Kings Pride

SVC | Skagit Valley College

S/N *King's Pride* Refit

The Story Board

2020 – 2022

Bob Perry ~ King's Pride Designer

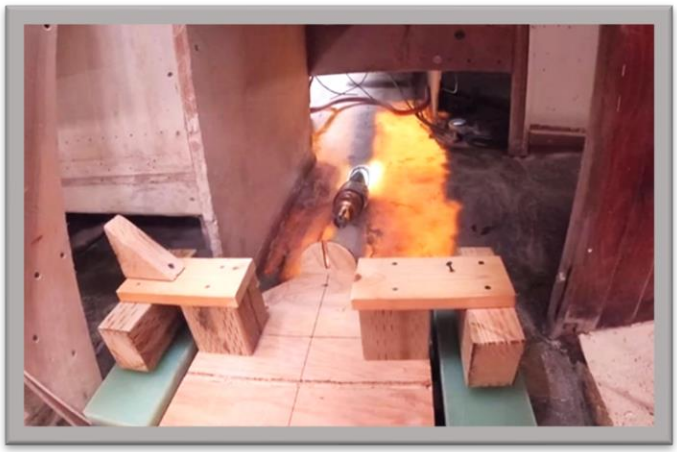
RIGGING ~ $20,000 in the rig with a professional paint job!
This includes all new wiring, hardware, standing rigging, halyards, lights, wind instrument, Windex, and Harken roller furler.

Bottom was water-blasted, faired, barrier coated and will have new bottom paint just before launch

Yanmar 45 hp 4JH, down angle gear box, new shaft, shaft tube, packing gland, stern bearing, & 4 blade 18” Max prop, new water-lift muffler, & entire exhaust hose
Fuel tanks removed, inspection ports added, tested, new fill/vent hoses, stripping port added for fuel sampling, extra port for future use (maybe diesel furnace)

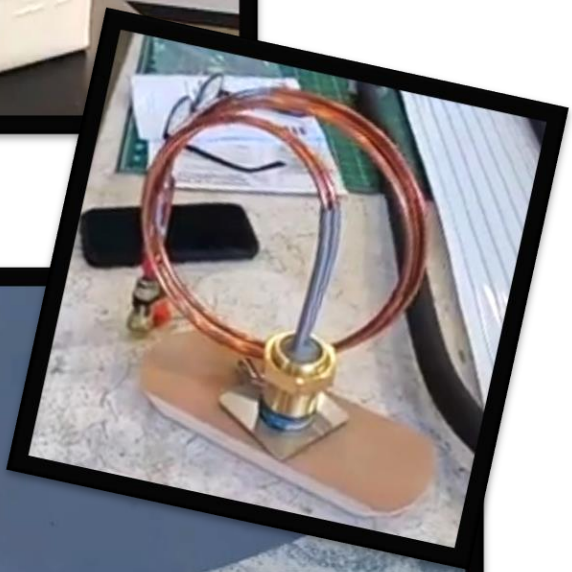
BACK

Rudder removed, inspected, new Edson radial drive, new cables, new rudder stops Redesigned bilge, new bilge pumps, double bottom with closed cell foam, emergency portable pump.



New head installed, cleaned holding tank, all new hoses, discharge pump, shower sump discharge pump. Re-designed propane locker, new hose, new control/sniffer, new Force 10 stove/oven

Keel-cooled refrigeration installed with evaporator for freezer and spill-over thermostat/fan system for refrigerator, system has great insulation and will be super-efficient. Still needs extra insulation on the lids



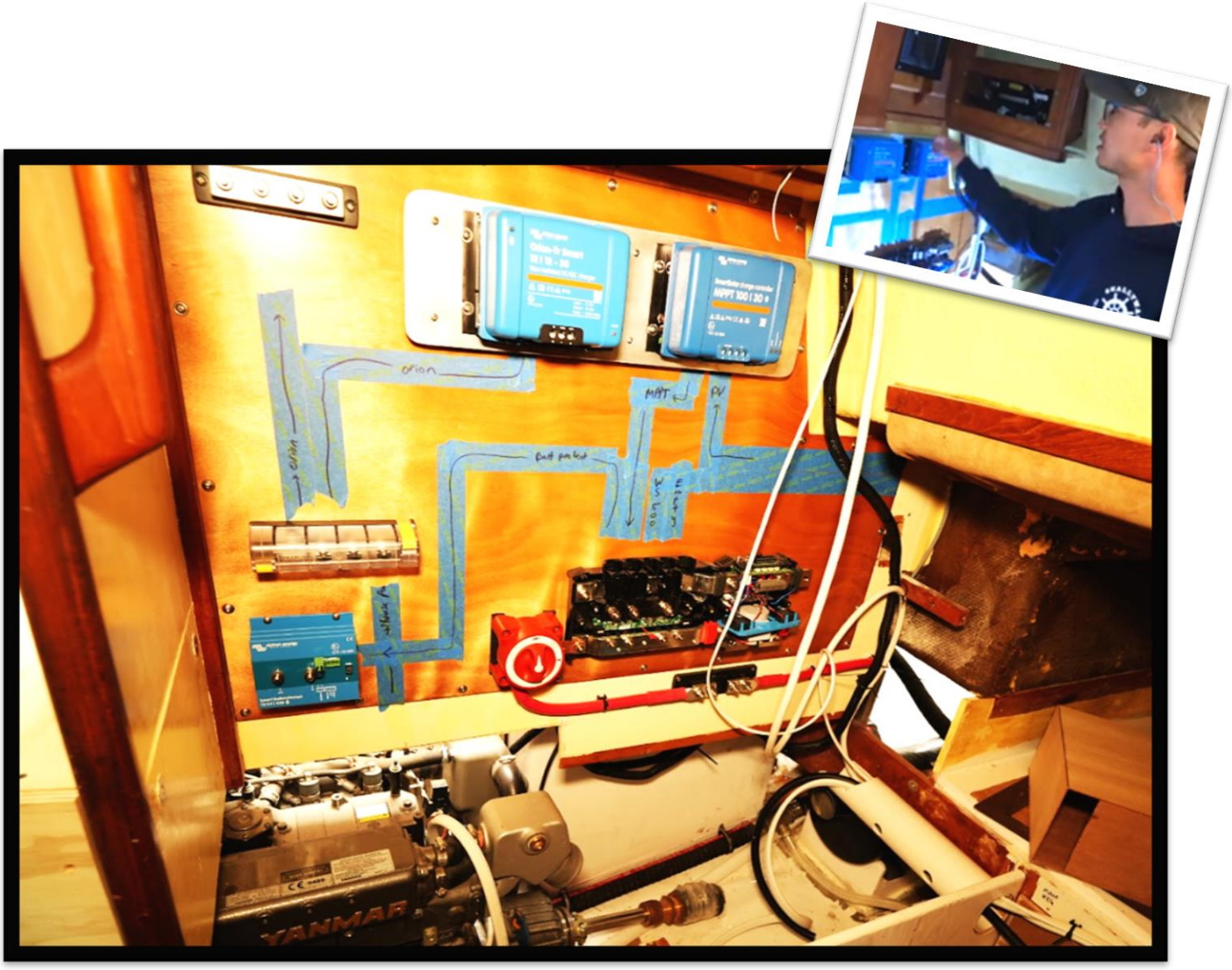
New electrical system

Dual hull inlets so the vessel can be plugged in anywhere in the world!
Double breaker, Isolation transformer on 30-amp 120-volt system.

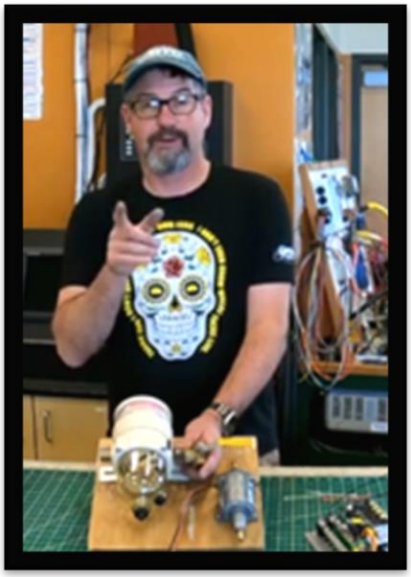
<u>All new wiring ~ Complete Victron system including:</u>

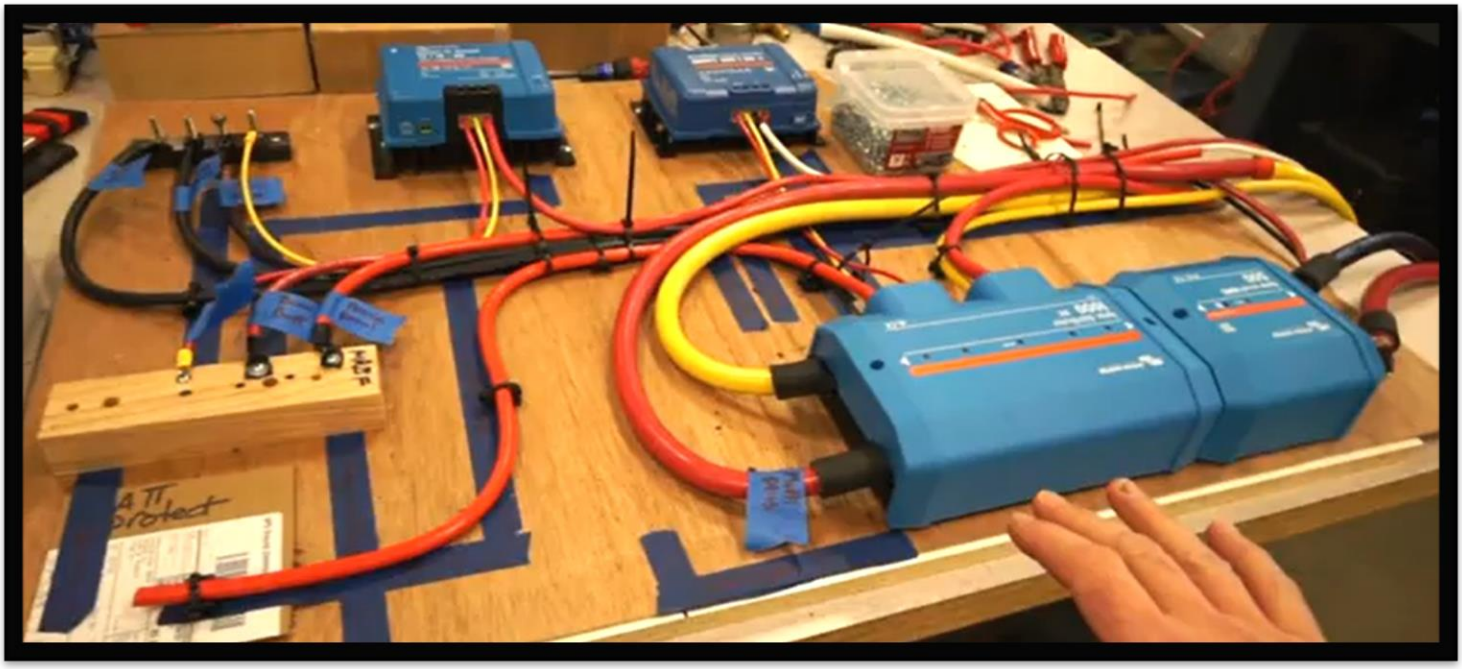
~Multiplus 3000 inverter
~400 amp-hours of Victron lithium batteries
~Battery monitoring equipment
~Solar controller
~Battery disconnect/BMS/etc. for lithium operation
~DC to DC chargers for start & windlass batteries (AGM's)

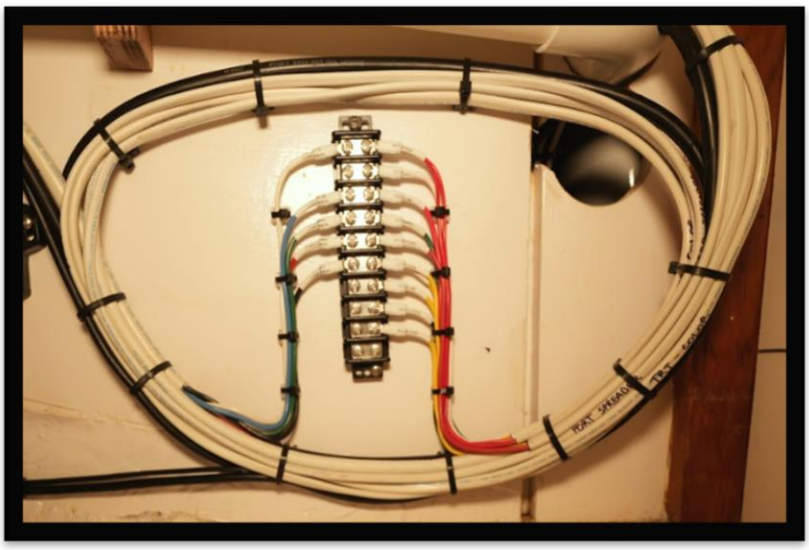
<u>New AC panel and circuits</u>
170-amp Balmar alternator & WakeSpeed WS500 regulator
Windlass removed, serviced, new wiring, foot switches, & relay



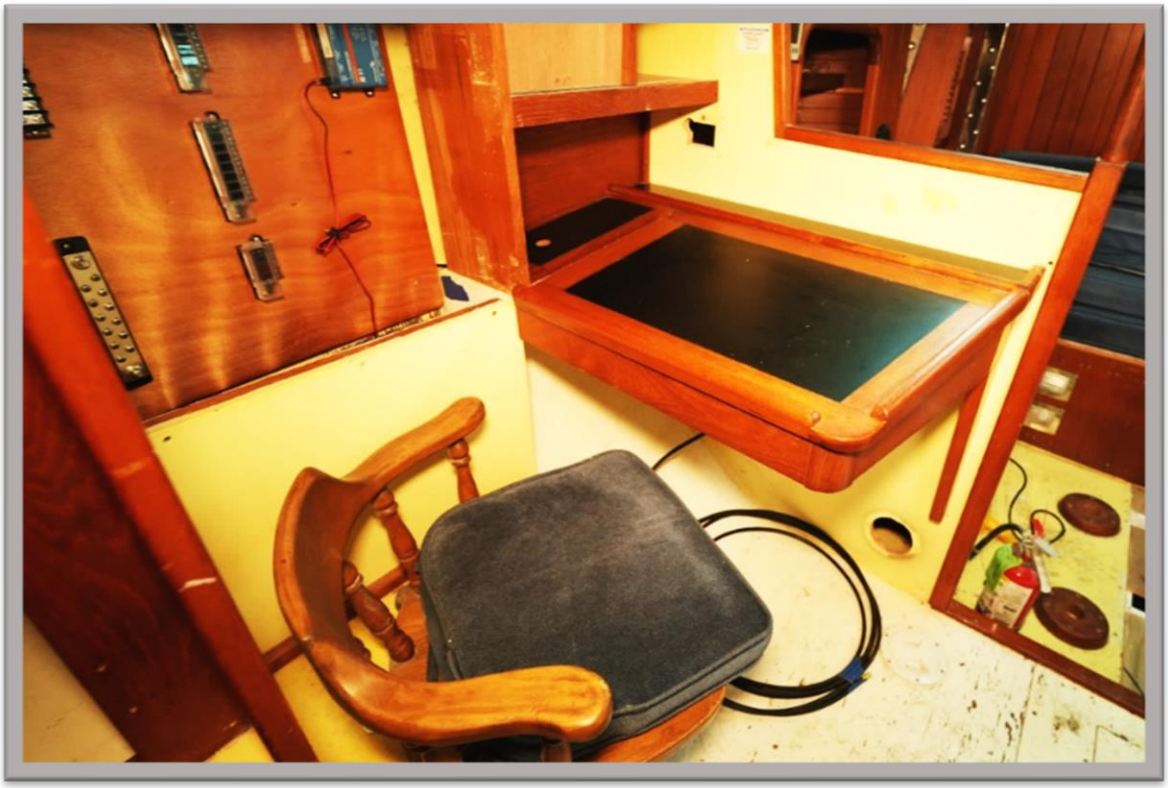
EXHAUST
ON
AQUALARM
BILGE
ON
AQUALARM
BILGE PUMP 1
AUTO
MAN
OFF
BILGE PUMP 2
AUTO
MAN
OFF
AQUALARM







New windows made & installed
NMEA 2000 backbone installed, wind, depth, temperature transducers installed
I'm sure we forgot stuff here as well….
As much as possible, every system was designed to be serviced, inspected, & easy to maintain.



Frequently Asked Questions

Why did SVC refit this boat?

We are always doing boat projects at Skagit Valley College. The past two seasons, we needed a project boat for authentic learning during Covid when students couldn't work in the local yards. This particular vessel had the pieces we needed in order to provide authentic student learning activities—systems, rigging and engines.

Why did you choose this boat?

Skagit Valley College connection Jennifer King who now runs K & R marine and teaches for us. The boat was here locally, needed a complete re-fit, and was in our budget.

Is any more work going to be completed?

Yes, a little, until the end of the month/launch day.

- Mostly getting the electrical system online.
- Running the engine
- Testing work we've done
- Fresh bottom paint before the launch, as this is time sensitive

How much will it cost to have the project finished?

DIY starting $25,000+ our best guess. Having the work done professionally $50,000+ Depending on fit and finish, and your cruising style.

What happens to the money?

It goes back into the program for future projects. We are a community college and funding is always tight! The money from this project is held in the Skagit Valley College Foundation with a specific account for our program. The funds are used in support of student learning, projects, growing the program and keeping students current with new and emerging technology.

Can the potential buyer have the boat surveyed?

Absolutely, we always recommend an independent evaluation. However, it will not include a sea-trial as the boat is being purchased as-is, where-is. Our lability insurance ends when it's taken off our property.

Is there local moorage available?

For short term, after the boat is launched, but not for long-term. Please check with local marinas for arrangements.

What is the condition of the sails?

Main-sail is in pretty good condition can be seen in the SVC workshop.
Needs a new head-sail, no light air sails at this time.

Does the boat come with a warranty?

No, the vessel is sold as-is., where is.

Kings Pride
Project Costs

2020

May 2020	Purchase Vessel from Roger King	$25,000.00	
May 2020	Tax & Title Work	$2,500.00	
June 2020	Haul-out, Transport, & Pressure Wash	$959.06	
September 2020	Paint stripper, brushes, putty knife	$41.37	
September 2020	Tarps for under boat	$50.83	
	Starting Costs		**$28,551.26**
October 2020	3 S.S Tank inspection ports	$734.02	
October 2020	Silvertip: gallon epoxy, 1/2 hardener	$202.75	
October 2020	Temporary Caulk, Windows	$19.16	
October 2020	1.5" SS fitting for fuel tank	$25.56	
October 2020	3/4 Aluminum fitting	$7.81	
October 2020	Crane fees for mast removal	$250.00	
October 2020	King Electric heater	$165.81	
	Total Costs October		**$1,405.11**
November 2020	Shrink Wrap supplies	$297.43	
November 2020	8" x 8" SS plate for fuel tank	$42.23	
November 2020	Shrink Wrap supplies	$25.44	
November 2020	Shrink Wrap supplies	$102.36	
November 2020	Windlass Base UHMW	$70.34	
November 2020	G10 1"x4"x24" Engine beds	$167.40	
November 2020	SS for Chain Plates	$473.86	
November 2020	Standing rigging, turnbuckles, etc	$7,761.02	
November 2020	Harken Mark IV Roller Furler	$4,102.16	
	Total Costs November		**$13,042.24**
December 2020	SS for Rudder	$45.38	
December 2020	Vitrifrigo refrigeration system	$1,421.21	
December 2020	Yanmar 4HJ, 45 HP Engine	$12,851.00	
December 2020	KaM35, * degree reduction gear	$2,720.00	
December 2020	Lumber & supplies to build mast paint tent	$154.76	
December 2020	Bronze Bolts for gudgeon	$25.71	
December 2020	Paint Materials for mast	$1,000.00	
December 2020	2 Qt. White Bilge Paint	$48.21	
December 2020	Gallon Barrier Coat	$124.67	
December 2020	1/2" S.S. Fitting for fuel tank	$3.06	
	Total Costs December		**$18,394.00**

Kings Pride
Project Costs

2021

January 2021	G10 for new stern tube	$248.94
January 2021	500' of 18-2 marine wire	$113.71
January 2021	Mast Head/Spreader/Steaming lights LED	$403.85
January 2021	Machining for Chain Plates	$2,400.00
January 2021	4" & 6" Fiberglass tape	$70.47
January 2021	RigRite Mast parts	$133.40
January 2021	Marine Edson, quadrant, cables & chain kit	$1,638.75
January 2021	LRM 400 coax cable	$97.15
January 2021	Bronze bearing holder	$297.14
January 2021	S.S. Rivets for mast	$32.57
January 2021	Max Prop 18" 4 Blade	$3,681.03
January 2021	Type N to PL-259 adapter	$7.07
January 2021	4 Ty-vek suits	$42.80
	Total Costs January	**$9,166.88**

February 2021	3M Filter cartriges	$80.26
February 2021	2.5 Gallons Epoxy	$398.12
February 2021	Cutlas Bearing	$82.95
February 2021	Cabosil filler	$69.99
February 2021	Windlass Reversing Solenoid	$123.14
February 2021	Harware: Sandpaper, bolts, etc	$70.00
	Total Costs February	**$824.46**

March 2021	Window Material 4' x 8' x 3/8" sheet	$366.27
March 2021	LFS Frigoboat Spill-Over unit	$166.74
March 2021	Silver Tip Epoxy 1.5 Gallons	$206.24
March 2021	GE SilPruf for Windows, 12 tubes	143.89
March 2021	More Silver Tip Epoxy, 3 gallons	307.52
March 2021	Barrier Coat & Bototm paint, rudder	$100
March 2021	Supplies for blasting bottom paint	$714
March 2021	Labor and equipment for blasting	$1,500
	Total Costs March	**$3,504.88**

April 2021	Hardware for chainplates, buffing compound	$28.17
April 2021	More hardware for Chain plates	$45.26
April 2021	4 new 5/8" Plastic Thru-hulls	$20.55
April 2021	Gallon EZ Bilge White	$102.52
	Total Costs April	**$196.50**

Kings Pride
Project Costs

May 2021	Plastic Thru-hulls & Bronze Bolts	$106.50	
May 2021	Sandpaper for removing rest of bottom paint	$30	
	Total for May		**$136.50**

June 2021	QuickFair for bottom (2 kits)	$96.00	
June 2021	More sandpaper	$18.00	
June 2021	Supplies for blasting bottom	$714.22	
	Total for June		**$828.22**

	Total for July	$0.00	
	Total for August	$0.00	
September 2021	Hardware for Chain Plate covers	$19.58	
September 2021	Hardware for cleats	$6.99	
	Total for September		**$26.57**

October 2021	Water lift Muffler	$453.59	
October 2021	New sheeves for top of mast	$240.00	
October 2021	Qt White Bilgecoat	$30.83	
October 2021	Gloves, Paint Brusshes, Coveralls, misc	$67.39	
October 2021	Propeller Shaft	$1,000.00	
	Total for October		**$1,791.81**

November 2021	S.S. for 2 Mast tangs	$21.35	
November 2021	Mast halyards (5)	$1,678.33	
November 2021	Roller Blocks for Mast 4 @ 60.00	$240.00	
November 2021	Blocks For Mast	$212.76	
	Total for november		**$2,152.44**

December 2021	Mast Boot	$53.02	
December 2021	Windex, Micro Block, flag halyards	$69.62	
December 2021	NW Rigging, 2 hours, spreader boots, halyard	$714.15	
December 2021	Shrink Wrap	$60.00	
	Total for December		**$896.79**

Kings Pride
Project Costs

2022

January 2022	Hardware	$21.29
January 2022	Electrical - Victron	$10,500.00
	Total for January	**$10,521.29**

February 2022	Aqua Alarm, bilge swithc, engine exhaust ala	$163.00
February 2022	Fisheries: Stove, fuel fill hose, wiring	$4,840
February 2022	Weld Mount & LPG hose	$100.15
February 2022	Fisheries, buss bars, exhaust adapte,	$407.39
February 2022	McMaster Carr, fuel tank fittings	$72.79
	Total for February	**$5,583.33**

March 2022	Marinco 220 volt hull inlet	$134.31
March 2022	McMaster Car, black water 45 fitting	$29.11
March 2022	4/0 battery cable (75') Lithium Battery Protect	$850.66
March 2022	McMaster Carr, 1.5" NPT to hose bard (3)	$84.72
March 2022	2.5" Exhaust hull fitting	$91.55
March 2022	Compass light, gasket material for fuel tank	$55.55
March 2022	New Marelon 1.5" Sea valve	$141.99
March 2022	Fuel fittings & screws	$47
March 2022	4/0 lugs, & bus bar	$151.38
March 2022	Sebo's fuel tank fittings	$86.20
March 2022	Exhaust Hose, 2.5"	$240.00
March 2022	WakeSpeed WS500 & Harness	$725.00
	Total for March	**$2,637.52**

April 2022	Misc Hardware items	
April 2022	Fisheries for plumbing head/washdown	$139.48
April 2022	Solar vent	$107.00
April 2022	Plumbing Fittings - bilge pumps	$77.00
April 2022	Plumbing for sea water engine supply	$138.00
April 2022	Fisheries: Clamps, terminal blocks, 4/0 yellow	$323.98
April 2022	Fisheries	$833.00
May 2022	Plumbing, heat shrink, fasteners etc	$305.00
May 2022	Cleaning supplies	$97.32
May 2022	Fisheries, wiring supplies	$213.26
May 2022		
Donated / stock	Pumps, hose, fittings, wire, etc we had on-hand	$10,000.00
	Total Spent	**$111,893.84**

Kings Pride
Project Costs

Mast Costs....

October 2020	Crane fees for mast removal	$250.00
November 2020	SS for Chain Plates	$473.86
November 2020	Standing rigging, turnbuckles, etc	$7,761.02
November 2020	Harken Mark IV Roller Furler	$4,102.16
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November 2021	Roller Blocks for Mast 4 @ 60.00	$240.00
November 2021	Blocks For Mast	$212.76
December 2021	Mast Boot	$53.02
December 2021	Windex, Micro Block, flag halyards	$69.62
December 2021	NW Rigging, 2 hours, spreader boots, halyard	$714.15
	Wind Instrament	Donated
	Deck Lights	Donated
	Total	$20,107.26

Kings Pride
Project Costs

Engine Costs

November 2020	G10 1"x4"x24" Engine beds	$167.40
December 2020	Yanmar 4HJ, 45 HP Engine	$12,851.00
December 2020	2 Qt. White Bilge Paint	$48.21
January 2021	G10 for new stern tube	$248.94
January 2021	Max Prop 18" 4 Blade	$3,681.03
February 2021	2.5 Gallons Epoxy	$398.12
February 2021	Cutlas Bearing	$82.95
October 2021	Water lift Muffler	$453.59
October 2021	Propeller Shaft	$1,000.00
	Exhaust Hose	$500
	Fuel Components	$350
	Sea Water components	440
	Total	$20,221.24

Work Still Needing to be Done

Woodwork:

- Finish the v-birth modification: Paint, create storage access, locker door, etc. Major work has been completed to Bob Perry's actual design.
- Entrance: the stairs are attached to a temporary piece of particle board, must replace with marine plywood
- Sink/engine cover box is just plywood mock-up needs to be constructed by marine carpenter or DIY with wood skills
- Engine cover in quarter/birth electrical area needs to be finished
- Back corner of galley needs trim/modification for storage
- Main saloon: need to finish paint some wood
- Sound proofing needs to added around engine

Plumbing:

- Potable Water system:
    - Forward tank is complete and plumbed to water-pump area under settee
    - Hot/cold (blue/red pex) main runs are installed
    - Most needs final installation
- sink, sink drain, sink faucets
- shower box for cockpit (if desired)
- head faucet with pull out for shower
- Saltwater wash down: Completed up to pump in forward cabin. Needs to run under bunk and up on deck
- Hot water heater
- Ideally, according to SVC, a 30 gallon tank or even two new tanks constructed for main cabin area as designed by Bob Perry. This would give a second tank(or tanks).

Electrical:

There will be some small projects still to complete

- Need to add solar panels, comes with Victron Controller installed
- The AC outlets are wired from panel to first outlet, but the rest of them need to be installed and wired according to your preference
- The DC power will be available on both sides, but new owner will need to install USB chargers and other DC appliances
- The cabin lighting still needs to be completed

Exterior:

New life-lines needed

Canvas: Sail cover, winch covers, windlass cover, and the dodger Less the top, it's composite)

Paint the deck/synthetic material like SeaDeck, or just go sailing ☺

Strip the cap rail, caulk around the underside, varnish (if desired)

New Anchor & chain, it's there but very rusty and old design

New headsail, mainsail is decent

Electronics for Navigation, radar, autopilot

VHF radio, AIS receiver:

Bonus: The Antenna [top of mast] and cable installed to Nav station, ready to go!

Covering for the sole inside (we wanted SeaDeck), currently painted plywood

Boat was set up for hydrovane, but it was sold, replace if desired

Refrigerator:

- Needs insulation added to lids
- Storage system to make easy access: Removable shelf or storage boxes, or….

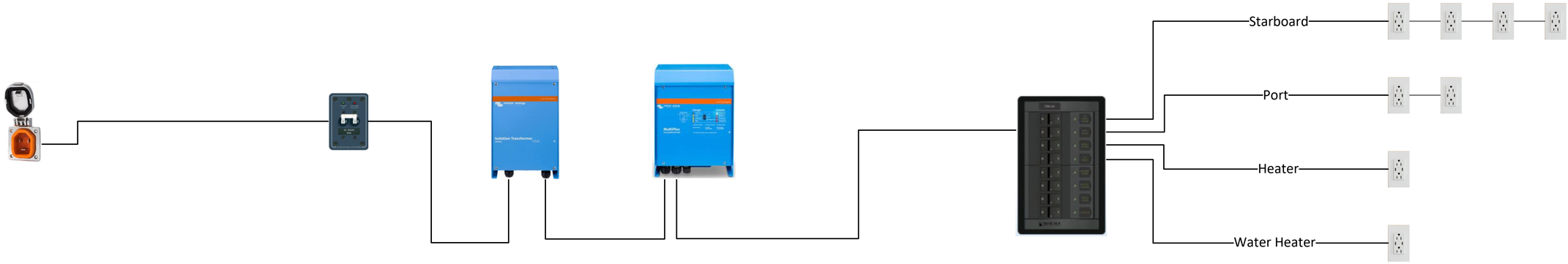
Needs new v-birth cushion – have the old one, but it was a single.

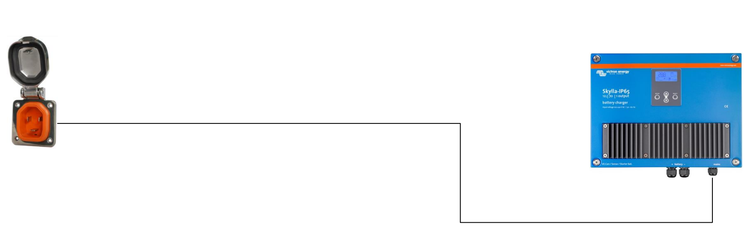
Rigging [most is new]:

- Will need some reefing lines and other
- A boom kicker or vang
- Few exit blocks
- Line locks on the mast for halyards

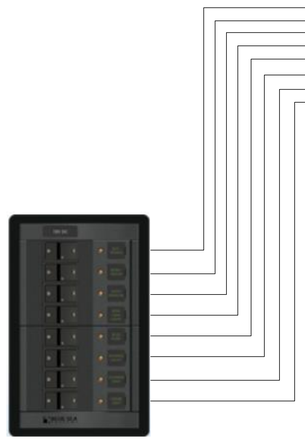
I'm sure we've missed a few things….

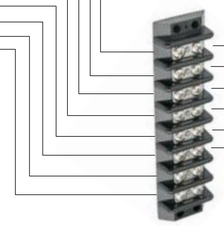
King’s Pride – AC Conceptual v2





King’s Pride
DC Panel - Nav Station
Conceptual Diagram





Electronics

House Loads

Cabin
Lighting

Companionway

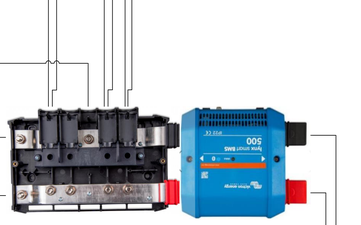
Water Pump

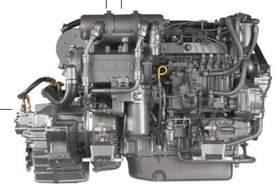
Head Large Loads

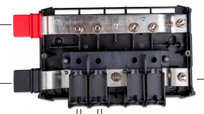
Refrigerator

AC Panel

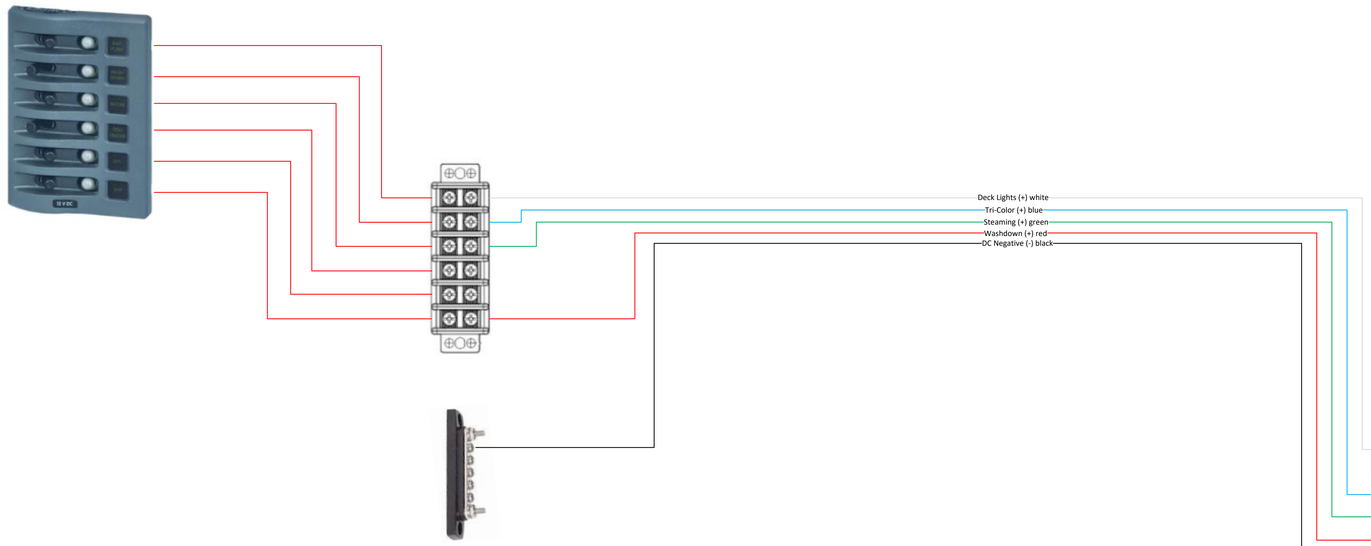
DC Panel

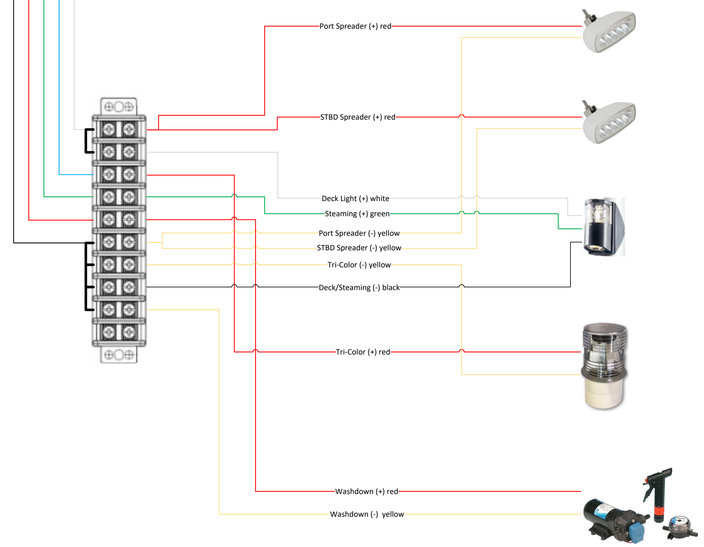






King’s Pride
DC Sub-panel: Companionway
Conceptual Diagram





NMEA Backbone

VHF

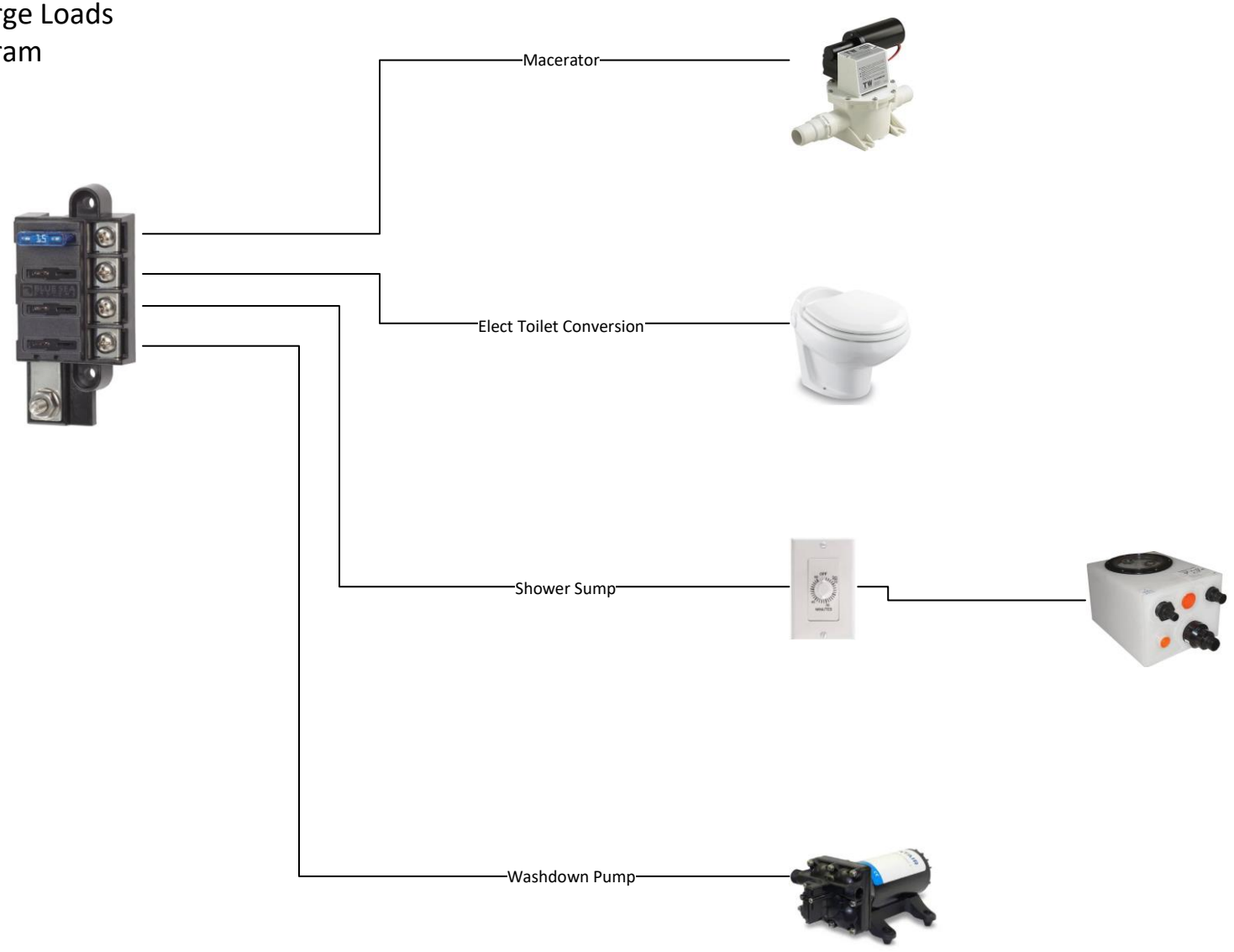
MFD

Radar

Autopilot Control Unit

King’s Pride
DC Sub: Electronics
Conceptual Diagram

King's Pride
DC Sub: Head Large Loads
Conceptual Diagram



King’s Pride
DC Sub: House Loads
Conceptual Diagram

Quarter Berth

Cabin Light

Reading Light

USB

Head Lighting

Light

Fan

V-Berth
Lighting

Cabin Light

Reading Light

USB

Stereo

Cabin Fan

Cabin
Lighting

Cabin Lights Port

Cabin Lights Starboard

Cabin 12v Socket

Cabin USB