporated. A splash proof fixed shore power socket arrangement was also installed with a built in automated battery charging system.

ENGINE INSTALLATION / GENERATOR.

Main engines: make: 2 x Volvo model: TAMD 71B hp: 380HP.

Type: Diesel.

Engine cooling: Closed fresh water/raw water heat exchangers.

Reduction gear: Hydraulic drive.

Engine hours: Not observed.

Engine bed: Fibreglass stringers

Pan under engine: Divided bilge. Generator: Panda.

Note: Inspection of the engines was restricted to installation only and the above details are not guaranteed.

A visual inspection of the engines, filters and related connections showed no signs of abuse and a good maintenance regime became apparent. The stringers that support the engine mounts were cored fibre glass and in turn they were secured to the hull and appeared to be free of stress. The main flexible engine mountings were secure and in a good condition. The crankcase oils and gearbox oils were checked and appeared to be clean and at the correct levels. The water cooling caps were lifted and no signs of oil emulsification was noted inside.



It was not possible to check the compression of the engines nor was it practicable to remove injectors and check the actual cylinder pressures, however the machinery was superficially clean, free of significant rust and excessive oil leaks and appeared to be in a serviceable condition, however, it is always strongly recommended that the engines are further examined and tested by a

competent Marine Engineer familiar with this type of machinery prior to purchase.

Engine throttle and gear controls were adequately secured and were tried and found in a good, smooth operational condition.

The exhausts were of the wet type, and the manifold, silencer and hoses appeared sound without breaks or fractures and there was no sign of carbon deposits. Clear of the manifolds the exhaust system was fully supported.

Recommendation

1. Although the engines appeared to be in a good / serviceable condition, carry out a thorough test of the engines prior to voyaging. Alternatively have a competent marine engineer inspect the engines/gearboxes and arrange an analysis of the oils.

FUEL TANKS AND FUEL SYSTEM

Fuel type: Diesel

Tanks: 260 gallons estimated.

Material: Mild steel.

Manufacturer's label: None.



Note: Welded edges on metal tanks are susceptible to crevice corrosion. Threaded and welded fittings for draw and fill lines are also other trouble spots. Unfortunately a mild steel tanks weakest link is the undersides and outboard side, which as in this case were impossible to see.

The vessel was fitted with two free standing fuel oil tanks of welded steel construction which were examined as far as practical and appeared externally in a fair condition. It was not possible to open up the tanks and inspect their interiors. The material of construction was considered suitable for the fuel contained therein and appeared to comply with the 30 minute fire resistant requirement of BS 476/20. The tanks were properly secured and no sign of movement was observed. There was some light corrosion visible to the accessible parts of the tanks, although this was not considered to be of any structural consequence.

The tanks filling and vent pipes were not accessible for a full inspection, however from what could be seen from a distance, they appeared to be suitable for the fuel used, and were in a good condition and firmly clamped. The filling pipes were taken to deck level and were so arranged that it was not possible for fuel to overflow into the vessels hull or bilge.

The fixed copper fuel piping ran clear of the bilges and was adequately secured and in a good condition. The piping was showing no signs of significant corrosion. The fuel was drawn from the top of the tanks, with the correct stop cocks installed for each engine. The fuel shut off cocks position should be clearly marked for the emergency services.

The flexible fuel hoses attached to the engines looked new, and were of the correct fire resistant type.

The fuel filters were of the marine type and appeared to be the non corrodible

and fire resistant type. The fuel tanks vent pipe openings on the exterior were correctly furnished with effective wire gauze diaphragm type flame arrestors.

Recommendation

1. The specific type of fuel in use must be correctly and clearly marked on or adjacent to all fuel filling points.

INTERIOR/ ACCOMODATION

The interior was found to be in a good cosmetic condition, and provided six berths in three cabins. The saloon, and berths were fully lined and fitted out to a good standard.

Soft furnishings remain in a good condition. It is not known whether foam used in the soft furnishings was fire retardant.



Bulkheads and joiner work showed good care and maintenance. The furniture was constructed from hardwood framing. The floors were carpet covered and the majority of the drawers and locker doors appeared functional.

STEERING GEAR

Rudders: Balanced/spade on hydraulics.

Material: Bronze.

Rudder stock: Bronze. (emergency steering bar).

Bronze tiller levers were fitted to the rudder posts and linked to the steering positions by a hydraulic purging steering system. The rudders were found in a good condition with no significant play noted in the bearings at the 'thru' hull positions. The rudders could be rotated from stopper to stopper and were tried hard over and found to be in a good smooth operation from both helms. All parts of the system, which were accessible without removal of bulkheads, panels, etc; were carefully examined. Every effort was made to determine the systems installation compliance compared to similar existing systems. The system has been sensibly installed and was found to be in a good operating condition.



FIRE FIGHTING AND SAFETY EQUIPMENT

Personal Floatation Devices: None observed.

Life ring/horse shoe: No.

Life sling: None observed.

Life raft: No.

Flares: Non observed.

Fire extinguishers: 4 x manual. Halon to dispose.

The vessel carried an adequate number of dry powder fire extinguishers. The extinguishers were kept in readily accessible positions adjacent to fire risk points, and appeared to have been properly maintained and were in a good condition.

Replace the two Halon extinguishers in the lazarette space. (one adjacent diesel heater. One adjacent Genset) for an FM 200 gas type. **Note:** If you have halon fire extinguisher or an installed fixed system in your leisure boat that contains halons 1211, or 1301 you will be affected by EC Regulation 2037/2000 on substances that deplete the ozone layer. According to EC Regulation 2037/2000, halon fire-protection systems and fire extinguishers must have been decommissioned by 31st December 2003, and the halons recovered. It is illegal to use or possess such extinguishers or fire protection systems.

Recommendation

1. I recommend that the owner obtains a copy of the Royal Yachting Association booklet C8/02 "Boat Safety Handbook" and use their recommendations as a checklist when outfitting the vessel with personal Safety Equipment suitable for the type of cruising and size of crew intended.

DOMESTIC WATER INSTALLATION

Tanks: Aluminium.

Capacity: 120 gallons (approximated).

Pumps: 3.8 pressure pump.

Dockside connection: No

Pressure regulator: None observed.

Water heater: 6 gallon calorifier/immersion heater.

The vessel was fitted with one freshwater tank of Alloy construction which was examined as far as practical and found externally in a good condition. The tank was not filled up and it was not possible to check fully its watertight integrity and this is not guaranteed although no signs of leakage from the joints or fittings were noted. It was not possible to open up the tank and inspect its interior and the quality of the water inside was not tested. The plumbing was of the plastic flexible piping and fitted with a pressure pump and was examined as far as practicable and found generally in good order with the worm drive clamps in a good condition.

The hot water calorifer tank was found properly secured beneath the 'step down' to the galley, with the associated hot water hoses found in a good condition and linked to the exhaust side of the port engine.

GALLEY / GAS INSTALLATION

Stove: Marine type full size cooker.

Cylinders: 1 x 4.5Kg Butane.

Gas Locker: 1 x GRP locker.

Microwave: Yes.

Fridge: Electric. (tested and proved powering).

A two burner hob was securely mounted in the galley and a satisfactory flame picture was present at each LPG appliance burner when all burners in the system were operating at their maximum setting at the same time.

The system was powered by liquid petroleum gas. The gas was supplied from one small cylinder situated in a vented GRP gas locker located in the cockpit. The locker was adequately vented overboard, and the drain pipe was found to be in a good condition and clamped at both ends. The locker was examined all over

and found to be in a good condition, and dedicated for its use. There was good access to the main shut off valves. The regulator was of the non-externally-manually adjustable type and properly secured. **NB.** Secure the gas cylinder with a strap. If an LPG cylinder tips over, *liquid* instead of *gas* might come out-with potentially dangerous results.

The gas cylinders flexible neoprene connection was in a good condition and of the correct type 2 BS 3212 hose.

The copper supply tubing was visually inspected where accessible and appeared to be in a good condition and properly secured. The pipework was protected, to minimise the possibility of damage where it penetrated the bulkheads.

The GRP, timber and soft furnishings nearby the source of heat were specially examined and no sign of heat damage, charring or scorching was noted.

The bottled gas installation was inspected visually only and pressure tests were not undertaken within the scope of this survey. All gas systems should be regularly tested as part of a normal preventive maintenance routine, and the installation of a bubble leakage tester, which permits simple non- invasive regular checks on the integrity of the system, is strongly recommended.

Recommendation

1. Cylinders must be secured so that the possibility of cylinders damaging low pressure regulators, pipe work or other LPG system components is minimised.
2. The cooker was connected by a flexible gas hose. This must be provided with an individual shut-off valve at the connection to the supply line. (access behind draw below cooker).

GROUND TACKLE

Anchor: Danforth Sea anchor.
Anchor windlass: Electric winch.

The main anchor was found in its dedicated position over the stem head fitting, with approximately 15 Fathoms of 32 x 25 x 6mm galvanised plain link chain cable, the length of which was not measured. A statistically significant number of links were measured for wear. It should be noted that the Classification Societies will allow up to 11% wear down in the links ends before requiring renewal of the chain. **NB.** Some links were showing corrosion and pitting and these should be further checked and tested within the next six months. The inboard end of the chain on the main anchor appeared to be securely attached to the vessel, although this is not guaranteed. The size of the anchor complied with the recommendations of the RYA Yacht Safety Document number C8/02.



The vessel was fitted with an electric windlass. The arrangements were such that it could be considered to be a strong point in accordance with the EU Recreational Craft Directive. It was considered to be capable of adequately accepting mooring, anchoring or towing loads. The winch was switch tested and proved powering from the lower helm position.

The fenders and mooring ropes were examined and found to be in a good condition and sufficient in number.

Advisory comment for seagoing.

Boat size	Chain size	Anchor sizes	
6m (20ft)	6mm	8kg (18lb)	4kg (9lb)
8m (26ft)	8mm	10kg (22lb)	6kg (14lb)
10m (33ft)	8mm	13kg (29lb)	10kg (22lb)
12m (39ft)	8mm	18kg (40lb)	16kg (35lb)
14m (46ft)	10mm	24kg (53lb)	16kg (35lb)
17m (56ft)	10mm	34kg (75lb)	25kg (55lb)
20m (65ft)	12mm	47kg (103lb)	40kg (88lb)

The amount of cable to carry onboard your boat depends on your cruising area and the depth of water you are likely to anchor in. 100M of chain or 150M of warp should be sufficient to anchor in depths of 25m at high water.

HATCHES AND PORTS

Hatches: Alloy type emergency escape hatch forward.

Portholes: Alloy framed construction.

Windows superstructure: Alloy drain framed/safety glass.

The forward hatch was examined and found to be secure and in a good condition. The hatches dimensions comply with the EU Essential Safety Requirements as a visible means of escape from the accommodation area.

The vessel was fitted aft with a door of alloy construction. This was examined and found to be in a good condition, secure and lockable.

The hatches and access doors appeared to be strong enough to withstand the point of load of a normal beings weight and the load to be expected from the water in the sea areas for which the vessel was apparently designed. The hatches and similar openings were of such a size and placed in such a position that it was considered that they would not be likely to allow serious down flooding of the vessel, although this cannot be guaranteed.

The windows which were aluminium framed and were examined and found to be in a good/serviceable condition. It was not possible to water test these items, and a few areas of sealant were visible on the exterior, presumably an indication of an attempt to cure leakage. The windows and shuttles appeared to be strong enough to withstand the water pressures likely to be encountered within sea areas for which the vessel was apparently classified.

VENTILATION

Various permanently open ventilators were installed onboard and were considered sufficient. Permanent and measurable gaps around doors when the doors were fully closed were also taken into account as part of the total fixed ventilation provision. The responsibility for the safety of anybody onboard your boat lies with the owner or skipper. I advise strongly that boats have enough fixed ventilation to feed all the appliances on board that use LPG, or other carbon-based fuels.

NAVIGATION INSTRUMENTS/ELECTRONICS

Compass: Yes.

Radar: Furuno.

GPS: Furuno Navigator.

Depth Finder: Echo.

Log/speed: Yes.

Wind indicator: No.

VHF: Yes+ Loudhailer and intercom.

Auto pilot: Cetrek. (Broker confirmed this unit has a fault.)

Stereo: Radio cassette player.

TV: No.

The vessel was fitted with the nautical equipment listed above, which, apart from the auto pilot, appeared to be in generally good working order.

STERN GEAR / ANODES

Propellers: Fixed, bronze, 3-blade.

Propeller shaft: Bronze metal.

Struts/P bracket: Single arm cast bronze/P bracket.

Bearing: Rubber cutlass.

Thru hulls: Bolted gland type x 2.

Ground plate lightning protection: n/a

The propellers dimensions were not checked for matching with the machinery power and revolution output, however the propellers showed no sign of significant corrosion and the propeller blades were individually sighted for obvious signs of significant deformation and none were found.



It was not possible to check the condition of the keys and keyways, however the propellers were a snug fit to their shafts and properly secured by bronze locking nuts and steel split pins. When the shafts were rotated by hand they were free.

NB: The stern glands, which were of the bolted gland type, were examined - without opening up - and found in a serviceable condition. There was no sign of excessive leakage but it was not known when they were last opened and repacked. As the remaining adjustment appeared to be well over halfway to the end it is suggested that the opening of the glands and an inspection of the packing would be prudent during the vessels next haul out. There was also signs of salt encrustation in way of the stern glands and their attachment bolts.

The P brackets and cutlass bearings were secure and in a good condition with no sign of corrosion or dezincification to the metal.

The propeller shafts were not drawn for inspection nor the tail ends examined. However no signs of surface flaking, fatigue or fretting corrosion to the shafts could be seen. The propellers were not removed from the shafts nor the cones examined.

The drive flanged to shaft couplings were visibly examined on the interior and the bolts hammer tested and these appeared sound and well tight. It was not

practicable to 'break' the couplings and test the alignment.

The vessel was fitted with two hull anodes, and two trim tab anodes. These were attached by way of steel bolting. The bolts were showing no signs of corrosion and the hull anodes were showing little wastage. (port hull anode replaced on day of inspection). The hull anodes were, inside the hull properly bonded to the engines stern gear seat, P brackets etc and to various overboard discharges by a clearly marked multi stranded earth wire of about 4mm square. The bondings were examined as far as practicable limitations of access allowed and were found good.

Advisory comment

The anodes appeared to be of the Zinc type. If it is necessary at some time for the vessel to change from salt to fresh water, or visa versa then it should be borne in mind that this will have a deleterious effect on the anodes fitted. Magnesium or aluminium anodes (which are suitable for fresh water) have a much higher driving potential than anodes manufactured from zinc. If a vessel fitted with magnesium or aluminium anodes passes into salt water for anything longer than about seven days, the anodes will waist away very quickly. Vessels which are fitted with magnesium or aluminium anodes moving into a salt water environment for longer than a week should be, therefore, fitted with a replacement zinc anodic system. Conversely vessels fitted with zinc anodes(suitable for use in salt water) will find over a period exceeding about seven days that the metal will be coated with an impervious off-white crust of zinc salt which will very effectively prevent it working even when returned to salt water. After any trip into a fresh water environment a vessel fitted with zinc anodes should have these thoroughly scaled back to bright metal. If proceeding into fresh water for longer than about seven days a vessel should be fitted with replacement magnesium or aluminium anodes.



HEADS/SHOWER INSTALLATION

Head: Two electric flushed sea toilets.

Holding tank: None observed.

Sump: Two shower sump drain pumps.

The heads were fully lined and fitted with Marine type sea toilets, sink units and showers. The heads were plumbed in reinforced hoses found in a good condition and the toilets discharged directly overboard.

The seacocks which were found, as stated as *above*, accessible and examined without opening up. Pipe work I was able to inspect appeared satisfactory with the connections and worm drives clamps in a serviceable condition.

The shower water drain pumps were switch tested and proved effective and were visibly inspected and found to be in a serviceable condition and firmly fastened down.

TRIM TABS

The aluminium bladed trim tabs were secured to the lower transom on the exterior and operated through pneumatic struts that were helm controlled by the hydraulic pump secured to the transom bulkhead. Although not tested under any significant load, the system appeared to be functional.

HEATING

A diesel driven warm air heater was secured in the lazarette space and was switch operated from the control unit in the saloon. The units fuel piping was in a good condition, it will however require further securing adjacent the starboard engines fuel tank. Plus the heaters fuel pump at this position requires securing (mounting bracket broken). The heaters exhaust pipe was properly lagged and adequately supported and fitted with the appropriate exhaust cowling at the 'thru' hull position. The Yacht Broker confirmed the unit had a start up fault.

SUMMARY / OBSERVATIONS

This document is a General Condition Survey Report for pre-purchase, mortgage or insurance purposes on the Motor Yacht carried out by the undersigned Surveyor whilst acting as a Director of Insight Marine Surveys Ltd.

The vessel, appeared to be a standard production version of a Princess 415 GRP Motor Yacht, no unusual modifications or changes were observed and she was found to be in a good structural condition overall and she has been constructed to a high standard out of good quality materials.

The vessel appears to have been well maintained, well equipped and was found in a good, clean condition, and in our opinion, was worthy of purchase for the stated intended use as a Motor Cruiser for general pleasure use within sea areas laid down by European Directive (94/25/EC) class B, offshore, provided that all recommendations as given later within this report are carried out within the stated time limits.

With the recommendations related to industry standards and other safety issues in this report properly implemented, the vessel should be suited for her intended purpose. Recommendations concerning maintenance and upgrades should be considered normal maintenance or improvements to be done by a prudent owner and are not intended to detract from the vessel's overall condition or value.

The ultimate responsibility for the maintenance and safe operation of this vessel lies with the owner and master.

Within this report principal repair recommendations are graded for your information according to priority as follows:

1. *Urgent Recommendation* must be done urgently, preferably before re-floating and certainly before any use is made of the vessel.
2. *Recommendation* should be done at the earlier of next docking or within six months or such other time scale as may be specified.
3. *Suggestion / advisory comment* for information and consideration, or may be necessary to comply with waterways standards or regulations on inland waterways, but not of particular significance to safety or insurability at this stage.

Urgent recommendations.

1. The stern glands, which were of the bolted gland type, were examined - without opening up - and found in a serviceable condition. There was no sign of excessive leakage but it was not known when they were last opened and repacked. As the remaining adjustment appeared to be well over halfway to the end, it is suggested that the opening of the glands and an inspection of the packing would be prudent during the vessels next haul out. There was also signs of salt encrustation in way of the stern glands and their attachment bolts.

Recommendations

1. Before voyaging I recommend that the owner obtains a copy of the Royal Yachting Association booklet C8/02 "Boat Safety Handbook" and use their recommendations as a checklist when outfitting the vessel with Personal Safety equipment suitable for the type of cruising and size of crew intended.
2. Rectify the following circuit faults on equipment not operating. Starboard navigational light. Auto helm. Diesel warm air heater.
3. Although the engines appeared to be in a good / serviceable condition, carry out a thorough test of the engines prior to voyaging. Alternatively have a competent marine engineer inspect the engines/gearboxes/ genset and arrange an analysis of the oils.
4. The specific type of fuel in use must be correctly and clearly marked on or adjacent to all fuel filling points.
5. Gas cylinders must be secured so that the possibility of cylinders damaging low pressure regulators, pipe work or other LPG system components is minimised.
6. The cooker was connected by a flexible gas hose. This must be provided with an individual shut-off valve at the connection to the supply line. (access behind draw below cooker).

Advisory comment

1. Fuel filling hose and vent pipe connections should be accessible for visual and manual inspection.
2. Fuel shut of cocks must have their location clearly marked in open view.
3. Clearly label the main gas shut off valves. It is recommended that the marking should have lettering, minimum 10mm high, be clearly distinguishable e.g. red letters on a white background, not become illegible through cleaning, fading, or normal usage.
4. Secure the feed pipe for the warm air diesel heater. (adjacent starboard engines fuel tank).
5. There was signs of salt encrustation and corrosion in way of the toilets raw water inlet valve (starboard side) and its attachment handle. (access below mid cabin floor hatch).
6. Replace the two automatic Halon fire extinguishers in the lazarette space. (see page 10).
7. Any owner of a boat with overnight accommodation is strongly recommended to install a smoke alarm in the best possible place and to press the test button routinely.
8. Radar arch, access panel found loose. (fastening screws missing).

Valuation

The Fair Market Value given herein is defined as the highest price that can be obtained by a willing seller from a willing buyer, with neither being compelled to sell or buy, and the subject vessel having been offered on the open market for a reasonable time. The guidelines used for the valuation are as provided by industry pricing guides. Estimates based on currently listed asking prices, along with market conditions were also considered.

Fair Market Value: (in Pounds Sterling) £100,000.00 (One Hundred Thousand pounds).

This work was carried out in accordance with the following:

- a) Our Standard Contract of Employment.
- b) The code of Practice for Small Craft Surveys published by the International Institute of Marine Surveying.

SURVEY PRACTICE STATEMENT.

This survey report is for the benefit of Mr. and is not transferable except for the named Owner's purpose and may not be used for other purposes and may not be relied upon by any other person without written consent by the surveyor. The surveyor warrants that this report is a true and unbiased opinion of the vessel, based upon a visual inspection on the date of the survey. The findings, opinions and conclusions are based upon the best professional judgment of the undersigned surveyor. If this survey does not discuss a specific item, equipment or machinery, it is not covered by this survey. While every effort has been made to conduct a thorough survey, there can be no guarantee or warranty, express or implied, as to the condition or suitability of the vessel and her equipment or machinery. This survey makes no representation and does not purport to describe any condition which may have changed since the date of the survey and the recommendations herein are limited to those that, in the opinion of this surveyor, are reasonably necessary and appropriate, based upon the conditions and circumstances as they existed at the time of the survey.

Respectfully submitted,

Signed Steven Truss

SM TRUSS AssocIIMS

MEMBERS OF THE INTERNATIONAL INSTITUTE OF MARINE SURVEYORS

