

# Morgan's Cloud

Specification and Maintenance History

Version 2.1 29th June 2020

## Disclaimer

The owner believes the information herein to be correct; however, he does not warrant that the information is in fact accurate and further makes no warranty, express or implied, of the yacht's fitness for any task.

**Furthermore, the owner makes clear that responsibility to insure the correctness of this, or any other documents provided to a prospective buyer by the owner or his agents, lies entirely with said prospective buyer.**

**And, further, the owner specifically recommends that a prospective buyer investigate all specifications and condition of the vessel and her gear, to in all ways assure themselves of the vessel's suitability for their intended use.**

## Specification

### ▼ 2.1 Build

#### ▼ 2.1.1 Merrek Machine Company

- 2.1.1.1 Cleveland Ohio
- 2.1.2 Fit out in Maine
- 2.1.3 Launched 1986
- 2.1.4 Registered Hamilton Bermuda 716325

### ▼ 2.2 Dimensions

- 2.2.1 LOA 55' 6"
- 2.2.2 LWL 41' 3"
- 2.2.3 Draft 6' 6"
- 2.2.4 Beam 14' 10"
- 2.2.5 Displacement design light ship 44,750 lbs
- 2.2.6 Displacement in full cruising trim fully provisioned and all tanks full ~52,000 lbs
- 2.2.7 Ballast 18,000 lbs
- ▼ 2.2.8 Sail Area 1436 (main and foretriangle)
  - 2.2.8.1 Main 673
  - 2.2.8.2 Spinnaker (full symmetrical) 1650
  - 2.2.8.3 Jib Topsail 814

- 2.2.8.4 Staysail 305

## ▼ 2.3 History

- 2.3.1 The first owner circumnavigated South America in the boat, then named *Abbie Haymaker*, including beating to windward down the west coast against the Humboldt Current and rounding Cape Horn.
- ▼ 2.3.2 The present owners have sailed her well over 100,000 miles, including four trans-Atlantics and multiple voyages to the northern high latitudes, including Greenland, Baffin Island and Svalbard, all without significant incidents.
  - ▼ 2.3.2.1 <https://www.morganscloud.com/voyages-morgans-cloud/>
    - ▼ 2.3.2.1.1 She has also proven herself fast and capable by winning her class (doublehanded) twice in the Newport Bermuda race.
      - 2.3.2.1.1.1 In 1994 she had the fastest corrected time in the Newport Bermuda fleet, including beating all the fully crewed racing boats.

## ▼ 2.4 Construction

### ▼ 2.4.1 Hull

- 2.4.1.1 Super strong aluminum construction
- 2.4.1.2 See survey for full plan and as-built verification that the hull meets or exceeds American Bureau of Shipping standards. Survey done by commercial vessel professional engineer.
- ▼ 2.4.1.3 Boat has been cared for under these guidelines
  - 2.4.1.3.1 <https://www.morganscloud.com/category/aluminum-boats/care-tips/>

### ▼ 2.4.2 Deck

- 2.4.2.1 Welded aluminum
- 2.4.2.2 Almost all the deck fittings are attached to plates that are then welded to the deck, or fastened underneath, so there are no penetrations.
- 2.4.2.3 The deck does not leak a drop, even in heavy weather.

### ▼ 2.4.3 Interior

- 2.4.3.1 Herreshoff style, white semi-gloss paint and rubbed-effect varnished North American cherry trim
- 2.4.3.2 Bulkheads are non-structural but constructed in high quality marine ply
- 2.4.3.3 Teak and holly cabin sole (not veneer)
- ▼ 2.4.3.4 All cladding is easily removed for access
  - 2.4.3.4.1 Screws are not plugged

## ▼ 2.5 Arrangement

### ▼ 2.5.1 Owners aft cabin

- 2.5.1.1 Spacious, bright, well-ventilated
- 2.5.1.2 Head and SS sink, separate shower stall
- 2.5.1.3 Spacious bureau, closet and bookshelves, filing cabinet
- ▼ 2.5.1.4 Berths (all berths have lee cloths)
  - 2.5.1.4.1 Single sea berth to starboard
  - 2.5.1.4.2 Queen-sized berth to port
- 2.5.1.5 Ample storage
- ▼ 2.5.2 Passageway to aft cabin
  - 2.5.2.1 Wet locker to starboard
  - ▼ 2.5.2.2 Work bench to starboard
    - 2.5.2.2.1 with vice and toolkits
  - 2.5.2.3 Entrance to engine room to port
  - 2.5.2.4 Battery cabinet under work bench
- ▼ 2.5.3 Engine room
  - 2.5.3.1 Walk in with access to all equipment
  - ▼ 2.5.3.2 All equipment in one area
    - 2.5.3.2.1 engine
    - 2.5.3.2.2 generator
    - 2.5.3.2.3 water heater
    - 2.5.3.2.4 refrigeration compressor
    - 2.5.3.2.5 pumps
    - 2.5.3.2.6 Fuel transfer manifold with polish system
  - 2.5.3.3 Ample storage, including custom tool and part locker
- ▼ 2.5.4 Navigation station/office
  - 2.5.4.1 To starboard of companionway
  - 2.5.4.2 Storage under desktop
  - 2.5.4.3 Engine start battery under seat
  - 2.5.4.4 Waterproof seat cover
  - 2.5.4.5 Bookshelves
  - 2.5.4.6 Instruments (see navigation and communications)
  - 2.5.4.7 Breaker panel
  - ▼ 2.5.4.8 Battery-operated weather station

- 2.5.4.8.1 barometer
- ▼ 2.5.4.8.2 temperature interior and exterior
  - 2.5.4.8.2.1 exterior temperature sensor on radar stand
- ▼ 2.5.5 Galley
  - 2.5.5.1 To port of companionway
  - 2.5.5.2 Ample storage
  - 2.5.5.3 Deep double SS sinks
  - 2.5.5.4 Pressurized hot and cold freshwater system
  - 2.5.5.5 Whale foot pump
  - 2.5.5.6 General Ecology Seagull water filter system
  - 2.5.5.7 Overhead rack for dish storage
  - 2.5.5.8 Force10 three-burner stove with oven and broiler
  - 2.5.5.9 LPG electric solenoid shutoff switch
  - 2.5.5.10 Battery-powered wall clock
  - ▼ 2.5.5.11 Refrigerator and freezer
    - 2.5.5.11.1 top loading
    - 2.5.5.11.2 urethane foam insulation
- ▼ 2.5.6 Salon
  - ▼ 2.5.6.1 U-shaped dinette to port
    - 2.5.6.1.1 Table on electric lifter so can be lowered to use as desk
  - ▼ 2.5.6.2 Settee to starboard
    - 2.5.6.2.1 Excellent sea berth (with lee cloth)
  - 2.5.6.3 Bookshelf
  - 2.5.6.4 Ample storage in lockers behind and under settees
- ▼ 2.5.7 Forward cabin
  - 2.5.7.1 Head and SS sink to port
  - 2.5.7.2 Hanging locker with storage shelves to starboard
  - 2.5.7.3 2 single berths
  - 2.5.7.4 2 shelves above berths
  - 2.5.7.5 5 drawers
  - 2.5.7.6 Storage under berths
  - 2.5.7.7 Gun locker (polar bear protection)

- 2.5.7.8 Custom storage bags for cockpit enclosure that clip to ceiling
- ▼ 2.5.8 Forepeak
  - 2.5.8.1 Spacious sail storage area
  - 2.5.8.2 Vertical chain locker
- ▼ 2.5.9 Lazaret
  - 2.5.9.1 Large enough to swallow up all deck required for long distance and high latitude cruising
  - 2.5.9.2 No deck gear or sails needs to be stowed in the accommodation.
- ▼ **2.6 Mechanical Equipment**
  - ▼ 2.6.1 Engine
    - 2.6.1.1 Range at 7.8 knots 1000 NM
    - 2.6.1.2 Range at 6.5 knots 1400 NM
    - ▼ 2.6.1.3 Perkins M92B, 87 HP low RPM, high torque: WOT 2400 RPM
      - ▼ 2.6.1.3.1 New 2010
        - 2.6.1.3.1.1 <https://www.morganscloud.com/2010/05/05/perkins-sabre-m92b-marine-diesel-engine/>
        - 2.6.1.3.1.2 <https://www.morganscloud.com/2010/07/16/engine-installation-details/>
      - 2.6.1.3.2 Hours 2405
    - ▼ 2.6.1.4 Custom gauge panel
      - 2.6.1.4.1 Water temp, oil pressure, exhaust temperature, gear oil pressure, RPM
      - 2.6.1.5 Alarms: oil pressure, water temp, exhaust temperature.
      - 2.6.1.6 Halyard water separation exhaust system for quiet operation and low exhaust back pressure.
  - ▼ 2.6.2 Gear
    - ▼ 2.6.2.1 ZF 45-A
      - 2.6.2.1.1 Upsized for reliability
      - 2.6.2.2 New 2010
      - 2.6.2.3 Hours 2405
  - ▼ 2.6.3 Running Gear
    - ▼ 2.6.3.1 Aquadrive system
      - 2.6.3.1.1 New CV and thrust bearing 2019
      - 2.6.3.1.2 Hours 0
    - ▼ 2.6.3.2 Shaft
      - 2.6.3.2.1 1.5" Aqualoy 22

- 2.6.3.2.2 New Jan 2017
- 2.6.3.2.3 ~ Hours 500
- ▼ 2.6.3.3 21" Maxprop 3 Blade
  - 2.6.3.3.1 New 2002
  - 2.6.3.3.2 Rebuilt 2019
  - 2.6.3.3.3 Hours since rebuild 0
  - 2.6.3.3.4 Spare three blade fixed prop with prop puller
- ▼ 2.6.3.4 Stuffing Box
  - 2.6.3.4.1 PYI Driplless
  - 2.6.3.4.2 Rebuilt 2017
  - 2.6.3.4.3 ~Hours 500 since rebuild
- ▼ 2.6.4 Generator
  - 2.6.4.1 Northern Lights M643-5N 5 KW
  - 2.6.4.2 New 1992
  - 2.6.4.3 Hours 3870
  - 2.6.4.4 <https://www.morganscloud.com/2014/04/24/do-you-need-a-generator/>
- ▼ 2.6.5 Bilge Pumps
  - 2.6.5.1 Edson Manual 30 GPM mounted in aft cabin
  - 2.6.5.2 Edson Manual 30 GPM mounted in over-the-side drained cockpit locker
  - ▼ 2.6.5.3 PAR 10.8 GPM electric bilge pump
    - ▼ 2.6.5.3.1 Ultra safety system switches for pump and alarms
      - 2.6.5.3.1.1 <https://www.morganscloud.com/2014/07/09/an-electric-bilge-pump-for-the-ages/>
      - 2.6.5.3.1.2 <https://www.morganscloud.com/2014/06/13/the-worlds-best-bilge-pump-switch-really/>
    - ▼ 2.6.5.4 48 GPM Continuous-duty portable electric crash pump
      - 2.6.5.4.1 <https://www.morganscloud.com/2014/08/22/our-new-crash-pump/>
- ▼ 2.6.6 Refrigeration
  - 2.6.6.1 Glacier Bay holding plate system
  - ▼ 2.6.6.2 Compressor driven by 12 volt 1/2 HP motor
    - 2.6.6.2.1 Spare compressor and motor
  - ▼ 2.6.6.3 Freezer 7.5 cubic feet
    - ▼ 2.6.6.3.1 Custom air-mixing fan system to insure even freezing top to bottom when freezer is full

- 2.6.6.3.1.1 <https://www.morganscloud.com/2015/06/21/cool-gadget-to-keep-your-frozen-food-frozen/>
  - ▼ 2.6.6.4 Fridge 6.5 cubic feet
    - 2.6.6.4.1 Custom sliding rack
  - ▼ 2.6.6.5 Both fridge and freezer are very well insulated. At 25°C ambient:
    - 2.6.6.5.1 Freezer runs 1 hour a day
    - 2.6.6.5.2 Fridge runs 1.5 hours every other day
- ▼ **2.7 Rig**
  - ▼ 2.7.1 Cutter Rigged
    - 2.7.1.1 <https://www.morganscloud.com/2015/09/17/12-reasons-the-cutter-is-a-great-offshore-voyaging-rig/>
  - ▼ 2.7.2 Hall Spars carbon fibre mast up-strengthened from normal practice for use in extreme weather
    - ▼ 2.7.2.1 New 2007
      - 2.7.2.1.1 <https://www.morganscloud.com/category/rigging-sails/carbon-fibre-spars/>
  - ▼ 2.7.3 Navtec Rod Rigging
    - 2.7.3.1 New 2007
  - ▼ 2.7.4 GMT Spinnaker Pole
    - 2.7.4.1 New 2005
    - 2.7.4.2 Specially up-strengthened to use as part of emergency steering system
    - 2.7.4.3 Pole stows on front face of mast on Harken track with Antal line driver control for inner end.
    - 2.7.4.4 There is also stowage for the pole on deck for use when very heavy weather is expected.
  - ▼ 2.7.5 Running Rigging
    - 2.7.5.1 Combination of Dacron double braid for sheets and New England T-900 and Endura Braid for halyards
    - 2.7.5.2 <https://www.morganscloud.com/2017/12/09/running-rigging-recommendations-part-1/>
    - 2.7.5.3 New 2005
  - ▼ 2.7.6 Halyards
    - 2.7.6.1 Main
    - 2.7.6.2 Storm trysail
    - 2.7.6.3 Staysail
    - 2.7.6.4 2 x Jib Halyard

- ▼ 2.7.6.5 Spinnaker
  - 2.7.6.5.1 Mast is rigged for a second spinnaker halyard and there is a messenger
  - 2.7.6.6 Pole topping lift
- ▼ 2.7.7 Hydraulics
  - 2.7.7.1 Qty 2 Navtec hydraulic backstay adjusters
  - 2.7.7.2 Navtec hydraulic vang
  - 2.7.7.3 Control panel in cockpit
  - 2.7.7.4 All rebuilt 2007
  - 2.7.8 Jib top and staysail roller furling units rebuilt by Harken 2005
- ▼ 2.7.9 Lazy jack system
  - 2.7.9.1 <https://www.morganscloud.com/2013/09/03/lazyjacks mainsail-handling-made-easy/>
  - 2.7.10 Running back stays
- ▼ 2.7.11 Boom preventer system
  - 2.7.11.1 <https://www.morganscloud.com/2014/03/13/rigging-a-proper-preventer-part-2/>
- ▼ 2.7.12 All halyards except main (dedicated winch) have clutches.
  - 2.7.12.1 <https://www.morganscloud.com/2016/07/12/hoisting-the-mainsail-made-easy-simplicity-in-action/>
- ▼ **2.8 Winches**
  - 2.8.1 All Lewmar self tailing
  - ▼ 2.8.2 Cockpit
    - 2.8.2.1 2 x primary, jib topsail, #65 three speed
    - 2.8.2.2 2 x running backstays and roller furling lines, #52 two speed
    - 2.8.2.3 2 x secondary staysail, #55
    - 2.8.2.4 Main sheet, #40
  - ▼ 2.8.3 Mast
    - 2.8.3.1 2 x #46
    - 2.8.3.2 2 x #43
  - ▼ 2.8.4 Boom
    - 2.8.4.1 2 x #40
- ▼ **2.9 Sails**
  - ▼ 2.9.1 Jib topsail radial cut 110% Hallett Sails 2007
    - 2.9.1.1 Condition fair

- ▼ 2.9.2 Mainsail radial cut Hallett Sails 2007
  - 2.9.2.1 Five full battens
  - 2.9.2.2 Condition good
- ▼ 2.9.3 Staysail radial cut Hallett Sails 2007
  - 2.9.3.1 Condition fair
- ▼ 2.9.4 1.5 oz asymmetric spinnaker in ATN sleeve, Bierig Sailmakers
  - 2.9.4.1 Condition fair
- ▼ 2.9.5 Storm jib, Bierig Sailmakers
  - 2.9.5.1 Cosmetic fair
  - 2.9.5.2 Strength good, never used in anger
- ▼ 2.9.6 Storm trysail, Bierig Sailmakers
  - 2.9.6.1 Cosmetic fair
  - 2.9.6.2 Strength good, never used in anger
- ▼ **2.10 Anchoring**
  - ▼ 2.10.1 SPADE 121 lb best bower
    - 2.10.1.1 <https://www.morganscloud.com/2019/03/28/4-vital-anchor-selection-criteria-and-a-review-of-spade/>
  - ▼ 2.10.2 SPADE 66 lb backup
    - 2.10.2.1 Secure stowage below in two parts
  - ▼ 2.10.3 Fortress FX 55 kedge
    - 2.10.3.1 <https://www.morganscloud.com/2015/05/01/kedge-secondary-anchor-recommended-type-and-size/>
    - 2.10.3.2 Stows in chocks on aft cabin top
  - ▼ 2.10.4 Luke 150 lb
    - 2.10.4.1 Stows in ready use chocks on aft cabin top or in chocks bolted to hull members in salon behind starboard bunk
    - 2.10.4.2 <https://www.morganscloud.com/2015/06/10/third-anchors-storm-anchors-and-spare-anchores/>
  - ▼ 2.10.5 Primary Rode
    - ▼ 2.10.5.1 380 feet of 3/8" G70 Peerless ACCO high strength chain (new 2013)
      - 2.10.5.1.1 <https://www.morganscloud.com/2013/09/25/which-anchor-chain-should-we-buy/>
    - 2.10.5.2 Fitted with oversized end link by factory to allow matching strength Crosby 209A shackles
    - 2.10.5.3 Break load of system is 11 tons

- 2.10.5.4 Stows in anchor locker forward without hand flaking
- ▼ 2.10.6 Secondary Rode
  - 2.10.6.1 300 feet 7/8" Dacron double braid
  - 2.10.6.2 Stows in two bags
- ▼ 2.10.7 Second anchor roller offset so that it can be used for a mooring pennant without fear of chafe on the anchor.
  - 2.10.7.1 <https://www.morganscloud.com/2016/09/14/the-quest-for-a-perfect-anchor-roller-part-1/>
- ▼ 2.10.8 Qty 2 300' Dyneema shorefast lines
  - 2.10.8.1 <https://www.morganscloud.com/2020/04/06/shorefasts-part-3-the-gear/>
  - 2.10.8.2 Misc gear for putting in shorefasts, see above post
  - 2.10.8.3 Qty 2 50' 7x19 3/8" wire for use around boulders on shore
- ▼ 2.10.9 Idea Horizontal Windlass with chain gypsy and warping drum
  - 2.10.9.1 <https://www.morganscloud.com/2011/08/07/boat-windlass-requirements/>
- ▼ 2.10.10 Salt water deck wash down
  - 2.10.10.1 <https://www.morganscloud.com/2014/10/01/five-ways-to-save-big-money-while-cruising-part-1/>
- ▼ 2.10.11 Snubber and trip line
  - 2.10.11.1 <https://www.morganscloud.com/2020/01/11/anchoring-snubbers/>
  - 2.10.11.2 <https://www.morganscloud.com/2011/01/28/anchor-trip-line/>
- ▼ **2.11 Safety**
  - 2.11.1 SOLAS Flares and rockets to satisfy World Sailing Cat 1 Offshore
  - ▼ 2.11.2 Life Raft
    - 2.11.2.1 Viking RescueMe Pro 6 Person
    - 2.11.2.2 New May 2017
    - 2.11.2.3 Next Required Service May 2020 (In progress)
    - 2.11.2.4 Mounted in custom-made cradle on aft deck
  - ▼ 2.11.3 Person Overboard Prevention and Recovery
    - 2.11.3.1 Qty 3 MOB1 Personal AIS POB Beacons
    - 2.11.3.2 Qty 4 Spinlock Deckvest 5D Lifejackets with harness
    - ▼ 2.11.3.3 Jackstays and tethers to meet or exceed regulation
      - 2.11.3.3.1 <https://www.morganscloud.com/2016/11/11/banishing-sidedeck-jacklines-forever/>
    - ▼ 2.11.3.4 Switlick MOM 600 throwable rescue platform

- 2.11.3.4.1 <https://www.youtube.com/watch?v=o8aDi9X1pW8>
  - 2.11.3.5 Pull down rope ladder for self-rescue
- 2.11.4 Flashlights, headlamps, and spotlight
- 2.11.5 Air horns and bell
- 2.11.6 Knife in cockpit
- 2.11.7 Qty 4 USCG approved lifejackets
- ▼ 2.11.8 Survival Suits
  - 2.11.8.1 Qty 2 Stearns survival suits
  - 2.11.8.2 Qty 2 Mustang Commander Survival Suits
  - 2.11.8.3 Qty 4 Mustang working exposure suits
  - 2.11.8.4 <https://www.morganscloud.com/2007/05/19/survival-suits-for-boats/>
- ▼ 2.11.9 Full offshore medical kit
  - 2.11.9.1 Plus extra supplies including bandages, splints, heating pad, etc.
  - 2.11.9.2 Several wilderness first aid reference books
  - 2.11.9.3 Less prescription drugs
- 2.11.10 Ditch kit in separate bag
- ▼ 2.11.11 Auto-launch EPIRB mounted on radar stand
  - 2.11.11.1 ACR Globalfix Pro 406 MHz GPS EPIRB
  - 2.11.11.2 New 2011
  - 2.11.11.3 New Battery June 2017
  - 2.11.11.4 Hydrostatic release replaced 2020
  - 2.11.11.5 Battery expires in 2023
- ▼ 2.11.12 Soft wood plugs to fit all seacocks
  - ▼ 2.11.12.1 **Note, we do not place these next to the seacock but rather keep them in a separate safety locker**
    - 2.11.12.1.1 Our thinking is that if a seacock fails the last thing we want to be doing is scrabbling around in a fountain of sea water trying to locate the plug
- 2.11.13 Emergency steering tiller with tiller lines and blocks to lead to cockpit winches
- ▼ 2.11.14 Jordan Series Drogue for storm survival
  - 2.11.14.1 <https://www.morganscloud.com/series/heavy-weather-tactics/>
  - 2.11.14.2 Chain plates to stream drogue from, approved by marine engineer to withstand expected maximum design loads (up strengthened in 2019)
- 2.11.15 Galerider storm drogue and swivel for emergency steering

- ▼ 2.11.16 Hydraulic bolt cutters to facilitate cutting away a broken mast
  - 2.11.16.1 Battery powered grinder with cut off wheels for same task
- ▼ 2.11.17 Deck and Navigation Lights
  - 2.11.17.1 Hella NaviLED TRIO
  - 2.11.17.2 Aquasignal Series 40 navigation lights at deck level
  - 2.11.17.3 Combination deck and steaming light
  - 2.11.17.4 Spreader lights
  - 2.11.17.5 Added anchor light on top of radar stand as per COLREGS 30 (a)
- ▼ 2.11.18 Sirens Marine Remote Boat Monitoring
  - 2.11.18.1 <https://sirenmarine.com>
  - 2.11.18.2 Bilge, intrusion, tamper with cockpit instrument covers, battery level, engine room temperature
- ▼ 2.11.19 Fire Fighting
  - 2.11.19.1 All updated, tested, and either refilled or replaced 2020.
  - 2.11.19.2 Qty 4 handheld clean agent fire extinguishers (lazarette, aft cabin, salon, forward cabin)
  - 2.11.19.3 Qty 1 dry powder fire extinguisher (galley)
  - 2.11.19.4 Qty 1 fireblanket (galley)
  - ▼ 2.11.19.5 Qty 2 Maus clean agent (new 2018)
    - 2.11.19.5.1 <https://www.morganscloud.com/2018/05/19/maus-fire-extinguishers-a-breakthrough/>
  - ▼ 2.11.19.6 Qty 2 emergency smoke mask kits with fire resistant gloves (salon, lazarette)
    - 2.11.19.6.1 <https://www.morganscloud.com/2018/09/11/5-ways-we-are-updating-our-thinking-on-fire-fighting/>
  - ▼ 2.11.19.7 Full engine room fire suppression system (new 2020)
    - 2.11.19.7.1 Auto and manual
    - 2.11.19.7.2 Control box to automatically shut down engine, generator and blowers (installation in progress)
    - 2.11.19.7.3 High temperature alarm which sounds at a lower temperature than the activation of the suppression system
- ▼ 2.11.20 Qty 2 battery-powered Nest smoke/CO2 detectors (salon and aft cabin)
  - 2.11.20.1 Connected to ship's WiFi system
- 2.11.21 Floor boards secured with heavy duty latches
- 2.11.22 Lockers under berth hatches secured with barrel bolts
- 2.11.23 Storm cover for work bench

- 2.11.24 Storm cover for galley dish rack
- ▼ 2.11.25 Fall Risk
  - 2.11.25.1 There are handholds and furniture to lean against with no large areas to fall across in all spaces below

## ▼ 2.12 Communications

- 2.12.1 <https://www.morganscloud.com/2016/01/15/marine-electronics-recommendations-communications/>
- ▼ 2.12.2 ICOM IC-M700 SSB
  - 2.12.2.1 Tuner
  - 2.12.2.2 Insulated back stay antenna
  - 2.12.2.3 New 2003
- ▼ 2.12.3 Iridium 9555 Sat Phone
  - 2.12.3.1 New 2011
- ▼ 2.12.4 Iridium GO!
  - 2.12.4.1 External antenna
  - 2.12.4.2 New 2015
- ▼ 2.12.5 Icom VHF M604 Commercial grade DSC mounted in cockpit
  - 2.12.5.1 Antenna at top of mast wired with low-loss cable
  - 2.12.5.2 Command mike below
  - 2.12.5.3 New 2009
- 2.12.6 Backup VHF IC-M 100 VHF mounted below and with separate antenna on radar stand
- ▼ 2.12.7 Vesper WatchMate Class B AIS Transponder
  - 2.12.7.1 Ocean Signal AIS Person Overboard Alarm programmed to recognize crew AIS beacons
- 2.12.8 Handheld VHF
- ▼ 2.12.9 Internet Connectivity
  - 2.12.9.1 Wilson cell phone amplifier with external antenna on radar stand
  - 2.12.9.2 Coastal Marine WIFI amplifier with external antenna on radar stan with router and ship's WIFI network

## ▼ 2.13 Navigation

- 2.13.1 EchoPilot Platinum Forward Scan Sonar
- ▼ 2.13.2 Full Nexus NX2 sailing instruments, including echo sounder

- 2.13.2.1 Five dials on deck
- 2.13.2.2 One repeater at chart table
- ▼ 2.13.3 Furuno 1830 commercial-quality free-standing radar
  - 2.13.3.1 <https://www.morganscloud.com/2016/01/28/marine-electronics-recommendations-radar/>
  - 2.13.3.2 Repeater at chart table
  - 2.13.3.3 New magnetron in 2018
  - ▼ 2.13.3.4 Scanner on pole aft
    - 2.13.3.4.1 Scanner can be leveled when heeled using switch in cockpit
- ▼ 2.13.4 B&G GPS Plotter Zeus 3 7" backup plotter new 2018
  - 2.13.4.1 Nobeltec charts for Canada East Coast
- ▼ 2.13.5 Main Navigation System
  - 2.13.5.1 Apple Air computer mounted at the chart table
  - 2.13.5.2 Argonaut [Tflex-G615XL 15"](#) Sunlight readable waterproof display mounted in the cockpit
  - 2.13.5.3 Waterproof mouse and keyboard
  - 2.13.5.4 <https://www.morganscloud.com/2019/02/08/marine-navigation-system-plotter-or-computer/>
- 2.13.6 Instruments for paper navigation
- ▼ 2.13.7 Ritchie Globemaster compass at binnacle
  - 2.13.7.1 swung by professional adjuster 2011, deviation card at chart table
- 2.13.8 HawkEye handheld sonar
- 2.13.9 Handheld backup GPS
- ▼ **2.14 Cooking**
  - 2.14.1 <https://www.morganscloud.com/2015/08/16/ten-ways-to-make-propane-safer/>
  - ▼ 2.14.2 Force 10 three-burner stove with oven and broiler
    - ▼ 2.14.2.1 Custom made up-strengthened mounting
      - 2.14.2.1.1 <https://www.morganscloud.com/2009/05/18/force10-marine-stove-cooker-problems/>
  - 2.14.3 Three sniffer alarms: bilge, under cooker, in propane bottle locker
  - ▼ 2.14.4 Gas-tight bottle locker draining overboard
    - 2.14.4.1 Holds 4 20 lb aluminum tanks for a total of 80 lbs propane
  - 2.14.5 Gas cut-off solenoid in locker with control switch in galley

- 2.14.6 Hose and regulator replaced 2015
- ▼ 2.14.7 Everything required to prepare and serve multi-course meals
  - 2.14.7.1 pots and pans, flatware, utensils, mixing bowls, food storage containers, glasses, mugs, wine glasses, highball glasses, placemats, napkins, dishtowels and handtowels
- 2.14.8 Storm cover for dish rack
- ▼ 2.14.9 Deep double SS sink
  - 2.14.9.1 dish drainer
- ▼ **2.15 Household**
  - 2.15.1 Qty 6 bath towel and facecloth sets
  - ▼ 2.15.2 Bed linen
    - 2.15.2.1 qty 4 sheet and pillow case sets for master bunk
    - 2.15.2.2 qty 4 sheet and pillow case sets for single bunks
    - ▼ 2.15.2.3 qty 8 bed pillows
      - 2.15.2.3.1 4 patterned pillow covers for use in salon when pillows not being used on bunks
    - ▼ 2.15.2.4 qty 4 sleeping bags
      - 2.15.2.4.1 2 summer and 2 winter weight
      - 2.15.2.4.2 2 X-long
  - 2.15.3 Shop-Vac vacuum with spare filters
  - ▼ 2.15.4 Custom blackout curtains for all ports
    - 2.15.4.1 spare material
  - 2.15.5 Custom blackout cover/screen for aft cabin hatch
  - 2.15.6 Numerous clothes hangers for 3 hanging lockers
- ▼ **2.16 Self Steering**
  - 2.16.1 Sailomat Vane Gear
  - ▼ 2.16.2 Simrad Robertson AP300X
    - 2.16.2.1 RPU hydraulic pump
    - 2.16.2.2 Hynautic K4 ram—much larger and robust than standard Simrad
    - 2.16.2.3 Spare pump and ram
- ▼ **2.17 Electrical**
  - ▼ 2.17.1 Isolated ground DC system
    - 2.17.1.1 VVO isolation monitor

- 2.17.1.2 Meter with silver chloride anode to check effectiveness of hull and shaft zincs
- ▼ 2.17.1.3 Four hull zincs set into pockets in hull
  - 2.17.1.3.1 The boat is so electrically quiet that these have only been replaced once in 28 years
- ▼ 2.17.2 Batteries
  - ▼ 2.17.2.1 House
    - ▼ 2.17.2.1.1 12 Volt 800 A/H LifeLine AGM in two banks with 1-2-Both switch
      - 2.17.2.1.1.1 New 2016
  - ▼ 2.17.2.2 Engine Start
    - ▼ 2.17.2.2.1 12 Volt 4D LifeLine AGM
      - 2.17.2.2.1.1 New 2014
- ▼ 2.17.3 160 Amp Balmar alternator with twin belts and custom mount with belt tightening threaded bar
  - 2.17.3.1 Balmar MC614 Regulator with spare
  - 2.17.3.2 <https://www.morganscloud.com/2013/11/06/10-tips-to-buy-and-install-a-liveboards-alternator/>
- 2.17.4 Qty 3 Xantrex TrueChargers for a total of 120 amps
- ▼ 2.17.5 Separate Xantrex 1800 watt inverter
  - 2.17.5.1 <https://www.morganscloud.com/2010/08/28/inverter-charger/>
- 2.17.6 Backup Prowatt 250 watt inverter at chart table
- ▼ 2.17.7 Two 30 amp shore power cables with smartplug at boat end
  - 2.17.7.1 <https://smartplug.com/marine/combo/>
- ▼ 2.17.8 Isolation transformer with taps for use in 220 volt countries
  - 2.17.8.1 Kit of adapters to allow use of shore power in Europe
  - ▼ 2.17.8.2 Mastervolt softstart
    - ▼ 2.17.8.2.1 <https://www.mastervolt.com/products/soft-start-transfer-systems/soft-start-13-kva/>
      - 2.17.8.2.1.1 Not currently connected since it's not required on 110 volt systems
- ▼ 2.17.9 Lighting
  - ▼ 2.17.9.1 Qty 11 Aplenglow Lights. Custom made in North American Cherry to match woodwork
    - 2.17.9.1.1 <https://www.alpenglowlights.com/store/overhead-lights.html>
- ▼ **2.18 Heating**
  - 2.18.1 Espar 8D diesel forced air furnace with ducting throughout boat
  - 2.18.2 Webasco engine heat exchanger forced air heater ducted to salon

- 2.18.3 Qty 2 1500 watt 120 volt ceramic heaters for use with generator or shore power in winter

## ▼ 2.19 Ventilation

### ▼ 2.19.1 Ports Qty 12

- 2.19.1.1 Ports are custom, all are opening, and massive, with 1/2" high tensile glass. The frames are welded into the boat. These ports have never leaked a drop.
- 2.19.1.2 The wooden frames take removable Plexiglass covers to provide double glazing so there is zero condensation in cold weather.

### • 2.19.2 8 Dorade vents

### • 2.19.3 5 ceiling mounted electric fans (aft cabin, salon, forward cabin)

### ▼ 2.19.4 Hatches Qty 4

- 2.19.4.1 Qty 2 salon, forward cabin, aft cabin
- 2.19.4.2 Air lifters
- 2.19.4.3 Massively constructed to withstand wave strikes or dropped objects
- 2.19.4.4 Dog down on gaskets
- 2.19.4.5 Hatches do not leak, even in very heavy weather

## ▼ 2.20 Tankage and Plumbing

### • 2.20.1 290 US gallons diesel in two integral tanks in keel stub

### ▼ 2.20.2 250 US gallons water in two integral tanks in keel stub

- 2.20.2.1 Separated from fuel by mid-bilge area

### • 2.20.3 Hart Tank Tender System

### ▼ 2.20.4 20 US gallon black water tank

- 2.20.4.1 Deck empty

### ▼ 2.20.4.2 Valve manifold

- 2.20.4.2.1 <https://www.morganscloud.com/2009/05/18/headhunter-three-way-universal-valves/>

- 2.20.4.3 Electric pump to dump blackwater at sea

- 2.20.4.4 Blackwater gauge

### ▼ 2.20.5 Two Lavac marine heads with Henderson manual pumps

- 2.20.5.1 Two spare MK5 Henderson pumps

### • 2.20.6 Sump for shower and head sinks with electric pump

- 2.20.7 Separate sump for water that comes down inside the mast and for anchor locker

- 2.20.8 Sureflow 14 GPM fresh water pump with Groco accumulator tank
- 2.20.9 12 US gallon SuperStor hot water heater with electric element and heat exchanger off main engine
- ▼ 2.20.10 General Ecology whole boat water filter system
  - 2.20.10.1 <https://generalecology.com/collections/marine-rv/products/100049>
- ▼ 2.20.11 General Ecology Seagull filter at galley
  - 2.20.11.1 <https://generalecology.com/collections/marine-rv/products/732000>
- 2.20.12 General Ecology dock fill filter

## ▼ 2.21 Cockpit and Deck

- ▼ 2.21.1 Dodger with hard top and soft sides
  - 2.21.1.1 <https://www.morganscloud.com/2008/06/01/hard-dodger-for-morgans-cloud/>
  - ▼ 2.21.1.2 Fabric replaced with Stamoid 2016
    - 2.21.1.2.1 Much better and longer lasting option than Sunbrella
- ▼ 2.21.2 Full cockpit enclosure
  - 2.21.2.1 <https://www.morganscloud.com/2016/10/10/a-sailors-cockpit-enclosure-part-1/>
  - 2.21.2.2 New 2016
- ▼ 2.21.3 Hard bimini top up-strengthened to stand on
  - ▼ 2.21.3.1 Complete set of C Cushions for cockpit
    - 2.21.3.1.1 <http://seacushions.com/products.htm>
    - 2.21.3.1.2 New 2016
  - 2.21.4 Custom super strong aluminum swim ladder

## ▼ 2.22 Tender

- ▼ 2.22.1 Avon Rover 310 Inflatable
  - 2.22.1.1 Custom wooden floorboards for more stability vs inflatable floor
  - 2.22.1.2 Proper wooden oars
  - ▼ 2.22.1.3 Anchor and custom built portable pull off setup
    - 2.22.1.3.1 <https://www.morganscloud.com/2016/02/28/mooring-your-dinghy-while-ashore-made-easy/>
- ▼ 2.22.2 4 HP Yanmar 4 stroke
  - 2.22.2.1 New 2010
  - 2.22.2.2 Lifting derrick on aft rail
  - 2.22.2.3 Storage bracket on aft rail

- 2.22.3 Light duty spare inflatable boat in case primary tender is damaged in a remote place.

## ▼ 2.23 Docking

- ▼ 2.23.1 Set up for use of aft-running spring to make docking easy for two
  - 2.23.1.1 <https://www.morganscloud.com/series/docking-made-easy/>
- 2.23.2 5 large fenders
- 2.23.3 2 large balloon fenders for use on rough commercial wharves
- 2.23.4 Fender covers
- 2.23.5 6 dock lines (two extra long for use in high tide range areas)
- 2.23.6 Fender board

## ▼ 2.24 Winter Layup

- 2.24.1 Custom steel cradle
- 2.24.2 Full bow-to-stern cover that can be used with mast in and boat in the water
- 2.24.3 Cockpit winter cover which makes a nice "mud room" when living aboard in winter

## ▼ 2.25 Tools and Parts

- ▼ 2.25.1 In all our years of cruising we have never had to wait for a part or be delayed in making a repair due to the lack of the correct tools
  - ▼ 2.25.1.1 The list of tools is huge, but here are a few that have proved invaluable, that you won't find on most any other boat.
    - 2.25.1.1.1 Handheld explosive gas detector
    - 2.25.1.1.2 Handheld refrigerant detector
    - 2.25.1.1.3 Digital RPM counter
    - 2.25.1.1.4 Prop puller
    - 2.25.1.1.5 Two torque wrenches
    - 2.25.1.1.6 Easy-outs
    - 2.25.1.1.7 Taps with the correct letter and number size drill bits
    - 2.25.1.1.8 Sawsall
    - 2.25.1.1.9 Milwaukee 1/2" drill
    - 2.25.1.1.10 Crowfoots
    - 2.25.1.1.11 Bosch lithium 1/2" drill motor, right angle drill motor, and grinder
    - 2.25.1.1.12 Digital micrometer

- 2.25.1.1.13 Dial indicator

#### ▼ 2.25.2 Spare parts for all systems

- 2.25.2.1 Complete inventory spreadsheet with storage locations available on request
- 2.25.2.2 <https://www.morganscloud.com/2015/02/18/parts-inventory/>

### ▼ 2.26 Reserved

- 2.26.1 Art work and photos
- 2.26.2 Name "Morgan's Cloud"
- 2.26.3 Prescription drugs
- 2.26.4 Sextant
- 2.26.5 Walker Log
- 2.26.6 Custom roping palms
- 2.26.7 Paper Charts, guide books
- 2.26.8 Cookbooks
- 2.26.9 Personal clothing
- 2.26.10 Foul weather gear
- 2.26.11 Personal multitools
- 2.26.12 Dry suit, weight belt, Brownie hooker rig
- 2.26.13 Sweetgrass basket from galley
- 2.26.14 Injector puller (it was a gift)

## ▼ Maintenance History

### ▼ 3.1 Introduction

- 3.1.1 During their 28-year ownership, the current owners have completed two extensive refits and much other work. Not a year has passed without major maintenance or improvement. Details on major projects follow. We have not covered routine maintenance below, but that is detailed in the vessel maintenance logs available on request. Suffice to say that all routine maintenance has been done on the schedules recommended by the gear manufacturers.
- ▼ 3.1.2 In cases where the owners deemed it necessary, manufacturer maintenance recommendations have been exceeded.
  - 3.1.2.1 For example, oil samples have been taken from engine, gear, and generator before every change and sent for analysis. Results are available on request.

### ▼ 3.2 After Purchase 1991

- 3.2.1 Made good all defects identified in pre-purchase survey.
- 3.2.2 Replaced generator that had been damaged by back flooding.

### ▼ **3.3 Refit #1 1998-1999**

- 3.3.1 Paint inside and out.
- 3.3.2 Strip bottom paint and recoat, including barrier coat.
- 3.3.3 Remove teak decks and make good. Paint with non-skid paint.
- 3.3.4 Remove wooden toe rails and replace with welded aluminum.
- 3.3.5 Welded pre-threaded plates for all deck fittings and tracks to the deck so there are very few fastener penetrations of the deck.
- 3.3.6 Replaced stanchion bases with custom fabricated aluminum integrated into toe rail.
- 3.3.7 Replaced all stanchions.
- 3.3.8 Replaced all navigation electronics and moved on deck for safer inshore navigation.
- 3.3.9 Built a new and more practical emergency tiller that utilizes steering lines led to the cockpit winches.

### ▼ **3.4 Refit #2 2003-2007**

- 3.4.1 Replace mast with new carbon fibre Hall Spars rig specially up-strengthened for heavy weather.
- ▼ 3.4.2 Replace all standing rigging.
  - 3.4.2.1 Roller furling units were rebuilt and reused, but the stays they are on were replaced.
  - 3.4.2.2 Bronze/Stainless turnbuckles were dye-tested and reused.
- 3.4.3 Replaced all running rigging.
- 3.4.4 Repainted entire boat, inside and out.
- 3.4.5 Stripped all antifouling paint and re-coated barrier coat and anti-fouling.
- ▼ 3.4.6 Replaced two bronze seacocks that were showing wear in the handle-to-ball connection.
  - 3.4.6.1 All other seacocks inspected.
- 3.4.7 Removed rudder, inspected and replaced and improved alignment of bearings.
- 3.4.8 Replaced generator exhaust system.
- 3.4.9 Replaced mainsail, genoa and staysail.

- 3.4.10 Installed Treadmaster on the deck to make deck work safer, particularly with ice or snow present.
- 3.4.11 Built new custom hard dodger and bimini top covered with Treadmaster to make working on the boom safer.
- 3.4.12 Installed Jordan Series Drogue and chain plates to deploy from.

### ▼ **3.5 Repower 2010**

- 3.5.1 Replaced engine with commercial quality Perkins M92B 87 HP together with new ZF transmission/gear.
- 3.5.2 Replaced shaft, coupling and cutless bearings.
- 3.5.3 Installed Aquadrive CV joint and thrust bearing.
- 3.5.4 Replaced mounts.
- 3.5.5 Replaced old dry jacketed exhaust system with modern water separation system from Halyard Marine to reduce back pressure, as well as flooding and fire risk.

### ▼ **3.6 2010-2011**

- ▼ 3.6.1 Updated all safety equipment for voyage to Greenland and Baffin Island.
  - 3.6.1.1 Replaced liferaft
  - 3.6.1.2 Replaced EPIRB
- 3.6.2 Upgraded shore power socket to fire resistant positive engagement type.

### ▼ **3.7 2012-13**

- 3.7.1 Removed anchor windlass and sent for rebuild by manufacturer.
- 3.7.2 Replaced steering cables.

### ▼ **3.8 2014**

- 3.8.1 Had strength of quadrant and rudder shaft analyzed and confirmed as adequate by Lloyds surveyor/marine engineer.
- 3.8.2 Full on-ground inspection of the rig by owners, including magnifying glass inspection of all cold heads.
- 3.8.3 Installation of new high volume continuous-duty emergency electric bilge pump.

### ▼ **3.9 2015**

- 3.9.1 Complete redesign and, where required, replacement of person overboard prevention system.
- 3.9.2 Inspected, lubricated, and where required, rebuilt winches

## ▼ 3.10 2016

- 3.10.1 Replaced galley counter and sink
- ▼ 3.10.2 Replaced and upgraded batteries to 800 amp/hour Lifeline AGM bank.
  - 3.10.2.1 Replaced house battery box including improved spill, break-loose prevention, fusing and cabling to main buss bars.

## ▼ 3.11 2017

- 3.11.1 Replaced liferaft
- 3.11.2 Replaced propeller shaft due to scoring from defective cutless bearing.
- 3.11.3 Replaced cutless bearing.
- 3.11.4 Replaced bellows and O rings on PYI dripless stuffing box.
- 3.11.5 Removed and inspected rudder.

## ▼ 3.12 2018-19

- ▼ 3.12.1 Required due to defective installation of Aquadrive system by boatyard in 2009/10
  - 3.12.1.1 Replaced CV joint
  - 3.12.1.2 Replaced thrust bearing
  - 3.12.1.3 Replaced and upgraded thrust plate to specification developed and approved by Lloyds surveyor and marine engineer.
  - 3.12.1.4 Replaced engine mounts.
  - 3.12.1.5 Aligned all to meet or exceed Aquadrive specifications using chockfast grouting compound.
- 3.12.2 Stripped all paint from bottom. Re-coated with three coats barrier and three coats ePaint ZO antifouling.
- 3.12.3 Removed propeller and sent to PYI for rebuild.
- 3.12.4 Removed line cutters and sent to Spurs for rebuild.
- 3.12.5 Hydrotest and refill all 5 portable extinguishers.

## ▼ 3.13 Currently In Progress Spring Summer 20

- 3.13.1 Complete upgrade of engine room fire suppression system to ABYC standards under supervision and certification of marine fire suppression experts Brenton's Fire Protection. System will be certified and a certificate provided by Brenton staff.
- 3.13.2 All out-of-date flares and other dated safety equipment will be replaced as we do every year.
- 3.13.3 Liferaft service