

M/V ***KnightHawk***

This vessel was purchased in 2006 and rebuilt that winter with completion in 2007. The task was to build a vessel for extended outings, which this vessel does quite well. Our longest research charter was 11 days and nights in Prince William Sound with 8 passengers and crew. The vessel has the range and fuel economy, freezer capacity, combined with a watermaker, to handle this work nicely.

The scope of the work done to the vessel was: reliability, safety, comfort and economy. The following is a statement by Brian Pouillon the surveyor in 2007, followed by a list of the work and upgrades of the ***KnightHawk***.

“SUMMARY & VALUATION: The subject vessel is one of several of this type produced between late 1979 and 1984. This vessel was purchased at a reduced cost and condition, then completely restored and updated. The lay out was changed from a two stateroom layout to three, a top house was added in place of the fly bridge, and all steering and electronics moved to this location. New Teleflex electronic controls were added and state of the art navigation electronics added including a laptop computer and chart plotter. A second Furuno radar has been installed as a back up to the one in the Furuno Nav net unit. The (2) 671 Detroit diesels which were standard were replaced by (2) remanufactured Volvo 71B diesels. One of the ZF transmissions was rebuilt and one was purchased new. There was a new fuel tank installed in the place of the corroded one under the AFT stateroom cabin sole, and the two saddle tanks in the engine room were removed, cleaned out, and inspection plates installed. There has been extensive replacement of wiring both DC and AC on the boat and it has been bundled and run in an expert manner. All major systems on the boat have been upgraded and /or replaced. All the work has been done with one purpose in mind and that is the comfort and safety for the passengers which this vessel will carry as a six person charter vessel.”

Vessel description as follows:

Mechanical:

- The original engines were 300hp 671 Detroit's. These were replaced with Volvo 71B @ 380hp each. Both engines are complete remanufactured. Currently they are just breaking 1000 hours.
- The gears are new ZF 301's @ 2 to 1 ratio.
- The shafts are new Aquamet 22 – 1 ¾ inch with new dripless seals and new shaft bearings. The original shafts were Aquamet 17 with a 3 to 1 safety factor, Aquamet 22 is 2 stages harder, giving a safety factor of 4.5 to 1.
- The rudders are new.

- There are hydraulics on the back deck and we added an anchor windless on the front deck. The ground gear consists of a 66 lbs Bruce style anchor with 190 feet of 3/8 chain and 600 ft of 1/2 inch Spectra core Dacron line rated at 15,000 lbs working load.
- There are five 2000 gallon per hour bilge pumps in this vessel with alarms.

Fuel tanks and systems:

- The original fuel system was a copper tubing and valve nightmare. We removed all of it, and replaced it with a simple valve and pump system. This system consists of a sealed Reverso Pump and Reverso's own valve system. First off, there are five fuel tanks with gages. The main fuel tanks are outboard of the engines, these tanks are 225 gallons each. Next there is a 100 gallon tank under the sole of the aft stateroom. Next are two 75 gallons tanks which are under the fishing cockpit hatches. The transferring of fuel is simple. When you need fuel moved up to the main tanks, simply open a valve from the 100 gallon or one of the two - 75 gallon tanks and select the valve to either the port or starboard main tank and flip the switch. It's done, no need to worry about fuel flowing overboard as with the old system by using fuel from one tank and returning fuel to a tank that's full.
- The two main tanks and the two - 75 gallon tanks have been opened up, scrubbed clean and inspection hatches installed. The 100 gallon tank is a new replacement.
- The generator is plumbed into the 100 gallon tank. The furnace draws off the starboard main tank. The Wallis stove top and convection oven draw off of a 4 gallon day tank.

Wiring ***KnightHawk:***

- Most of the wiring was replaced. I would say 90% replaced, some wiring for lighting was reused where it was internal. The entire main electrical for controls, engines and equipment were replaced. The quote from Shoreline Marine who did the job was a little over \$7,000. The end price was over \$30,000. I'm very happy with the job, and as it turned out, a great job by Keith.
- There is a 12KW Northern Lights generator with less than 1500 hours under the fishing cockpit deck

Pilot House and boat deck cover:

- This was all new construction designed and built by Dick Smitha of Norcraft Marine in Anacortes, Washington. The idea was to make it yacht quality in appearance as well as commercial boat strength. You have to be right next to the PH to see that it is aluminum and not fiberglass. Great

work. Dick designed the dash so all of the electronics' are built in front and center. There are panoramic wipers on each window with speed controls and intermittent settings. The windshield has a defroster independent of the main heat for the cabin.

- Electronics consists of:
Furuno 10 inch NavNet – 36 mile Radar, GPS chart plotter and video cameras on the back deck, salon and engine room, on one display.
Furuno 1830 24 mile radar.
1000 watt Raytheon V8010 color sounder.
VHF Radio: ICOM IC M504 – hailer
Autopilot: Wesmar with Jog stick control in Pilot House & cockpit.
control not operational at this time.
Pioneer Super Tuner with CD
- The 10 x 12 foot boat deck aluminum cover has complete isinglass & canvas sides and doors.
- The interior of the Pilot House which will seat 5-6 beside the pilot is all teak, done by Mike Murphy of Guemis Island just off of Anacortes. Mike designed a built in sleeping bunk for 2 and lots, and I mean lots, of storage for the crew's personal gear and supplies, as well.

The interior:

- As you enter the fishing cockpit (6 ft x 14 ft) through the transom door going forward is a 3 step ladder way up to the covered boat deck. On the boat deck (12 ft x 10ft) you find a 15 cubic foot freezer run off the inverter and a dock box with storage for life jackets. Overhead are fishing rod racks for up to 30 rods. In this area you will find a GPS Satellite EPIRB and an 8 man life raft.
- From the boat deck you can go up a ladder way to the Pilot House which has a 360 degree view.
- Back on the boat deck it's down 3 carpeted steps to the salon. There is carpeting through out the rest of the vessels Pilot House, 3 staterooms, salon, and galley.
- The salon contains a wet bar with sink and drawer storage as well as a trash compactor. On the port where the old helm was there is now a guest refrigerator for drinks and a microwave. Also an "L" settee that makes down into sleeping for 2. There is a high-low dining table as well as 2 barrel chairs. Chart table and small library also. The Salon is heated by a hot water boiler as are all spaces in the KnightHawk.
- Down 4 carpeted steps from the salon is the aft stateroom which sleeps 4, with a private bath and shower. This stateroom started out with 2 twin size bunks, port and starboard, along with two large hanging lockers. We had Mike Murphy add two upper twin size bunks over the existing bunks. The 20 gph

watermaker and water tanks are under the lower bunks. Independent heating in this space as well.

- Going back up to the salon and continuing forward you will go down 3 steps to the galley and the mid stateroom. The mid stateroom has an upper and lower bunk for 2 people. This stateroom was added by Mike Murphy. Independent heating in this space as well.
- The galley was rebuilt, removing the old electric stove, replaced with a Wallis diesel cook top and convection oven. This is a great oven, you will love it. The cook top doubles as a cabin heater also. Built in to the galley cabinets is a under counter dishwasher. All counters through the vessel have new Formica tops. There is a large refrigerator as well. Lots of storage for dishes, stem ware, glasses and pots and pans.
- Going forward next you find the 2nd bathroom to starboard with a shower stall.
- Continuing forward you will find the forward V-berth stateroom which has a double bunk to starboard and a single bunk to port. Lots of storage in drawers and 2 hanging lockers in this cabin. Independent heating in this space as well.
- All cushions through out the vessel have been replaced and upholstered.