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MARINE SURVEYORS®

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Setting Standards for Safer Boating

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Marine Surveyor

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Ref: WCDXXXX

PURPOSE: Condition and Valuation

Date: 01/01/2013

YACHT NAME: SS Mino

HOME PORT: Never Sink, NC

Survey Certified For:

Skipper

101 Water St.

Never Sink, NC 20001

YEAR: 1990

BUILDER: Carver Boat

MODEL: Californian 45

HULL IDENTIFICATION NUMBER (HIN): CDRFBXXXXX

USCG DOCUMENTATION NUMBER: XXXXX

TONNAGE NET: 31

LOA:	BEAM:	DRAFT:	DEPTH:	DISPLACEMENT:
45'0"	15'2"	4'0"	8.7'	40,000lbs.

This survey was conducted at, Old Marina, Never Sink, NC while the vessel was in the water, Underway, and hauled out with the owners, present.

This vessel is registered for Recreation.

MARKET VALUE: \$ 150,000.00

SCOPE OF SURVEY:

This survey is a visual inspection of the vessel its structure, systems, and rigging. It does not cover possible latent defects which could not be readily discovered by inspection without removal of machinery, tanks, sheathing, joiner work, upholstery, bulkheads, ceiling, fascia, fiberglass or metal covering, fasteners, or other fixed material, disassembly of machinery, plumbing, wiring, or other parts, components or systems. Unless specifically stated, no test borings have been made, and no destructive or invasive testing has been performed.

GENERAL CONDITION: Good, when the recommendations are accomplished. This report should be considered as an entire document. No single section is meant to be used except as part of the whole. It is current to the named client, underwriters, or lenders for 30 days of undisturbed lay-up or the vessels first use.

HULL COMPOSITION AND STRUCTURE:

HULL MATERIAL: FRP (Fiber Reinforced Plastic)

FRAMES/STRINGERS: Hat section FRP.

FASTENINGS: Stainless steel.

WEATHER DECKING: Cored FRP.

INTERIOR DECKING: Plywood with FRP and Aluminum framing.

SUPERSTRUCTURE: Cored FRP.

BULKHEADS: Plywood

HATCHES: Cored FRP, Aluminum framed polycarbonate.

PROPULSION MACHINERY:

No certified or factory engine surveyor was present the day of survey.

MAKE: Caterpillar

MODEL: 3208

SERIAL STARBOARD: Not sighted.

SERIAL PORT: Not sighted.

REPORTED HOURS OF USE: Port 1347, Starboard 1748, on meters.

Full Throttle RPM:	Port:	2750	Stbd:	2700	Speed:	19 MPH
Oil PSI:	Port:	60	Stbd:	60		
Exhaust Temp:	Port:	102°	Stbd:	100°		
Cruise RPM:	Port:	1800	Stbd:	1800		11 MPH
Oil PSI:	Port:	60	Stbd:	60		

EXHAUST SYSTEMS: Wet out Transom at waterline.

COOLING SYSTEMS: Raw water/coolant heat exchange.

SEA STRAINER: Perko bronze basket type inside, bronze strainers exterior.

GAUGES: (2) Station analog: Oil pressure, Coolant temperature, Tachometer, Fuel Gauges, Hour meters, Transmission temperature, Fuel use.

ENGINE MOUNTS: Vibration isolator bolted to FRP stringers in good condition.

HOSE CLAMPS: Adequate stainless steel.

HOSES: Are in good condition.

FUEL LINES: Are of approved type and in good condition.

PRIMARY FUEL FILTERS: Racor 1000MA.

OIL FILTERS: OEM spin on cartridge. Temperature: Port 195°, Starboard 192°

THROTTLE AND CLUTCH CONTROLS: (2) station, hydraulic on HyNautic dual lever control heads.

TRANSMISSION: Caterpillar

Model:	MG 507-1	Ratio: 2.5
Serial #:	Port: 5AM726	Stbd: 5AM773
Temperature:	Port: 113°	Stbd: 127°

SHAFT PACKING GLANDS: Lip seal with spare on shaft. (See recommendations.)

GENERATOR: Kohler

MODEL: 12.5CC063

FUEL: Diesel.

KW: 12.5

VOLTAGE: 120/240 60 cycle.

SERIAL NUMBER: XXXXX

REPORTED HOURS OF USE: 1896 on meter.

SOUND SHIELD: Yes OEM.

PRIMARY FUEL FILTER: Racor 500 MA.

BATTERY: House. Has a main disconnect switch.

EXHAUST SYSTEM: Wet out hull side above water.

STEERING: HyNautic manual hydraulic. (See recommendations.)

Always test the steering before leaving the dock.

BOW/STERN THRUSTERS: None.

PLUMBING SYSTEMS:

FUEL SYTEMS:

TANKS: (2) Aluminum 440 gallons total reported.

Fuel tank could not be fully inspected and a pressure test to 3 PSI for 30 min. is recommended.

PLATE GAUGE: Not sighted.

PUMPS: Engine lift,

HOSE: Rubber.

FRESH WATER:

TANKS: (1) Aluminum, 190 gallons reported.

PLATE GAUGE: Not sighted.

PUMPS: Groco Paragon 12 VDC.

HOSE: Vinyl, Quest tubing.

HEATER: Raratan 20 gallon, 120 VAC.

SHORE CONNECTION: Yes. (Never leave shore water connected on unattended vessel.)

SINKS: (4)

SHOWERS: (2) inside, (1) transom.

GRAY WATER: Check local and state laws where the vessel is operated regarding the discharge of grey waters.

TANKS: (2) Sumps.

PLATE GAUGE: NA.

PUMPS: (2) Jabsco 12 VDC, automatic only.

HOSE: Vinyl.

REMOVAL: Overboard.

BLACK WATER: Check local and state laws where the vessel is operated regarding the discharge of black waters.

TANKS: (1) Aluminum 70 Gallons reported.

PLATE GAUGE: Not sighted.

PUMPS: Jabsco macerator 12 VDC. (See recommendations.)

HOSE: Vinyl and rubber sanitation.

REMOVAL: Overboard, Deck plate.

HEADS: (2) Groco electric, 12 VDC.

SEA WATER: None.

UNDERWATER:

HULL: Semi V, no keel, hard chine, flat transom, raked bow. The antifouling coating is in poor condition, needs new antifouling coating soon. The hull was sounded with a plastic hammer and appears to be in good condition. There were no visible blisters. Hull topsides were checked with a Wagner non contact moisture meter and found to be within normal ranges.

PROPELLERS: 4 blade bronze, right hand/left hand, in good condition.

SHAFTS: 2" stainless steel in good condition where visible.

SHAFT BEARINGS: Solid rubber cutlass in good condition.

STRUTS: "V" shaped bronze aft "I" shaped bronze mid, in good condition.

ANODES: Zinc, (1) on transom, (2) per shaft, (1) per shaft line cutter.

RUDDERS: Spade semi balanced bronze in good condition.

TRIM TABS: Bennett electric/hydraulic with 46" X 12" planes.

THROUGH HULL FITTINGS: Bronze in good condition where visible.

SEA VALVES: Bronze Ball valve. (See recommendations.)

ELECTRICAL SYSTEMS:

DC SYSTEM:

VOLTAGE: 12

BATTERIES: (2) 8D wet cell, (6) 6 volt golf cart wet cell.

DISTRIBUTION: Panel in salon.

CIRCUIT PROTECTION: Fuse and trip free breakers.

BATTERY DISCONNECT SWITCHES: (1) Two position, (4) single position.

ENGINE DRIVEN CHARGERS: OEM Alternator.

MONITORS: Link 1000, Volt AMP meters.

AC SYSTEM:

VOLTAGE:

DISTRIBUTION: Panel in salon.

CIRCUIT PROTECTION: Trip Free Breaker.

SHORE CONNECTIONS: (2) 240 volt 50 AMP, (2) 120 volt 30 AMP.

SHORE CABLES: (1) 240 volt 50 AMP.

INVERTER: Trace Engineering, inverter/charger, PS2512.

BATTERY CHARGER: Sentry 60 AMP.

MONITORS: Volt, AMP, cycle meters.

BONDING SYSTEM: Passive with shore ground isolator.

SHIPBOARD AMENITIES:

GENERAL DESCRIPTION AND CONDITION:

Vinyl overheads, Hardwood cabinets and trim, Hardwood bulkheads, vinyl hull liners, HPL and solid surface countertops, Carpeted flooring. General condition is good.

AIR CONDITIONER, HEATER:**MAKE:** CruiseAir**TYPE:** Split and self contained, 120 VAC. (See recommendations.)**TOTAL BTU:**

Outlet temperature:	Cooling
Salon	81°
Bow cabin	61°
Aft cabin	64°

GALLEY:**REFRIGERATION:** GE over under front opening, 120 VAC in good condition.**STOVE:** Origo cook top 120 VAC, 4 burner. In good condition. Open ventilation.**OVEN:** See microwave.**MICROWAVE OVEN:** GE microwave/convection, 120 VAC. In good condition.**SINK:** Double stainless steel. **DISPOSAL:** None.**BLENDER:** Nutone, in counter. (Not operational at time of survey.**COFFEE MAKER:** Braun counter top. Not tested.**ICE MAKER:** ULine under counter, 120 VAC on aft deck. In good condition.**TRASH COMPACTOR:** None.**CENTRAL VACUUM:** None.**LAUNDRY:** Frigidaire over/under 120 VAC, in good condition.**CANVAS AND COVERS:**

Fly bridge bimini top with full enclosure, helm cover, aft deck enclosure, windshield covers. All in good condition.

MISCELLANEOUS:**FEDERAL OIL POLLUTION SIGN:** Display one near bilge pump control. Sighted in engine compartment.**MARPOL TRASH PLACECARD:** Display one in a visible location. Not sighted.**NAVIGATION RULES BOOK:** Required not sighted..**LICENSES AND DOCUMENTATION/REGISTRATION CERTIFICATES:** USCG documentation.
Expires April 30, 2014

ELECTRONICS and NAVIGATION: units are working unless otherwise stated.

#1 VHF RADIO: Uniden UM625C

GLOBAL POSITIONING SYSTEM: Garmin

PLOTTER: Garmin 2010C

RADAR: Raytheon R41 Raster.

DEPTH INDICATOR: Garmin GDS 20.

AUTOPILOT: Autohelm ST7000.

ENGINE SYNCHRONIZER: Glendenning.

ANTENNA: (2) VHF, GPS, open array Radar, KVH track vision 4.

BRIDGE COMPASS: Ritchie. No Deviation Table.

FLYING BRIDGE COMPASS: Ritchie. No Deviation Table.

STEREO: Sony MHC-F150 AM/FM/CD player 120 VAC.

BRIDGE STEREO: Jensen MCD 5110, AM/FM/CD 12 VDC. (Would not play CD)

#1 TELEVISION: Sylvania 20" LCD, 120 VAC in salon.

#2 TELEVISION: RCA 21" CRT 120 VAC, in aft cabin.

#3 TELEVISION:

VCR: Sony, 120 VAC. (Not tested.)

DVD PLAYER: Mintek DVD-2110, 120 VAC. (Not Tested.)

SATELLITE RECEIVER: KVH TracVision 4 active antenna, RCA Direct TV. (Units not tested.)

Has cable TV & phone shore connections.

SAFETY EQUIPMENT:

PERSONAL FLOATATION DEVICES (PDF): (See recommendations.)

LOCATION	QTY	TYPE	CONDITION
Aft Deck	1	IV Foam Ring	Good
Fly Bridge Brow	3	IV Seat cushion	Good
Fly Bridge Brow	8?	II Vest	Unknown

VISUAL DISTRESS SIGNALS:

TYPE	QTY	EXPIRATION DATE
Red Handheld	5	MAY 94
Red Aerial 12 gauge	3	SEP 03
White Aerial 12 gauge	1	SEP 03
Red Aerial 12 gauge	4	OCT 13

EPIRB: None.

FOG BELL: (2) sighted.

SOUND DEVICES: Air/electric Horn.

NAVIGATION LIGHTS: Proper for class. (See recommendations.)

SPOTLIGHT: Jabsco with fly bridge remote. (Not working.) (See recommendations.)

FLAMMABLE GAS FUME DETECTOR: None.

CARBON MONOXIDE DETECTION SYSTEM: None, but suggested to add.

FIRST AID KIT: Sighted.

INFLATABLE LIFE RAFT: None.

DECK RAILS/LIFE LINES: Welded stainless steel tube.

SWIM PLATFORM: FRP Bolt on with boarding ladder. (See recommendations.)

FIRE FIGHTING EQUIPMENT:

AUTOMATIC ENGINE SPACE SYSTEM: FireBoy, halon 1301. Last inspection 2007. (See recommendations.)

PORTABLE FIRE EXTINGUISHERS:

LOCATION	QTY	TYPE	SIZE	LAST INSPECTION DATE
Helm	1	ABC Dry Chemical	I	2007 (Pressure low)
Aft Deck	1	ABC Dry Chemical	I	2007
Forward Cabin	1	ABC Dry Chemical	I	2007
Engine Compartment	1	ABC Dry Chemical	I	2007

The fire fighting system or installation is adequate. (See recommendations.)

BILGE DRAINAGE:

BILGE PUMPS: (See recommendations.)

LOCATION	TYPE	VOLTAGE	SWITCHES
Aft Bilge	Rule 3700 Submersible	12 VDC	Automatic, Manual
Mid Bilge	Rule 3700 Submersible	12 VDC	Automatic, Manual, NO
Forward Bilge	Rule 3700 Submersible	12 VDC	Automatic, Manual

MANUAL PUMPS: None.

ENGINE DRIVE PUMPS: None.

SHOWER SUMP PUMP: (2) Jabsco diaphragm, 12 VDC, Automatic only, open sump.

HIGH WATER BILGE ALARM: No.

COCKPIT DRAINAGE: Above water overboard.

BILGES are clean and free of oil and derbies.

GROUND TACKLE:

ANCHOR: Galvanized steel Delta plow type, on bow roller.

RODE: Chain.

SECOND ANCHOR: Aluminum fortress type on aft deck.

RODE: None sighted.

WINDLASS:

POWER SUPPLY: 12 VDC

MAKE: Maxwell

MODEL: Nilsson, vertical shaft.

RECOMMENDATIONS:

These are items that need to be corrected due to Coast Guard requirements, and/or for the safe operation of the vessel.

1. The propeller shaft seal hoses are dry rotted. Replace as needed.
2. The forward aft bilge pump automatic float switch sticks in the on position. Repair or replace as needed.
3. The steering reservoir pressure is low. Add air pressure per manufactures recommendations and check for leaks.
4. There is an air conditioner terminal block in the salon port aft cabinet that is not properly covered to prevent accidental exposure to energized 120 volt wires. Cover as needed to prevent accidental contact and/or damage from stowed equipment.
5. The port shore power inlet breaker was not operational. Repair or replace as needed.
6. The forward cabin GFIC outlet would not trip when tested. Replace as needed.
7. Most of the seacock ball valve could not be easily operated by hand. Check and service as needed.
8. The engine compartment 120 VAC outlet was not a GFIC type. Check if this is on a GFIC circuit and if not replace with a GFIC type outlet.
9. The starboard running light was not operational at time of survey. Repair as needed.
10. The PFD's (Personal Floatation Device) were stowed under the fly bridge brow and were hard to reach. The zippers on the stowage bags could not be opened. Remove from zippered bags and stow in a location that can easily be accessed in an emergency.
11. There is a valve on the air conditioner raw water manifold that is tapped up to prevent leaking. Replace this valve as needed.
12. There are several loose wires under the chart plotter in the fly bridge. Secure these wires and any other loose wires found under the fly bridge brow.
13. The mid bilge pump was not operational at time of survey. Repair or replace as needed.
14. The engine compartment fire suppression system has not been inspected since 2007. Have this system inspected now and annually.
15. The hand held fire extinguishers are all more than ten years old. The fly bridge unit is low on pressure. Handheld units should be replaced every 8-10 years. Replace all handheld units now.

16. The inverter is not properly wired with a separate neutral buss bar and loads properly separated on main panel
17. The Air conditioner raw water intake hose is dry rotted. Replace as needed.
18. The aft swim platform boarding ladder is secured with a line in the up position. This would prevent a swimmer of crew overboard from deploying the ladder from the water in an emergency. Remove line and add a tag line that would allow a swimmer to pull the ladder down in an emergency.

CONCLUSION:

There is no apparent structural de-lamination, dry rot, previous damage or repairs. At the time of survey the vessel appears to be a good marine risk when the above recommendations are complied with.

OBSERVATIONS and SUGGESTIONS:

These are items that do not directly effect the safe operation of the vessel, but should be completed to help retain the good condition and value of the vessel.

1. The bottom paint is thin and exposing primer in many locations. Recoat as needed to prevent fouling.
2. The salon Air conditioner did not seem to be working properly. Check and repair as needed.
3. Carbon Monoxide Detectors Suggested: This vessel uses fossil fuel for propulsion. During the burning of any of this fuel Carbon Monoxide (CO) gas may be created due to incomplete combustion. Adequate ventilation must be provided at all times while burning this fuel, but CO may also be drawn into the cabin through ventilation systems. CO is a silent menace and kills without warning, therefore this surveyor recommends installation of a UL Marine Listed CO detector in any occupied spaces below decks.
4. The ladder leading from the aft deck to the swim platform has a bent leg. Repair as needed.
5. There are numerous holes in the swim platform that are not properly repaired. Repair as needed.
6. The bridge stereo would not play a CD. Check and repair or replace as needed.
7. The aft deck starboard stereo speaker and forward cabin starboard stereo speakers were not operational at time of survey. Repair as needed.
8. The aft cabin stereo speaker control was not operational at time of survey. Repair as needed.
9. The port aft cabin bedside draw slide is broken. Repair as needed.
10. The lens on the port lower station oil pressure gauge is fogged. Repair as needed.

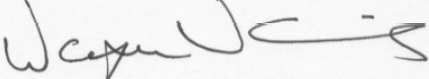
11. Many of the power indicator lights on the electrical panel are out. Replace as needed.
12. The Docking lights lens were cracked and appeared to be leaking. Replace and re-seal as needed.
13. The dinghy davit was not operational at time of survey. Repair as needed.
14. There are several poorly patched holes in the hard top near the dinghy davit. There are gaps in the sealant around the base of the dinghy davit where it passes through the hard top. Above average moisture was noted in these regions. Have this area checked by a qualified lamination technician and repaired and sealed as needed.
15. The starboard aft engine compartment blower was not operational at time of survey. Repair or replace as needed.
16. Above average moisture was noted on the foredeck near the windlass. Have this area checked by a qualified lamination technician and repaired and sealed as needed.
17. The wash down spigot on the foredeck is loose. Reseal and secure as needed.
18. The chrome plating is peeling on the windlass. No action recommended unless the owner wishes to have this unit re chromed.
19. The windshield wipers were not operational at time of survey. Check and repair as needed.
20. There are several loose screws on the bottom of the port house side window frames. Check and tighten screws as needed. Check for broken sealing and re seal as needed.
21. The water tank fill cap is missing on the aft fill plate on the transom. Replace as needed.
22. The galley stove would trip its breaker if all (4) burners were on at the same time. Check and replace breaker if needed.
23. The spot light was apart and not working. Repair or replace as needed.
24. The port engine oil change hose has no hose clamp on the valve connection. This could result in loss of engine oil and possible oil spill into bilges. Add hose clamp as needed.
25. Wire nuts were used for electrical connections at the aft shower sump. ABYC does not allow the use of wire nuts. Replace wire nuts with proper crimp type connectors.
26. The aft head hose shows signs of dry rot. Check and replace as needed.
27. There are several loose wires at the stereo speaker switch in the port salon. Secure as needed.

28. . The galley countertop has a crack near the stove. Repair as needed.
29. The in counter blender was not operational at time of survey. Repair or replace as needed.
30. The propeller shafts appeared low in the stuffing box tube. Check and raise shafts as needed.

This survey checks for compliance with U.S. Coast Guard, American Boat and Yacht Council, Inc., Underwriters Laboratory, and National Fire Protection Association standards and practices. It does not cover possible latent defects which could not be readily discovered by inspection without removal of machinery, tanks, sheathing, joiner work, upholstery, bulkheads, ceiling, fascia, fiberglass or metal covering, fasteners, or other fixed material, disassembly of machinery, plumbing, wiring, or other parts, components or systems. Unless specifically stated, no test borings have been made, and no destructive or invasive testing has been performed. The undersigned has conducted this survey and issued this report for the sole use of the specified requesting party for an agreed fee based upon the intended use of the report and the legal liability of the undersigned; accordingly, others are not to use this report and not rely upon the contents of this report without payment to the undersign of an additional agreed fee based upon reevaluation of the same factors.

The recommendations, judgments, and conclusion expressed herein represent the opinion of the undersign surveyor who has exercised reasonable care in conducting a routine visual marine survey of the subject vessel. This report contains opinions and observations based on my skill, experience and training as a marine surveyor and consultant. Under no circumstances shall this report be understood to constitute a representation, guarantee, or warranty, expressed or implied, of any kind as to the condition or soundness of the subject vessel, its hull, engines, machinery, equipment, or systems or any part of appurtenances thereof, or the cost of effecting any repairs or modifications. Survey conducted without prejudice.

Wayne V Canning, AMS

A handwritten signature in dark ink, appearing to read 'Wayne V Canning', is written over a light gray rectangular background.

Attending Surveyor

REFERENCES FOR COMMON RECOMMENDATIONS

ABYC is the American Boat and Yacht Council

ANSI is American National Standards Institute

CFR is the United States Code of Federal Regulations

ISO is International Standards Organization

NFPA is the National Fire Protection Association

UL is Underwriters Laboratories, Marine Division

Fire Extinguishers, Portable-ABYC A-4.6; 46 CFR 25.

Fixed Fire Extinguishers In Enclosed Engine Compartments-ABYC A-4.7, NFPA 12.B

Fog Bell; ABYC A-23.5, 33 CFR 80, Navigation rule 33, Annex III

Horn ABYC A-23.5. 33 CFR 80

Navigation Light: USCG Commandant Instruction M16672, Navigation Rules, Part C.ABYC A16

Flares-46 CFR 28.145. Water tight container for flares: 46 CFR 180.35-10

Non Metallic Fuel Hoses, fire resistant-USCG TYPE A-1, USC 46-CFR 183.590, UL 1114, ISO 7840 SEA 1527, ABYC H-24 & H-33.6, NFPA 302-5-6.2.2.

Double Clamp Fuel Lines –USC 46-CFR 183.564, ABYC H-24(33), NFPA 302-5-6.3.7.

Support Fuel Lines- NFPA 302-5-6.2.5. ABYC H-24.7

Mark Fuel Fill – NFPA 302-6.3.6., ABYC H-24(33).12.

EPIRB, 46 CFR 28.260

Carbon Monoxide Detection System: ABYC A-24.

Flammable Gas Fume Detector: ABYC, A-14

PFD (lifejackets) 46 CFR 180.25

Master Battery Switch – NFPA 302-7-11.2., ABYC E-9.11.3

Secure Batteries – NFPA 302-7-4.3, 33 CFR 183, ABYC E-10.7

Cover Battery Terminals – NFPA 302-7-4.5., ABYC E-10. NFPA, 7-15.9 Battery terminals shall not be used for more than 1 conductor. Exception: 1 additional connection to a + or – bus or stud for that purpose.

Reverse Polarity Indicator For 120 VAC Shore Power – NFPA 302-8-8.1., ABYC E-8.10

Ground Fault Circuit Interrupter (GFCI) for wet spaces – NFPA 302-8-12.1., ABYC E-8.12. UL 943

Support Electrical Wiring Every 18” – NFPA 302-7-14.6. ABYC E-8.15

Do Not Use Wire Nuts – NFPA 302-8-15.11., ABYC E-8.15.18

Lightning Protection – NFPA 302-2-3., ABYC E-4

Ignition Protected Devices – 33 CFR 183.410, UL 1500, or SEA J1171

Propane Bottle Locker – NFPA 302-6-5.12.1., ABYC A-1.8 ISO DIS9094

LPG Systems- ABYC A-1 & Galley Stoves A-3

CNG Systems – ABYC A-22

Sea cocks – ABYC H-27, UL 1121, ISO WD 9093

Hull Identification Number: 33 CFR 181, ABYC T-10

Toilet, USCG Marine Sanitation Device (MSD) 33 CFR 159, ISO WD 8099

Bilge Alarm, High Water Level. 46 CFR 28.250

Anchor, Ground Tackle: 46 CFR 28.235, ABYC H-40

Boarding Ladder: ABYC H-41

Navigation Rules Book: to be carried Vessels over 12 meter: 33CFR 88.05, COMDTINST M16672.2D









