01d 2756

MARINE CONDITION AND VALUATION SURVEY REPORT 2006 Boston Whaler 27 Challenger / Fire Boat



Survey performed on April 16th, 2021 for: Toms River Township Fire Commissioners District No. 1

Scope of Survey

Acting at the request of TOMS RIVER TOWNSHIP FIRE COMMISSIONERS DISTRICT NO. 1, the attending surveyor did perform an inspection on-board the vessel while ashore during storage period. A trial run was not performed. An inspection of underwater machinery, hardware and hull's wetted surface was performed.

The purpose of a marine survey is to determine, insofar as possible within the limitations of visual and physical accessibility, through non-invasive and non-destructive means, the subject boat's structure, systems, cosmetics, and levels of compliance with currently applicable federal law as well as commonly accepted industry standards and practices.

Certain parts of the boat's structure, systems and equipment can only be inspected after removing flats, bulkheads, joinery, headliners, tanks, etc. This would be prohibitively time-consuming, potentially destructive, and costly to restore. Components requiring access with tools or by disassembly were not inspected. Where dirt, marine growth, coatings buildup or corrosion obscured the surveyor's ability to inspect, these limits will be noted in the report. Conditions suspected or discovered using non-destructive methods may be further subject to invasive testing for confirmation. No invasive or destructive methods were utilized during the inspection without the expressed permission of the boat's owner or owner's representative.

Complete inspection of machinery, plumbing, electrical systems, and available equipment can only be made by disassembly or by continuous operation. This was not done but may be recommended. Engine compression testing was not performed. No fluid samples were drawn for laboratory analysis. Only the installation and external condition of machinery and accessory equipment was inspected, unless otherwise specified. This should not be considered a complete mechanical inspection. Qualified marine mechanics experienced with the specific machinery installed should be employed to survey propulsion of engines and auxiliary generators. Propulsion and rudder shafts were not drawn for inspection however, this may be recommended. The inspection of flexible piping was limited to the condition of its external casing and only where readily accessible for visual inspection.

Electronic and electrical equipment was tested by powering up and observing function. No measurements were taken; no calibrations or adjustments were made. Batteries were not load-tested. Only the external condition of electrical wiring, connections and systems' installation was inspected. No attempt was made to perform a complete analysis of the vessel's electrical systems; as to do so would have required disassembly with tools, removals, etc. to gain access to components.

Generally, it is our experience that few boats surveyed today meet all of the applicable standards for marine electrical system fabrication and installation. This situation may be further aggravated by the wet and corrosive marine environment, and often by the owner's tolerance for poor installations, "do it yourself" add-ons, and a general lack of preventive maintenance. Therefore, when the surveyor's limited visual inspection of an electrical system raises significant concern regarding standards compliance, the recommendation will be made to employ a qualified marine electrician for an in-depth inspection. Attention to compliance with electrical standards is critical to avoiding conditions, which will lead to fires, explosions and personal injury or death.

A test run is strongly recommended and conducted if requested by the client. Its owner or the owner's authorized agent must operate the vessel. If no test run is requested, and if the vessel if afloat, operation of propulsion and auxiliary machinery and the steering system is observed in static mode. If the vessel is blocked ashore, no machinery is operated. Boats in a state of winter lay-up preclude operation of winterized systems.

A boat's systems and component parts have a limited useful life and must be considered perishable. Conditions affecting "useful life" include original material specifications, fabrication and manufacturing techniques, atmospheric exposures, history of use, etc. These systems and component parts often give no readily detectable external indications of deterioration or impending failure.

Where relevant, the surveyor's recommendations are based on *the Federal Rules and Regulations for Recreational Boats*, as excerpted from the United States Code and Code of Federal Regulations and published by the American Boat and Yacht Council, as well as the voluntary *Standards and Practices for Small Craft*. Also, published by ABYC and *NFPA 302: Standard for Pleasure and Commercial Motor Craft*, published by the National Fire Protection Association. It should be noted that, with the exception of those requirements for vessel identification, safety equipment, accident reporting, and pollution control, current federal law applies only to vessels equipped with gasoline engines (other than outboard engines) used for electrical or mechanical power. The foregoing commentary is provided to give readers of this report an understanding of the survey process and its limitations. Since records of the boat's history of use and past maintenance are typically not made available to the surveyor, reported observations are necessarily limited to the boat's condition at the time the inspection was performed.

Further qualifying remarks regarding a specific part of the boat or its equipment may be found in the text of the report.

ESTIMATE MARKET VALUE

The market value appearing on this report is based upon the average selling price of a vessel of this size, type, construction, condition, and age with all equipment and accessories observed aboard. This value has been ascertained through personal knowledge and experience with the present sales market and with the assistance of resources, references, and publications available to this surveyor, and by the use of the current Marine Bluebook and Powerboat Guide, used boat price guides. Comparable type and size vessels listed for sale on Internet web sites also may be used to determine an estimated current market value of said vessel within this report. Payment is made in terms of cash, in US dollars, or in terms of financial arrangements comparable thereto.

INTENDED VESSEL USAGE: Fire / Rescue First Responder Purposes

INTENDED USAGE AREA: Barnegat Bay, Local Rivers and Near Coastal Waters

HULL IDENTIFICATION NUMBER PENCIL TRACING



US-WCG000551506

VITAL STATISTICS

1. **INSPECTION DATE:** April 16, 2021 2. PURPOSE: Condition and valuation survey INSPECTION PERFORMED AT THE REQUEST OF: 3. Toms River Township Fire Commissioners, District No. 1 1144 Hooper Ave., Suite # 306 Toms River, NJ 08753 4. BOAT DESCRIPTION: 2006 Boston Whaler 27 Challenger Fire / Rescue Vessel COLOR: . Red hull with black sheer stripes and black bottom. White topsides with grayred cabin stripes . BOAT NAME: FIRE / RESCUE HAILPORT: Toms River Dist. 1 / # 2756 HIN: . US-WCG000551506 . YEAR BUILT: Manufacture date: 09/05 - 2006 model year **DOCUMENTATION #:** . N/A • **REGISTRATION #:** NJ 9424 GX BUILDER: . Boston Whaler, Inc. / Brunswick Commercial and Government Products, Edgewater, FL CONSTRUCTION MATERIAL: Molded fiberglass laminate and closed-cell foam materials 5. 6. MACHINERY: **PROPULSION ENGINES:** . tw/ 2006 Yamaha Four Stroke Outboard Motors / 225 hp. / 450 hp total Engine Serial # (port): 1B258307 Engine Serial # (starboard): 1B264860 • FIRE PUMP ENGINE: Removed / Not sighted 7. BOAT LOCATION: Blocked ashore on storage cradle at Ocean Beach Marine Center, Lavallette, NJ 8. LOA: 26' 7" HULL DRAFT: 1' 9" with outboard motors up BEAM: 10' 0" **DISPLACEMENT/WEIGHT:** 6,200 lbs. dry weight w/o engines or gear HULL TYPE: Deep-V TANKAGE: Fuel: 184 gallons gasoline fuel Water: N/A

Note: Measurements and capacities were taken from available published information. The Surveyor made no actual measurements or calculations at the time of survey.

	MARKET VALUE:	\$ 38,000.00 (Boat with outboard motors and accessories / As is condition)
11.	ESTIMATED	
	REPLACEMENT VALUE:	\$ 310,000.00 (Boat with outboard motors and accessories)

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HULL AND CONSTRUCTION MATERIALS

Item	General Description	Condition
Bilges / Stringer System	Molded fiberglass stringer/inner pan system with closed-cell foam core materials bonded to hull interi	
Bow Rails / Grab Rails	Bilge cleanliness	Cleaning maintenance required
	Bow Rails: 1-1/4" diameter welded aluminum tubing sealed and bolted to foredeck and trunk cabin. Secure with stainless steel bolts/lock-nuts and backing washers	C 1 III
	<u>Stern Rails</u> : 1-1/4" diameter welded aluminum tubing sealed and bolted to stern deck corners (port and starboard). Secured with stainless steel studs/double nuts and backing washers	Good condition properly installed and secured from movement
	<u>Grab Rails</u> : 1-1/4" diameter welded aluminum tubing bolted along outer cabin sides (port and starboard). (2) 1-3/8" diameter x 14" length welded aluminum grab rails bolted to the lower port aft hull side and (1) 78" length grab rail bolted to the lower starboard aft hull side	Good condition properly installed and secured from movement. <u>Note</u> : One port grab rail damaged (see remarks)
Bulkheads	Interior: Molded fiberglass forward cabin bulkheads integrated with foredeck structure (port and starboard). Equipped with bi-fold cabin entrance door and overhead slide hatch cover	Good condition
abin / Top Rig	Exterior: Molded fiberglass main entrance bulkheads sealed and bolted to cabin side flanges (port and starboard). Equipped with entrance door and lock	Good condition properly installed
cks and Cockpit Sole	Molded fiberglass cabin / pilothouse structure with hardtop, integrated with main molded topside component. Equipped with two 15" x 15" size overhead hatch openings and (Bomar) outward hinged ventilation hatch covers	Elevated moisture levels detected on topside (see remarks re: reseal maintenance)
(terior)		Elevated moisture levels and delamination evidence detected at bow (see remarks re: reseal maintenance)
a n	cockpit flanges. Equine d it is a first the second se	Good condition (see remarks re: Bomar hatch maintenance)

Deck Hardware	Bow/Store Cl. (2) 1001	
(Mooring Cleats)	Bow/Stern Cleats: (2 ea.) 12" length heavy-duty stainless steel cleats sealed and bolted to foredeck an stern deck corners	Good condition tight and secure
Deel II (1 (E	Springline Cleats: (2 ea.) 12" length heavy-duty stainless steel cleats sealed and bolted to port and starboard side decks	Good condition tight and secure
Deck Hatch (Egress / Ventilation)	Single 19" x 19" size opening at trunk cabin deck on centerline. Equipped with (Bomar) outward hinged hatch cover	Good condition. No leakage evidence observe
Hull	Bottom: Molded fiberglass laminate with integrated longitudinal hull strakes, closed-cell foam core materials, gelcoat protective finish and anti-fouling paint coatings	Laminate: Good condition Paint coatings: Moderate paint layer build-up noted
	<u>Hull Sides</u> : Molded fiberglass laminate with closed- cell foam core materials between hull and inner liner, gelcoat finish and aluminum framed removable door panel on port hull side	Laminate: Elevated moisture levels detected (see remarks) Gelcoat appearance: Faded/oxidized and prior repairs observed (see remarks)
	<u>Transom</u> : Molded fiberglass cored full transom laminate with gelcoat finish	Elevated moisture levels detected (see remarks)
Hull / Deck Connections	Outward turned deck and hull flanges, fiberglass bonded throughout. Uni-bond type seal connection	Good condition properly installed and secured throughout. No leakage evidence observed
Portholes / Portlight Windows	Two plastic framed inward hinged opening port windows with screens (cabin sides mounted)	Good condition. No leakage evidence observed
(Portable) Heavy-duty two rung welded aluminum ladder with handrails and mounting brackets		Good condition
ub-railings / Gunwale Ioldings	Heavy-duty rigid vinyl railings screwed to deck and hull flanges	Good general condition (see remarks re: refastening repairs)
ilothouse Seat Structures	<u>Helm chair:</u> Pedestal mounted commercial-duty chair with seat, backrest, and arm rest cushions (vinyl covered upholstery)	Good, clean condition properly installed and secured from movement
	and backrest cushions (vinyl covered upholstery)	Good clean condition
	Aluminum framed system sealed and bolted to cabin front, cabin sides and aft bulkheads.	Good condition properly installed. No leakage evidence observed

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Equipment	General Description	Condition
Shaft size (diameter) &	(2) 1" diameter stainless steel spline shafts	Good condition
Materials Rudders		Good condition
	Outboard motor controlled system	Good condition performed properly. Tested in static
Propeller Size / Type	RH/LH labeled: Mercury Marine	mode
	LH: # 48-834853A45 16P RH: # 48-834859A45 16P Four blade aluminum propellers	Good condition Good condition
Thru-hull fittings	Bronze, plastic, and stainless steel	Good condition tight and
Seacocks:		secure
O/B Motors	N/A	
Fire Pump Engine Intake	1" hull mounted marelon plastic ball valve and additional bronze ball valve at raw water strainer	Good condition. Note: Strainer valve closed. Marlon valve located in difficult access area at stern. Visual inspection only
Engine Intakes (External)	Through outboard lower units	Good, clean condition
Zincs / Anodes	Located at outboard lower units, transom mounting assemblies, platform mounting bracket, trim tab planes and transom mounted bonding system anode	 Outboard lower unit anodes: New condition Bonding system anode, trim tabs and (Armstrong) mounting bracket anodes: All wasted (normal maintenance item) Corrosion:
		No corrosion evidence observed

UNDERWATER MACHINERY & RELATED HARDWARE

VESSEL CONTROLS:

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Equipment	No.	Description	Condition
Analog Instruments	2	Tachometer gauges	Powered on / operational
	2	Voltmeter gauges	Powered on / operational
	2	Outboard motor trim position gauges	Inoperative
	2	Engine hour meter gauges (accuracy not known)	Visual inspection only
	2	Fuel tank fuel level gauges (accuracy not known)	Visual inspection only
Clutch & Throttle	Single station control	(Mercury Marine) Single lever type shift- throttle control units with integrated trim- tilt control functions. Mechanical controlled system. Two control levers total	Visual inspection only. Suggest in-water testing while motors operating
Steering Type	Single station control	(Teleflex) Model: Sea Star Hydraulic controlled system with dual (Sea Star) steering cylinders and 15" diameter stainless steel wheel w/ power knob	Good condition performed properly. Tested in static mode only
Trim Tabs	Single station control	(Lenco) 12" x 17" stainless steel planes with single 12-volt trim cylinders, trim position indicators and auto-tab retract system	Good condition performed properly

MACHINERY:

Stroke Amt. / Engines	Dual outboard motor installation
ne / V- Engine Condition	No tests performed. One motor represented as seized
Serial # (stbd)	1B264860
Engine hours indicate (starboard)	ed 53.9 hrs. on meter
	Clean general appearance
	Serial # (stbd) Engine hours indicate (starboard)

Known Dates of Prior Service:

Yearly 2018 thru 2020 service records presented during survey. Routine outboard oil/filters, lower unit fluids, zinc anode maintenance and minor deficiencies performed

E · B ·			
Engine Beds and Installation Data	 (Armstrong) welded stainless steel outboard motor mounting platform flange mounted sealed and bolted to transom. Secured with heavy-duty stainless steel bolts/lock nuts and aluminum backing plates. Both outboard motor mounting brackets sealed and bolted to (Armstrong) bracket. Each motor bracket secured with six heavy duty stainless steel bolts/lock- nuts and backing washers 	Condition	Properly installed and secured from movement
Protective Outboard Motor Guard	Anodized aluminum tubing with welded flanges sealed, flange mounted and bolted to transom	Condition	Cracked weld observed (see remarks)
Exhaust System Operation:	Through propeller exhaust system with tell-tail water outlet	Condition	Visual inspection only
Engine Cooling Method:	Raw water cooled power heads with freshwater flush-out systems	Condition	Visual inspection only
Air Intake	Engine mounted air intakes	Condition	Good condition
Engine Disconnect Switches	Emergency Ignition Safety Cutout Switches w/ Lanyards	Condition	Visual inspection only

NAVIGATION AND ELECTRONIC EQUIPMENT

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Model FN-201 Powerdamp Ray 54 1623 Dome Array Antenna GPSmap 6208	Condition Good condition performe properly Good condition, transmit and receive Good condition performed properly
Ray 54 1623 Dome Array Antenna	properly Good condition, transmit and receive Good condition performed
1623 Dome Array Antenna	Good condition, transmit and receive Good condition performed
Dome Array Antenna	Good condition performed
	properly
	Good condition performed
XTL-2500	properly Good condition performed
106-3010-12	properly Unit missing / unplugged
WPA Series	(see remarks)
	Good condition performed properly
RCL100D	Good condition performed
12-Quarts Lights	properly Inoperative (see remarks)
12-volt (DC)	Good condition

ELECTRICAL SYSTEMS AND EQUIPMENT

VESSEL WIRING TYPE

CONDITION

CONTROL PANEL TYPE LOCATION

VESSEL'S BATTERY INVENTORY NUMBER

TYPE

LOCATION

CUT OFF SWITCH

BATTERY INSTALLATION

BATTERY CHARGER/CONVERTER # 1 BRAND/MANUFACTURER OUTPUT (DC) LOCATION CONDITION

: <u>DC Electrical System</u>: 12-volt system and accessories with negative ground and bonding system

<u>AC Electrical System:</u> 125-volt / 30-amp shore power system with ship-to-shore power cord

- : AC/DC electrical systems appeared in-compliance with USCG requirements and ABYC recommended standards ineffect at time of original manufacture. *Several maintenance related deficiencies were observed (see remarks)*
- : Circuit breaker panels and ATO fuse panels
- : Helm station, battery storage compartment, pump control station and AC main circuit breakers at stern
- : Four (Sportsman batteries)
- : <u>House/Accessories</u>: 1-XH8D-1725 CA / 1425 CCA lead acid battery

Outboard Motor batteries: 2-24M-1000 CA / 800 CCA maintenance free batteries

Pump Engine battery: 1-24M-1000 CA / 800 CCA maintenance free battery

<u>Battery Condition:</u> House battery dead, all other batteries weak and outdated *(see remarks)*

- : Pilothouse bilge compartment on centerline and stern bilge compartment
- : (2-Perko / 1-Blue Seas Systems) Main disconnect / select switches
- : Installed and secured from movement within acid proof containers with non-conductive vented covers (see remarks)
- : Guest Corporation
- : 12-volts, 30-amp, 3-output bank output capacity
- : Stern battery storage compartment on centerline
- : Not tested. Visual inspection only

Electrical Systems and Equipment Continued

BATTERY CHARGER/CONVERTER # 2 BRAND/MANUFACTURER MODEL OUTPUT (DC) LOCATION CONDITION	 Guest Corporation 2620A Charge Pro 12-volts, 10/10-amps, 2-output bank output capacity Cabin bilge compartment on centerline Not tested. Visual inspection only
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TEST OF ALL ONBOARD ACCESSORIES: <u>The electrical equipment was inspected where accessible</u>. <u>All AC</u> <u>and DC electrical circuits are protected from overload at the main circuit breaker switchboards and individual</u> <u>circuit protective devices as best determined</u>.

TANKAGE

FUEL SYSTEM:

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A. General Information:

Fuel Type	Gasoline fuel
Capacity	Labeled: 92 gallons each // 184 gallons total (USG)
Tankage Material	Labeled: .125 wall thickness / 5052-H32 alloy aluminum
Number of Tanks	Dual tank installation
Accessibility	Partial topside fitting access only due to solid deck construction
Location	Bilge mounted beneath cockpit sole. Mounted fore/aft direction
Compartment Ventilation Method	

B. Inspection / Condition Data:

Tank Condition Stateme	ant Taul III	
	pressure tested in accordance with USCG CFR 183.52 Fuel Tanks.	20 Static Pressure Test for
Equipment	No opinion regarding fuel tank(s) condition is rendered General Description	d unless otherwise noted.
Fill Pipes / Fill Hoses	USCG type A-2 / SAEJ 1527 / ISO 7840 hoses	Condition
Tank Ventilation Hoses	(uppeured original)	(Double clamped) Dry rot evidence observed
	USCG type A-1 / SAEJ 1527 / ISO 7840 hoses (appeared original)	(Double clamped) Good condition tight and
Fuel Supply Lines	USCG type A-1 / SAEJ 1527 / ISO 7840 hoses with clamped connections (from tanks-to-primary filters)	(Double clamped) Good condition tight and
	USCG type B1-15 SAEJ 1527 outboard motor hoses with primer bulbs (from primary filters-to-motors)	secure (Single clamped) Good condition tight and
Fuel Filters	Primary Filters: (Yamaha) Large outboard motor filters and (Racor) Model: 110 pump generator filter	 secure (Yamaha filters) Good new condition (Racor generator filter) Net in
Fuel Fill & Tank Ground	Secondary Filters: Cartridge type filter on each motor Visually sighted and ohm meter tested	filter) Not in-use Good condition Properly installed and secured. Less than one
nstallation Method	Padded and chocked to hull bottom. Secured with aluminum brackets and braced at topsides to main interior structure <i>(limited inspection access area)</i>	ohm resistance Properly installed and secured from movement
	Equipped at each tank fuel withdrawal fitting	Good condition
1.55	Three tank select / on-off valves mounted at stern	Good condition
restor Screens	Two hull mounted vent fixtures with arrestor screens	Good, clean condition

SAFETY EQUIPMENT

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FIXED FIRE EXTINGUISHING EQUIPMENT BUILT-IN SYSTEM LOCATION LAST INSPECTED MEANS OF ACTIVATION PORTABLE FIRE EXTINGUISHERS (Installed) NUMBER TYPE LOCATION LAST INSPECTED	 (Fireboy) Model: CG2-200-FE241 / 14 lb gross weight Pump generator engine compartment 08-2005. Suggest re-certification maintenance Heat activated sensor Three (Kidde extinguishers) A:B:C dry chemical Bracket mounted in cabin and cockpit areas
PORTABLE FIRE FIGHTING EXTINGUISHERS TYPE	 Two extinguishers defective (see remarks) S (Stowed) One (Badger) Model: WP-61 / 27.4 lb. gross weight water extinguisher (see remarks)
LOCATION LAST INSPECTED	One large A:B:C dry chemical extinguisher Stowed in pilothouse Both extinguishers tagged 06-2020
BILGE PUMP/SUMP PUMPS NUMBER LOCATION CONDITION	 Two (Rule pumps) 1-2000 / 1-800 gph pumps Stern bilge and fuel tankage compartments Good condition fully operational (see remarks re: stern pump switch)
AUXIARLY BILGE DRYOUT PUMP	: Single 12-volt (aftermarket installed) pump with bilge intake hose and intake screen <u>Condition:</u> Inoperative <i>(see remarks)</i>
BILGE HIGH WATER ALARM SYSTEM	: (Rule) Audible alarm at helm with (aftermarket installed) 1500 gph pump and alarm control switch at stern <u>Condition:</u> Good condition
GROUND TACKLE INVENTORY ANCHORS RODE WINDLASS DOCKLINES	 Two Danforth 13 lb. galvanized steel anchors 3/8" galvanized steel chain and nylon line rode Not equipped Various nylon lines aboard
PERSONAL FLOTATION DEVICE INVENTORY 11-Type II 2- Type III 1- Type IV 3- Type V	 9-Adult / 2-child size general purpose type life jackets Adult size vest type life jackets with personal safety lights (see remarks) (JB) Model: GO-24 throw ring buoy device with throw rope. Appeared aged (see remarks) Adult size CO2 inflatable vests (see remarks)

SIGNAL FLARE KIT INVENTORY

1-Orion pistol/launcher with three 4-Orion Skyblazer 1-Orion Light Stick

CARBON MONOXIDE DETECTION 1-(Fireboy-Xintex)

- : 12-gauge signal cartridges. Outdated (see remarks)
- : Red aerial flares. Outdated (see remarks)

: Handhold light stick

: Model: CMD-5-MD Condition: Good condition

NAVIGATION/ANCHOR LIGHT FIXTURES

Properly installed and in-compliance with USCG and Colregs compliance <u>Condition</u>: Starboard navigation light fixture inoperative (see remarks)

LIGHT BAR / BLUE STROBE EMERGENCY LIGHT

Cabin top mounted strobe light <u>Condition:</u> Good condition operated properly

SOUND PRODUCING DEVICE

Dual 12-volt horn device concealed at starboard bow <u>Condition</u>: Inoperative (see remarks)

POLLUTION CONTROL PLACARDS

- Oil Discharge Prohibited plaque: Posted at helm station
- MARPOL Trash Discharge Restricted plaque: Not posted *(see remarks)*

BILGE VENTILATION SYSTEM

Single powered ventilation blower (for pump generator compartment) and natural air ventilation system <u>Condition:</u> Blower operated properly / Duct system repairs suggested (see remarks)

FIRE FIGHTING EQUIPMENT

Equipment	Description	Condition
Fire Equipment	 (Elkhardt Brass Fire Fighting Equipment) Model: Vulcan RF control panel 	Disconnected
	 High capacity water pump with bow / stern fire hose apparatus with standpipes, hoses, a spray nozzles 	intake flange sealed
	 (Westerbeke) 70 hp. / gasoline powered pum generator system 	Removed from vessel (see remarks)
Portable Searchlights	• Miscellaneous fire hose nozzles and related equipment stowed aboard boat	Visual inspection only
searchinghts	(2-Fire Vulcan)	Operational / Batteries
Additional Rescue Equipment	Battery operated LED handhold lights	weak (see remarks)
	• Large fire ax and large steel pry bar	Good condition
	Body board and medical kit	Suggest medical kit update
	• (AED) defibrillator device	Visual inspection only
	• (Flir) portable night vision, thermal imagine viewer	Battery missing (see remarks)
	• (West Marine) Binoculars	Good condition
	Miscellaneous Equipment	
oilet / Sanitation System	Not equipped	
ockpit Flood Lights	(2 ea.) 12-volt, LED flood light fixtures. Cabin top mounted aft and aft sides (port and starboard)	Good condition
elm Windshield Wipers	(2-AFI) 12-volt wiper motors with 17-1/2" wiper blades rinse system	Wiper motors / Blades: Good condition
at Fenders	(1) 12" x 24" / (1) 8" x 20" and (2) 6" x 18"	<u>Rinse system:</u> Winterized. Visual inspection only Good condition
	vinyl fenders with lines	cood condition

PHOTOGRAPHS





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Photographs continued





Photographs continued





FINDINGS AND RECOMMENDATIONS

- I. <u>Type A-Findings // Safety Related, Necessary Repairs, USCG and ABYC Compliance Items:</u>
- 1) Vessel's 12-volt sound producing horn device is inoperative. <u>Reference:</u> USCG requirement. Comment: Repair or replace required sound producing device prior to getting underway. Also suggest a portable air horn device be kept aboard boat as an additional means to produce warning sounds when
- 2) Starboard navigation light fixture is inoperative. <u>Reference</u>: USCG requirement. Comment: Repair required navigation light fixture prior to use of vessel during darkness or time
- 3) All visual distress signal flares are outdated. <u>Reference:</u> USCG requirement, Comment: Provide at least four currently dated signal flares aboard boat prior to getting underway.
- 4) Portable fire extinguishers (located at the cockpit and forward cabin) are considered defective due to the recent Kidde recall notice regarding faulty nozzles and trigger mechanisms. Comment: Remove both defective extinguishers from vessel and return to Kidde for warranty replacements or provide new extinguishers prior to use of vessel. Note: Defective extinguishers can be identified by vertical release pull pins.
- 5) (Badger) water extinguisher psi gauge indicated low pressure. Recent service tag also indicated same. Comment: Have a qualified fire extinguisher service reinspect and perform repairs as needed.
- 6) MARPOL trash pollution placard not posted aboard vessel. <u>Reference</u>: USCG requirement for vessels over 2 Comment: Provide and post required pollution placard aboard boat.
- 7) Westerbeke fire pump generator and related equipment was removed from vessel. Comment: If generator system is not to be reinstalled, then have a qualified marine technician permanently remove fuel system, electrical system, raw water intake and exhaust systems.
- 8) 125-volt main circuit breaker for one of the on-board battery chargers is internally damaged and the trip-free mechanism is unable to operate manual without assistance. Located at the port stern corner. Comment: Have a qualified marine technician replace defective circuit breaker.
- 9) Surveyor's Suggestions / Upgrades:
- Fixed fire extinguisher was last serviced during year 2005. Suggest fixed system be re-certified by an
- Suggest provision and installation of a smoke detector device to be located within accommodation spaces. • Suggest recertification of the CO2 cartridges and battery replacements for all Type V life vests and related personal safety light fixtures be performed.
- Suggest upgrade replacement of the aged Type V throw device.

II. Type B-Findings (Recommended): Mechanical, Fiberglass Components and Miscellaneous Items:

Comment: Engine mechanical comments within report does not suggest an engine survey was performed. Findings mentioned only represent obvious external deficiencies noted at time of boat survey.

- 1) Outboard Motor and Related Systems Findings:
- One outboard motor was stated by marina as unable to start, locked-up and seized. No tests were performed during survey and extent of internal damages are not known. Possible corrosion of internal exhaust system and related water reversion into engine cylinders was suspected but not confirmed.
- Both outboard motor trim position gauges are inoperative. Comment: Have a qualified outboard motor technician further examine seized engine and provide a repair or replacement cost estimate. Replacement power head may be required.
- 2) List of Miscellaneous Mechanical Findings:
- Storage batteries and DC electrical system findings:
- Large 8D-1425 CCA main accessory storage battery is dead. Jumper battery was used to test system. Both outboard motor storage batteries and (unused pump generator battery) are outdated and no longer considered reliable.
- Storage battery terminals and the main DC terminal strip connections (located at the port stern corner)
- Starboard battery box lid is missing, and battery not secured from movement. <u>Reference:</u> USCG requirement. Comment: Have a qualified marine technician disassemble and clean oxidized electrical terminals and battery cable connections. Provide missing non-conductive battery cover and secure starboard battery as per requirement. All 12-storage batteries should be replaced at this time.
- Starboard fuel tank fill hose indicated mild dry rot / surface cracking evidence. Near future replacement . maintenance may be required.
- Welded connection for the outboard motor guard is cracked at upper rail connection to the port side transom mounting plate. Have a qualified welder further examine and reweld, as necessary. Note: Motor guard may require unbolting and removal from transom to perform welding repair.
- Zinc anodes for trim tabs and the (Armstrong) motor mounting system are wasted.

Fiberglass Hull and Topside Components:

- 1) Hull Findings:
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- Hull gelcoat appearance is faded and oxidized. Several prior repairs and color mis-match was observed. One approximate 8" x 13" size prior repair was observed on the port aft hull side. Several small patches • and scratches were also previously performed along scattered areas on the port hull side. Repairs appeared properly performed but fade related color mismatch was observed. Considered cosmetic.
- Two prior repairs were observed on the port hull side located forward of the side door opening and below . the RESCUE logo. Affected areas measured approximately 7" x 7" and 7" x 13" in size. Repairs appeared properly performed but fade related color mismatch was observed. Considered cosmetic.
- Color mismatch due to fading was observed around perimeter of the post-molded door opening located on the port hull side. Considered cosmetic. One approximate 2" x 12" size repaired area and six 2" x 2" size repaired areas were observed on the starboard hull side. Repairs appeared properly performed but fade related color mismatch was observed. Considered cosmetic.
- Moderate moisture levels were detected on the starboard hull side located along the aft sheer area. Affected section measured approximately 8" height x 68" length (fore/aft direction). No delamination evidence
- Moderate-to-high moisture level evidence was detected on the starboard forward hull side located at scattered areas within proximity of the NJ registration numbers and docking light area. Affected section measured approximately 24" height x 48" (fore/aft direction). No delamination evidence detected.

- Moderate moisture level evidence was detected on the starboard forward / lower hull side located within proximity of the plastic bilge pump drain outlet fitting. No delamination evidence detected.
- Low-to-moderate moisture levels were detected at scattered areas throughout transom. No delamination

Comment: Suggest hull mounted fittings, grab rails and fixtures, in affected areas be removed, cleaned, and resealed to prevent further water intrusion into closed-cell foam hull core materials. Suggest use of 3M-4200 sealant to perform reseal repairs. Also suggest hull sides be compounded and waxed to enhance overall appearance and to protect the gelcoat finish.

2) Decks and Topside Findings:

Moderate-to-high moisture levels and delamination evidence was detected at scattered areas throughout . the foredeck at bow. Notable flexing of deck surface and crunch sound was observed when walked on toward port area. Affected area measured approximately 8 ft. wide x 42" fore/aft direction (triangular

Moderate moisture level evidence was detected at scattered areas on the cabin top. No delamination

Comment: Suggest deck mounted rail footings and cabin top mounted antennas be lifted and resealed to prevent further water intrusion of cabin top and further damage to deck core materials. Suggest use of 3M-4200 sealant be used to perform reseal repairs.

List of Miscellaneous Findings and Maintenance Items:

- 1) Bilge pump findings:
- Stern bilge pump automatic control switch sticks causing pump to run continuously. •
- Aftermarket installed (mid bilge) dry-out pump did not operate, auto control switch is loosely installed and electrical wiring is unsecured within bilge compartment.
- 2) Vinyl rub-rail molding is disturbed within an approximate 2 ft. area and slightly sloped downward at the
- 3) Large cockpit deck plate hatch frame is disconnected and fasteners missing.
- Painted finish is blistered along bottom side of the hull side mounted removable aluminum door panel. 4) Note: Closed-cell foam materials installed within door panel are disintegrated.
- Aluminum grab rail, located on the port aft hull side, is usable but damaged due to previous contact with 5)
- 6) Cockpit bilge compartment requires cleaning maintenance.
- 7) Cockpit deck mounted (Bomar) hatch lifting handles are difficult to extend upward. Lube-type maintenance
- 8) Bilge duct hoses are sagging and unsecured.
- Battery missing for the (Flir) night vision viewer. 9)
- 10) (Fire-Com) device is missing and removed from vessel.
- 11) Bow docking lights did not operate when activated. Was not determined if another power source requires activation. Several unmarked accessory switches observed at helm station. Prove operation.
- 12) End of survey findings.

SURVEYOR'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions. I have no present or prospective interest in the vessel that is the subject of this report, and I have no personal interest or bias with respect to the parties involved. My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulate result, or the occurrence of a subsequent event. I have made a personal inspection of the vessel that is the subject of this report.

This report is submitted without prejudice and for the benefit of whom it may concern. SURVEY REPORT IS NON-TRANSFERABLE AND IS EXCLUSIVE FOR THE PERSON(S) WHOSE NAME APPEARS ON THIS REPORT.

FOR: Spencer Marine Surveys, LLC

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JOHN F. SPENCER, President

Member of: Society of Accredited Marine Surveyors-SAMS / AMS American Boat & Yacht Council

STATEMENT OF OVERALL VESSEL RATING OF CONDITION

It is the surveyor's experience that develops an opinion of the OVERALL VESSEL RATING OF CONDITION after the survey has been completed and the findings have been organized in a logical manner.

The grading of condition, developed by BUC RESEARCH, and accepted in the marine industry for a vessel at the time of survey, determines the adjustment to the range of base values in the BUC USED BOAT PRICE GUIDE, for a similar vessel sold within a given time period, as a consideration to determine the Market Value.

The following is the accepted marine grading system of condition:

"EXCELLENT (BRISTOL) CONDITION":	A vessel that is maintained in mint or Bristol fashion – usually better than factory new – loaded with extras (a rarity).
"ABOVE AVERAGE CONDITION":	Has had above average care and is equipped with extra electrical and electronic gear.
"AVERAGE CONDITION":	Ready for sale requiring some repairs and maintenance normally equipped for her size.
"FAIR CONDITION":	Requires usual maintenance to prepare for sale.
"POOR CONDITION":	Substantial yard work required and devoid of extras.
"RESTORABLE CONDITION":	Enough of hull and engine exists to restore the boat to useable condition.

NOTE TO UNDERWRITER:

SUMMARY -

The vessel appeared to be a customized model of the 2006 Boston Whaler 27 Challenger (for fireboat use). It was built originally to a quality standard of materials and workmanship for vessels of its generation, class and intended service. The vessel is considered to be in "AVERAGE-to-FAIR" condition for its age. Seized outboard motor will require further analysis and possible power-head replacement.

The previous Safety and Necessary Repairs should be considered primary and receive priority in the maintenance schedule aboard the vessel. The remainder of the remarks and recommendations can be considered as preventative maintenance in nature and are provided to help properly maintain the vessel.