# Ocean Advice Limited

Carpenter Court, 1 Maple Road, Bramhall Stockport, Cheshire SK7 2DH United Kingdom www.oceanadvice.club



### **Pre Purchase Survey Report**

Yacht Name: MY "Sample"

Yacht Brand: Dominator 780

Hull No." ......"

Date and Place of Survey: XXXXXXXX at XXXXXXXXXX

### By order of XXXXXXXXXXX (Buyer)

This report is based on the opinion of the undersigned and covers items observed at the time of the survey only. No warranty is given or implied by this report. No liability is assumed for errors or omissions of this report. It is agreed by all parties who make use of this report that this surveyor, this office and its heirs are indemnified and discharged of any and all liabilities that may arise therefrom. This report represents the unbiased findings of Ocean Advice Ltd.

Submitted without prejudice,

Ocean Advice Ltd.

**Dipl. Engineer Torsten Lieb** 

torsten.lieb@oceanadvice.eu

Internal notice: due to the huge amount of pictures and videos, the author decided to provide the pictures/ videos with description in a dropbox folder to which the buyer has access to. On his request that access can be granted to others.

#### **General impression**

The motor-yacht is in reference to its age and running hours in a poor condition.

Based on the findings during the survey, especially regarding the non maintenance on any installation, we found all installations either non functional or in poor condition.

# General Recommendations for the buyer

In order to get the boat able to conduct a full, safe season, or a longer journey the following points, marked with Priority, have to be fixed.

Even after repairing those points, because of its bad, or non existing maintenance, the be no guarantee for frictionless journey. Therefore we further recommend to hire a captain with technical skills and experience with that specific kind of yacht.

# Part A - Priority to do

### 1. Priority Engines

A sea trail with a technician, provided by XXXX( paid by the Buyer ) was conducted on the XXXXXXX Sea condition 2. The engines couldn't start in the first place because of its dead batteries. After they had been replaced the engines started.

During the first attempts of starting and on its first starts the display of the engines showed various alarms. Because of the technicians resetting and disconnecting the power again, the alarms disappeared. Further the internal Memory Card of the MAN Control System is not in function. Therefore it is impossible to read out the History of the Engine with all its Alarms and the engine hours are not visible. This is a well known problem and if the engines had been serviced properly, it should have been solved. During the sea trial the staff had been concerned that the engines would go in safe mode because of the alarms, but it appeared that the Technician on board with the computer attached to the engine had prevented it. Until the time of writing this report we had not received a proper performance data sheet from the time of the sea trail.

Even the engines had been working and reached their max. RPM, for us the Engine Survey including the work of the Technician of XXXX, is inconclusive.

We recommend having this MAN Memory Card <u>from MAN</u> repaired by sending them directly to MAN and to have a careful engine Service done, as well as controlling all leakages of oil and eliminating the causes. Here we want to point out that we found a lot of oil in the bilge below the port side engine. The explanation from the XXXX representative was: that during the last service they forgot to clean the bilge. Well frankly, that is unlikely, because the oil in the engines is quite old and there was oil missing, which they filled up directly before the seatrail.

Estimated cost for that ( min. required ) Service and the Memory card is

approximate 10.000 € if there is no bigger issue with the oil leakages.

After the work, mentioned above, is done and the cards are repaired a new sea trail can be carried out.

### 2. Priority Propeller-shaft

We found at the standard check of the shafts, while the boat was on hard standing, that the rubber bearings in the shaft support had been consumed unevenly.

On the end support (close to propeller) the shaft was hanging down and the ruse was consumed to 3mm on its lower part. On the top part the rubber was almost not consumed and even had an empty space of about 3 mm.

On the middle support the result was almost the same, but to its left and right sides. Further to that we detected around the end support, where it is mounted to the hull, unprotected Fiberglass. Normally those parts should be protected by Geelcoat.

Upon our arrival the propellers had been dismounted. On our question to the XXXX representative, WHY? we received the answer: just for cleaning and checking.

We found that one of the propellers had on its outer part of the blade an approx 5 cm long crack. Also many small cuts on the outer blade's edge were visible.

During the sea trail we recognized a continuous light vibration and it was visible that the shaft inside the boat from the shaft tunnel to its connection on the V drive Gearbox was shaking more than it is normal. We believe that the cause therefore is the misalignment of the shaft.

We pointed our findings out to the representative of XXXX and received the answer that the Bearings had been changed recently.

Our conclusions based on the findings and statements is that the rubber of the bearing is consuming quite fast. The risk during a longer journey that metal on metal will scrape and the possibility of damage to the GRP Hull by continuous vibrations is quite high.

We recommend dismounting the Shafts and Propellers, have both checked by an independent company of its balance and if necessary balancing, repair both. Further check the alignment with the laser and correct it. In the end change all bearings.

Estimated cost for that 15.000 to 20.000 € if propellers or shafts do not need to be replaced.

## 3. Priority Nermo Doors

Those doors need to be watertight and in function, because they are emergency exits and of course are supposed to prevent water from entering the boat in cases of emergency and rough sea.

Well, both doors, the one at the crew area and the one at the kitchen are not in function. At least the door in the kitchen is closing and it appears watertight, but the closing / opening mechanism is very slow in the emergency- and electrical mode.

The crew door is a total failure.

Just therefore the boat is unsafe for traveling.



Estimated cost to do the min. repair 6.000 €

Our recommendation is to replace at least the crew door with a new system, which we estimate with approximate 8.000 €

# 4. Priority Safety Equipment

The life raft, located on the fly, is without any label or show the capacity, nor the service date, therefore, unless there is other proof, not valid or safe. Normally the boat has two life rafts, for the amount of persons that are mentioned in the registration.

Other required safety material wasn't found or up to date.

We recommend updating the safety equipment in consideration of its use and registration. Further we recommend a different position for the liferaft, because of its weight it will be almost impossible to throw it overboard in the case of emergency.

Estimated cost for this approximate 10.000 €

# 5. Priority Anchor

The anchor winch itself is broken on various spots. The electrical connections below are poorly isolated, the engine itself is rusted. A Chain stopper, to prevent the force to pull on the winch itself while the boat is moored on anchor is missing. The chain is not in the center of the rollers and therefore destroying the rollers. The anchor stopper or roller outside the bow has been replaced by a 1 meter long screw bar?

Because the anchor is the emergency stop of the boat, the complete system should be renewed.

Estimated cost for this approximately 6000 €

## 6. Priority Flaps

In order to make a longer journey the flaps are required.

Right now it appears that the electric engine doesn't work. During the survey a technician of XXXX used a battery powered drill with an attachment to run the hydraulic pump and adjusted them by manually pushing the valves. That was necessary, because upon our arrival the flaps had been in different positions and the system did not work from any control panel, which would have made a sea trail impossible.

Estimating a cost is quite impossible, because of unknown causes. In the best scenario approximate 1000 €

# 7. Priority infiltration water windshield

The silicon sealing around the windshield is on many spots broken, loose and with bigger holes. Water did already enter, what was visible on the leather covers and on the compartments below.

Therefore we doubt that the windows will survive a heavier sea and maybe do not stay in place. Regardless of the scratches on both sides, caused by the wrong positioning of the wipers, the silicone has to be replaced.

Estimated cost for this approximate 1500 €

# 8. Priority Windshield Wipers

2 out of 3 don't work and the water flushing system doesn't work at all.

Both functions are necessary to drive the boat from inside. Since the manufacturer did not leave a space to reach to those parts, 3 openings have to be cut in the superstructure behind the bench in front of the windshields. Then the angle of the wipers has to be changed so as not to continue scratching the glass.

Estimated cost for this approximate 2.800 €

# 9. Priority Firefighting / Anchor Wash / Emergency Bilge pump

The pump was found continuously running as soon as the breaker was switched on.

We couldn't find a station to switch it off. Also the 3 way valve located at the bow in the anchor winch compartment did not work properly.

This is one pump for emergency bilge ( if the normal pumps don't work or are too weak) and for firefighting with seawater.

That is the reason why it is on the priority list.

Estimated cost for this approximately 1500 €

## 10. Priority Service Batteries and Charging system

During the survey we found the Batteries at around 20 Volt, a charging initiated by the XXXX representative caused by overheating of the broken batteries. Also he stated that the batteries had been changed last year. The overheating and evaporating of its acid caused a very dangerous situation for health and life. The batteries are located under the captain's bed. The temperature on the mattress had reached already 45 - 50 C even though the batteries are in a separate wooden box below the actual wood base of the bed.

We investigated the charging system and found out that 1 of 3 chargers was missing. The old system of power / charge distributors became hot. It seems like the battery temperature sensor is not connected or not in function.

We highly recommend changing the complete system to an updated technology either make that place under the captain's bed safe by installing closed boxes with ventilation and fire/ gas alarm or place them at a different position.

Estimated cost for this approximate 13.000 €

### 11. Priority Rudder alignment

We detected that the rudder supports and moving bars left a quite big amount of chipped metal close to its rudder shaft. Also we detected that the rudders itself are not symmetric. The straightforward due to little waves and current had not been tested, but it appeared the boat needed to be corrected many times.

We recommend at least aligning the system and checking the bearings of the rudders.

Estimated cost for this approximate 2500 €

#### 12. Underwater out / inlet valves

We found during the check of the hull for osmosis that the underwater in/outlets never had been changed or the sealing renewed. Some areas sounded like close to the in/outlets water is infiltrating in GRP

Therefore we recommend to change or if possible seal and inspect the close area of GRP and treat with epoxide.

Most of the tried valves did not move at all. Therefore they need to be replaced

Estimated cost for this approximately 10.000 €

Total cost of Priority works excluding transportation, lifting and hardstanding, rounded

95.000 € min. duration 3 Month, based on a Technician Hour Rate of 40€ and Material Yard purchase + 20%

## Part B - Necessary for a frictionless operation

1. Generators

The starboard generator worked and did produce energy, because of that batter, charging issue it was too dangerous to test it under full load.

The port generator did not work at all, at least when tried to start we could say it turned. The XXXX Representative stated that it did run but they needed the pump for

the starboard one. Also the port one had been smoking inside like burning wires. According to him it is only the electric panel.

Well, we recommend to conduct an overhauling of both generators

Estimated cost for this approximate 6.000 € if nothing cost intensive is broken.

## 2. Tubes and grounding cables

All over the tubes, pipes are oxidized, rusted or close to burst.

Grounding cables are oxidized and broken or connecting is missing.

Estimated cost for this approximate 5000 €

#### 3. Air Condition

During the survey the Air Condition wasn't operating well, actually not at all. It seems like the internal and external pumps were not working properly, like sucking air. Therefore we reached only 23 C (normally about 40 C) in 10 minutes of heating mode by initially 15C external water temperature. 3 compressors showed that they were running.

4 Fan Coils didn't work at all or could not be changed to heat mode.

The filters had been so dirty that it is unlikely that air could go through.

It is hard to estimate how much that will cost to bring it to a normal operation, but to give an estimation somewhere between worse and best case scenario

approximate 5000 €

### 4. Infiltration gangway

The box has to be dismounted, proper drains have to be installed, everything sealed, all sensors checked, function tested and properly remounted.

Estimated cost for this approximate 5.000 €

## 5. Hatches / Doors gas springs

Almost all hatches and doors in and outside are missing its gas spring. Also the supports had been part wise broken or ripped out of the GRP

Estimated cost for this approximate 2.500 €

# 6. Portholes Sealing adjustment

Portholes were leaking and the rubber sealing needed to be renewed.

After that, a new adjustment is necessary.

Estimated cost for this approximate 1.000 €

# 7. Navigation System

One plotter doesn't work at all, another one has blind spots. It does not show the Speed over Ground. The wind indicator on the roll bar is not mounted and cable's simply cut. Additional Instruments do not work, even mounted upside down.

Overall it is time to renew the system

Estimated cost for this approximate 15.000 € depending on what type, size, a.s.o. is requested.

# 8. Inside halogen lights

The lights should be replaced by LED for less heat production and energy consumption. Halogen getting up to 60 C Led max 30 C

Estimated cost for this approximate 2.500 €

#### 9. Broken mirror inside master cabin

Two broken mirrors should be replaced

Estimated cost for this approximate 1.000 €

#### 10. Fly Infiltration of water in salon and cockpit

Various spots need to be sealed and remounted.

Estimated cost for this approximate 1.500 €

## 11. One freshwater pump is missing

Estimated cost for this approximate 1.500 €

# 12. Diesel tanks need to be cleaned

due to the conditions of the Racor filters and running the tanks on almost empty required to clean the pipes and the tanks.

Estimated cost for this approximate 2.000 €

Total cost of necessary works excluding transportation, lifting and hardstanding, rounded 40.000 €, min duration 2 months. Based on a Technician Hour Rate of 40€ and Material Yard purchase + 20%

### Part C in / outside optical repairs

#### 1. Gelcoat

Various cracks and "spider nets" should be repaired and a complete intensive polishing is required.

#### 2. Under water

An osmosis protection with epoxide should be done

- 3. The kitchen requires a refit
- 4. The flooring needs to be redone
- 5. the crew area need a overhauling

Total cost of optical works excluding transportation, lifting and hardstanding, rounded

50.000 € min duration 6 Month. Based on a Technician Hour Rate of 40€ and Material Yard purchase + 20%

## Part D - to expect in the next 2 years

Because of its bad maintenance it is to expect that sooner or later various machinery and installations will fail.

Therefore you should calculate an additional budget of 50.000 € above the normal maintenance cost.

#### **Summary**

The boat requires immediate actions in an approximate amount of 100.000 €,

without knowing the real condition of the engines.

A short term necessary action of 50.000 €.

An optical repair of 50.000 €.

However, cost for transportation is not included and the base prices are prices in low cost areas. For other areas such as Cote d'Azur you may have to add 40 %.