WINDWARD FEATURES.

COPPERCLAD ANTIFOUL .

Copper impregnated gelcoat . Thanks to Lloyds of London she has an abnormally high copper content and many years of service life left before having to consider conventional antifouling paints .

HEAVY DUTY HIGH VOLUME INDUSTRIAL WATERMAKER .

Custom built system that fills our 340lt tanks in 90 minutes . Production rate is approx = 220L/hr . The high pressure pump is engine driven via an electro-magnetic clutch . The entire system is completely over-engineered regarding drive belt sizing , layshaft loading and the electro-magnetic clutch is rated six times it's maximum load generated by the high pressure pump .

BURMESE TEAK DECKS .

High quality Burmese teak was used on the deck , coachroof and cockpit . To avoid leaks no screws were used to fasten the teak planking to the deck .

DECK / HULL PENETRATIONS .

In order to preserve the integrity of the foam and balsa cores in the hull and deck , every hole drilled through the deck and hull is completely sealed off to avoid water ingress into the respective cores . Once a hole was drilled the surrounding core material was machined using a special tool and the waste was then removed . Using a liquid epoxy with a 7 hour pot life every hole was closed on one side and filled over and over again until the core was completely saturated and the void was full . This method creates a solid epoxy plug to prevent compression of the core material when tightening the fasteners of a deck fitting and it creates a watertight seal . Time consuming but well worth the effort in the long run . Along with the epoxy plugs , areas of the coach roof and side decks where deck equipment is mounted have hardwood pieces glassed in to support the deck from compressing . Where appropriate large stainless steel backing plates (not penny washers) are used on all the deck gear subjected to high loads .

WINDVANE STEERING SYSTEM .

Custom built rudder mounted unit , simple to use system .

BOWTHRUSTER.

A Lewmar bowthruster is operated via a joystick on the instrument panel . A very handy piece of equipment particularly when manoeuvring in a tight marina with the wind on the beam .

DUAL TANK LEVEL SYSTEMS .

The diesel fuel tank and twin water tanks incorporate both visual site level glasses and an electric gauge system . The blackwater tank level gauge is electric only .

BLACK WATER TANK SYSTEM .

Large blackwater tank which can be emptied either overboard or via the deck pump-out fitting . The tank breather pipe and the toilet discharge anti-syphon vent is led up the mast to avoid any foul odours at deck level .

HOT AIR EXTRACTION FROM ENGINE COMPARTMENT .

High ambient air temperatures within the engine compartment are removed via an in-line blower that exits through the coach roof via a sirocco vent . This feature improves the performance of the engine and protects all the components within the compartment from heat degradation .

RAW WATER VENT DISCHARGES INTO GALLEY SINK .

To eliminate issues with salt encrusted anti-syphon loops blocking , a 316 S/S loop is vented into the galley sink . This also provides a visual reference which can be viewed from either down below or from the cockpit in the event of am impeller failure or blockage in the raw water intake .

LARGE ENCAPSULATED WATERLOCK .

A custom built large capacity 316 S/S waterlock incorporating a drip tray is built into the cavity directly beneath the engine on the centre line . The entire tank is encapsulated using hi-tech matting and epoxy resin and lagged to prevent any damage to the hull should there be any heat generation . The 316 S/S exhaust pipe is also lagged in the sections where the pipe is exposed .

VENTILATION .

One of the boat’s great features is how cool the interior ambient temperatures are in tropical conditions , even in French Guiana . The combination of a huge skylight , opening portlights including additional portlights in the aft cabins and a forehatch which opens fore and aft allows a breeze to blow through the boat’s interior unhindered . The advantage of the forehatch opening both ways is that if berthed in a marina with the breeze from aft the forehatch can be reversed . In addition there are 4 large dorade vents leading into the forepeak , heads , stb aft cabin and galley and these vents are mounted on Sparkman Stevens designed teak boxes allowing maximum airflow . When the boat is stored and closed up the combination of the dorade vents and a louvred top washboard eliminates any stale air being trapped down below leaving a fresh clean odour even after six months of storage . An “ Anti-mould “ product was mixed into the interior paint and to-date we have

had no mould issues at all . The bulk of the locker doors are louvred with the balance either fitted with slotted vent plates or solid mirror doors .

DEKS OLJE WOOD OILS .

The exterior wooden parts mainly Burmese teak and iroko are protected by the Deks Olje wood oil system . Every piece of timber has been saturated with Deks1 and then coated with Deks2 which provides the UV protection . The advantage this product gives you is minimal preparation each season when re-coating these parts . The initial saturation of the timber using the Deks1 is never repeated so seasonal maintenance involves cleaning the surface and possibly a light sanding if it is warranted and then 2 coats of Deks2 brings the finish back like new . This product eliminates the need to remove all the existing coatings which in the case of polyurethanes and varnishes involves heavy sanding and over time the loss of timber .

CHILLED FILTERED DRINKING WATER .

A very nice feature especially in the tropics is a continuous supply of chilled filtered drinking water . A dedicated manual pump dispenser coupled to a 316 S/S manifold which has a silver impregnated carbon filter mounted in-line ensuring odour free pleasant tasting chilled fresh water .

LPG. GAS SYSTEM .

A large 19kg gas cylinder along with a 5kg spare cylinder supplies the Force 10 stove with fuel . The BEP gas management system operates a 12v DC solenoid mounted on the cylinder in use at the time . There are two gas sensors , one mounted beneath the stove in the galley and a second sniffer mounted near the gas locker . With the large capacity cylinder we found that refilling takes place so seldom that when we have run out , using our refill kit we fill the cylinder from a remote cylinder standing on the coaming avoiding the need to remove the cylinder from the gas locker .

BILGE PUMP SYSTEMS.

Three electric pumps and two manual pumps make up the bilge pumping system . A RULE 2000 pump along with a JOHNSON L4000 flood pump are mounted on the bilge floor with offset automatic switches allowing the flood pump to take over should the smaller pump not cope with the water flow . The VIKING greywater pump has a roving suction hose which can be used to mop up should it be required . Two WHALE manual pumps are included with one mounted down below in the forepeak and one mounted externally in the cockpit . A high water alarm system with the float switch mounted on the bilge floor alerts when water has accumulated in the bilge .

FILTRATION.

A bulk tank fuel filter/water separator is mounted in-line on the tank filler pipe removing dirt and water before the fuel enters the tank . Exiting the tank the diesel is then piped to a sedimenter then a RACOR FG500 and finally it passes through the standard spin-on fuel filter mounted on the engine . The engine air filtration system is a Donaldson Duralite filter fitted with an Informer indicator measuring restriction at the intake manifold .

CHARGING SYSTEMS .

Two engine driven alternators , one a standard 70AMP and a second 150AMP high output unit charge the start and house battery bank respectively , although through the master switch these alternators can be swapped .
When connected to shore-power a 50AMP Smart Charger charges both banks .
An Airmarine 400w wind generator fitted with " Silent Blue Blades " is mounted on rubber mounts on the starboard quarter . These mounts eliminate any high frequency vibration being transmitted through the hull .
Two 85w solar panels independent from each other are mounted on the bimini with separate controllers . Both panels including the wind generator are connected via watertight quick couplers to enable them to be removed easily for long-term storage .

ELECTRICAL SYSTEM .

The wire used throughout the electrical system was the silicon multi-strand tinned copper type run through Copex (flexible conduit) and terminated in sealed enclosures . Wire sizing was paramount and all the runs are over-spec regarding the current draw imposed on each circuit . Throughout the boat there are 10 off 12v DC outlets and 3 off AC outlets , one being the 220v inverter outlet . Two AC outlets function via the shorepower connection which is usually 220v or 110v .

PLUMBING.

A combination of threaded semi-rigid piping and flexible hosing was used throughout the hot and cold water system . The 3/4" full bore high temperature spec piping is rated at 50bar working pressure and utilizes threaded fittings . There is still no joint that competes with a threaded one when it comes to integrity .

Goodyear Thunder hose which is a clear walled pipe with a S/S coil in the wall is used to plumb the component to the semi-rigid pipe . T-BOLT (316 S/S) clamps are used on just about every connection throughout the system . The idea of using flexible tails off the semi-rigid piping is to eliminate high frequency vibration caused by pumps e.t.c. Large bore Thunder hose with T-BOLT clamps is used on all the Blake's seacocks and bilge pump lines . The use of a special high temperature hose was used between the engine and the calorifier . The rigid piping used on the watermaker high pressure circuit is 316Ti S/S with polyurethane tubing used on the low pressure side .

WATER DISTRIBUTION.

In the galley there are three separate systems , one being a hot/cold freshwater mixer , a salt water foot operated tap and a chilled water drinking tap which is hand operated .
In the heads there is a hot/cold freshwater mixer which when mounted in a support bracket combines as an overhead shower .
Lastly there is a freshwater cockpit shower which was our preferred place to bath .
Although it is cold water only , in the tropics you seldom need hot water .

HARDWOOD USED .

The bulk of the wood used on Windward is high quality Burmese teak . The Burmese teak used on the deck was a special order which we had to wait 5 months for and the teak used down below came from stock that was 70 years old when l purchased it . The floors in Windward are made of solid teak & holly , the louvred doors along with the raised panel doors are made of kiaat , maple slats line the hull in the cabins and all the hard wearing timber above deck i.e. caprail , samson posts are made out of iroko because of it's superior abrasion qualities .

POLYURETHANE LINING .

The anchor locker , lazarette and bilge areas are lined with polyurethane to protect the surfaces from being damaged . The blackwater tank is lined with the same product .

COCKPIT COMFORT .

A large fold-down spray dodger combined with an overlapping bimini provides adequate protection in the cockpit . The bimini has removable side and rear panels and the cockpit has custom-made cushions with two separate coaming cushions which can be placed on the coaming .

PROTECTION COVERS .

A custom-made full boat cover with additional skylight , windlass , liferaft , binnacle , wheel and a complete set of winch covers protect the boat while in storage . A main hatch cover is used while underway .

HANDHOLDS.

Above and below decks there are numerous handholds allowing safe movement around the boat at sea .

NIGHTLIGHTS.

A dedicated lighting circuit consisting of red LED's which light up certain areas of the interior provide sufficient light to move about the boat safely at night without affecting night vision while at sea .