

U. C. Davis / Bodega Marine Laboratory Research Vessel



Year built: 2002
Builder: Safeboat
Model: Full Cabin Archangel Class
Length: 42'
CF #: 9389 XS

Characteristics and Equipment

Collar System

- SAFE XDR-1 Extreme Duty Reinforced Collar System. Patented solid polyethylene (closed cell foam) collar encapsulated by a marinated polyurethane membrane with extreme rip-stop reinforcement.
- XDR-2 Upgrade with hand lines and stainless steel D-rings.
- Color: Blue.
- Anti-fouling paint on side plates behind collars.

Hull & Deck

- 5/16" - 5086 Bottom Plate with 5/16" keel doubler on forefoot.
- SAFE Boats exclusive 10 stringer system with angled transverse framing on 12-inch centers.
- Performance shoe in bottom plate.
- Fully welded performance strakes.
- Sacrificial zinc anodes.
- Eight (8) 10-inch cast weld aluminum cleats.
- Forward rails/grab handles on cabin.

- Fabricated aluminum life ring mount with 24-inch ring.
- Bow and transom eyes.
- Custom fabricated weld on four-way lifting eyes with SS inserts.
- Integral airtight chambers and welded hull and deck.
- 25-degree "deep-v" dead rise hull.
- Bottom anti-fouling paint on wetted hull surfaces.
- Welded marine grade 3/16" - 5086 deck plating.
- Dual water resistant hatches with SS pneumatic lift assists over engine compartment, removable center rail for engine removal.
- Water tight inspection hatch aft of engines with access to engine/jet space.
- Non-skid decks and gunnels with 3M Safety Walk. All non-skid edges are sealed with 3M edge seal.
- Anchor locker with anchor tie downs, locker drains, and ammo can mounts.
- All outside lockers have fabricated aluminum access doors.
- All locker vents are designed to reduce water intrusion.
- Wrap around aft deck rails..
- Self-bailing fore and aft decks.
- Attachment points for a variety of operational rigging.
- Full hand holds throughout.
- Easy passage around pilothouse to bow with hand/foot holds.

Fuel System

- Calibrated WEMA™ fuel sending unit. Threads out and provides easy tank inspection port.
- 300-gallon (US) fuel tank with a formed bottom and no seams including longitudinal and transverse baffles. All aluminum is 1/4" - 5086 material.
- Multiple fuel pickups and returns with SS shut off ball valves.
- Independent fuel stripping port.
- Racor water separator/filter with priming pump and SS shut off ball valves.
- Fuel read out gauge at operator's station and in tank room.
- Water tight hatch accessing fuel tank area.

Pilothouse

- 3/16" - 5052 aluminum with excellent visibility through watertight marine-grade tinted windows.
- Windshield wipers/motors and freshwater wash for front windshield panels.
- Dual forced air heat and windshield defroster/defogger system w/ multi speed fan and run-off engine heater core.
- Two (2) water cooled HVAC systems with individual electronic controls and one (1) auxiliary heater. Can be run from either shore power or generator
- Weather tight, rugged, hinged doors with windows on each starboard and port side of cabin with internal locks.
- Weather tight, aft facing hinged door with internal lock.
- Theater seating for three, with marine grade upholstery on shock mitigating seats.
- Ample stowage areas including cubbies.
- Access ports to all instrumentation, controls, and interfaces.
- Console mounted controls for ZF electronic gear shift with over rev protection.
- Marine grade carpet and insulation.
- Double reinforced swing down rooftop antenna/light/radar pod.
- Three (3) fire extinguishers.
- Two (2) ventilation fans, 12-volt.
- Rubberized non-slip material on dash, console and handholds.
- Isolated SS fasteners used throughout.
- All SS hardware is 316L grade or better.

Electrical

- 12-volt DC and 120-volt AC electrical system.
- XANTREX Freedom Marine 30 Inverter
- Batteries; absorbed glass matt (AGM) batteries secured in dedicated drip-resistant tray. Three (3) separate systems: one (1) for house and one (1) per engine for starting for a total of three (3) batteries. Isolated with selector switches.
- Independent port and starboard C-9 control panels.

- Six (6) 12-volt accessory plugs.
- Two (2) alternators with minimum 105-amp capacity for starting system maintenance.
- Service loops on all equipment cable.
- Marine grade commercial distribution breaker panel with thermal magnetic over/short surge protection breakers including shielded switch covers.
- Shore power via 120-volt AC system with 50-foot portable cable includes isolating transformer.
- Two (2) 120-volt AC 15-amp marine GFI duplex outlets.
- Built in engine room fire suppression system.

Electronics

- Fully integrated navigation system.
- All components NMEA standard compatible.
- GARMIN XSV & GARMIN GPS MAP Multifunction Display and Radar Bundle with Built In Sonar, GMR18HD+ Radar Dome and G3 Coastal and Inland Charts
- 520 - PLD Transducer with smart sensor, 10-meter transducer cable and 7-pin plug (to RD30).
- - 000-117-603 6-pin 5-meter NMEA/power cable (GP37 to radar)
- - 000-041-405 Front-mount flush mounting kit (GP37)
- Furuno LH-3000 loud hailer with speaker and horn.
- GARMIN VHF

Aft Deck Equipment

- Aluminum Hydraulic A-frame on stern
- Winch drum with approx. 200m 1/4" hyrdowire
- Hydraulic control station midship starboard side
- Electric Capstun
- Aluminum Davit with Electric Motor
- Operator control station midship port side
- ACR EPIRB
- TYPE IV Life ring
- Lifesling
- Hydraulic controlled Trasnom door on stern opens and lowers to waterline
- Seawater washdown hose port quater locker

Lighting

- Navigation lights (running and anchor).
- Starboard, port, and aft facing floodlights.
- Interior overhead lights (white and red).

Engine/Power Train/Hydraulic

- Dual inboard Yanmar 500 diesel engines.
- Dual ZF305-1 gear transmission 1 to 1 ratio.
- Dual drive lines with adapter plates.
- Dual Hamilton 322 water jets.
- Dual engine, transmission, and water jet controls at helm station.
- Dual gauge panels at helm station.
- Engine and transmission FLOCS (fast lube oil change system).
- Hydraulic Power Pack / PTO on Port Engine

Forward Below Deck Galley:

- Sink, faucet, Microwave, Norcold mini Refrigerator
- Enclosed head Dometic toilet with holding tank, water flush and pump out attachment.
- XINTEX Marine Carbon Monoxide detector
- Fire extinguisher
- Benches with vinyl foam cushion
- Storage for tools, equipment, and survival gear.
- Dog down water tight port and starboard lower cabin windows
- Forward weather tight access hinged with internal lock and window door to forward exterior bow and anchor locker