

**Fishermen's Maritime Services, Inc.**  
Capt. Erling E. (Jake) Jacobsen, B.Sc., M.Sc., Surveyor and Consultant

E-mail: [REDACTED]

Condition and Valuation Survey

**F/V SCANDIES ROSE**



File Number: 602351-11

Date of Inspection: April 27 and May 24, June 1, 5 and 6, 2019



Hereafter is the report of an inspection made at the request of owners of the fishing vessel “SCANDIES ROSE”, while the subject was hauled out at Loveric Shipyard, Anacortes, WA and subsequently afloat in fresh water at the Ocean Beauty Seafoods in Seattle, WA, in order to ascertain its condition, valuation and suitability for service.

Attending was Erling E. Jacobsen, Surveyor. Additional information was provided by Dan Mattsen, owner and manager, and Jamie Griggs the port engineer.



**General Information**

Official Number: 602351  
IMO/Lloyd's Register: 7933529  
MMSI: 367037000  
Owner: Scandies Rose Fishing Co. LLC  
Address: 3615 Olympus Drive NE  
Bremerton, WA 98310  
Contact: Dan Mattsen  
Contact Phone: [REDACTED]  
Vessel Phone: 1 [REDACTED]  
Flag: USA  
Former Names: F/V ENTERPRISE  
LOA : 130 ft.  
Registered Length: 116.6 ft.  
Beam: 34.6 ft.  
Depth: 11.3 ft.  
Gross Tons: 195 Net Tons: 132  
Year Built: 1978  
By: Bender Shipbuilding, Mobile, AL  
Hull Number: 747  
Service: Coastwise Fishing Registry  
Type: pot fishing and tendering  
Waters Navigated: Puget Sound, Gulf of Alaska,  
Alaska near coastal, and Bering Sea.  
Port of Registry: Dutch harbor, AK  
Radio Call Sign: WDI 389  
ADF&G Number: 35318  
Classification: not required for current service.  
Inspection: not required for current service.  
Load line: not required for current service  
Fuel oil capacity: 60,832 -gallons in (10) integral tanks  
Lubricating oil capacity: 1,200 - gallons in one integral tank  
Hydraulic oil capacity: 720 - gallons in one integral tank  
Potable water capacity: 7,625 – gallons in two integral tanks  
Waste oil capacity: 750 - gallons in one integral tank  
Flooded hold capacity: 11,415 cubic feet in three holds  
Modification: 1988, 1995  
Flooded tank capacity: 11,415  
Shaft Horsepower: 1,610 – hp through two shafts  
Crew: The average crew size is 4-6.



**General Description**

The vessel has a single fishing deck with a full-width, fully enclosed forepeak and raised aft full-width deckhouse.  
The top (02) level of the deckhouse is configured entirely as a partial-width navigation bridge. A weather gallery is aft. The 01 deckhouse level is a partial-width accommodations level with two (2) staterooms, a forward utility room and a forward room occupied by domestic freezers. Weather galleries are port, starboard and aft. The main deck has a full-width enclosed forepeak forward with a refrigerated bait locker port and a work area starboard. Next aft is a fishing deck with fishing machinery, equipment and port and

starboard deck cranes. A full-width deck house is aft with galley spaces, an electrical equipment room and crew accommodations.

The hull below the water line is divided transversely into six (6) watertight compartments.

A ballast tank is at the stem. Next aft is a chain locker. Next aft is a dry store. Next aft are three (3) flooded/RSW tanks arranged along the centerline. Pipe alleys port and starboard are fit with ventilation fans and accessible through hatches in the engine room and through the forepeak. Fuel tanks are outboard. Below are double bottom fuel tanks. Next aft is a machinery space with main and auxiliary engines and systems machinery. Next aft is a steering/machinery space aft.



#### Hull

The hull bottom is nearly flat, with a dead rise of 2 feet and nearly vertical sides. The bow is raked and there is a transom stern, a single hard chine and a single centerline skeg.

A 50 kHz Transducer and a 38 kHz are located forward just starboard of the keel.

A small keel cooler is forward on the port side of the keel.

Six (6) Sea chests are found with three (3) port and three (3) starboard aft on the hull and each fit with screens and zinc sacrificial anodes.

An ice belt of 5/8" steel plate extends from the chine to the rub rail from bow stem to beyond the turn of the bow.

Zinc anodes are distributed in the sea chests, on the stern tube, rudder supports, rudder and hull



**Construction**

Material: steel hull with a steel house.

Fastening: butt weld

Bow plating to the hull insertion: 5/8" and 1/2" mild steel plate

Hull plating: 3/8" mild steel plate

Deck plating: 3/8" mild steel plate

Frame spacing: longitudinally framed with 5"x3"x5/16" steel angle at 2 ft. except in the bow where intermediate frames have been added at 12" intervals.

Frame dimensions:

Internal bulkheads: 3/8" mild steel plate

Vertical bulkhead stiffeners: 4 X 3 X 1/4" angle

Side shell framing: 3 X 3/8"x3/8" angled steel bar. In

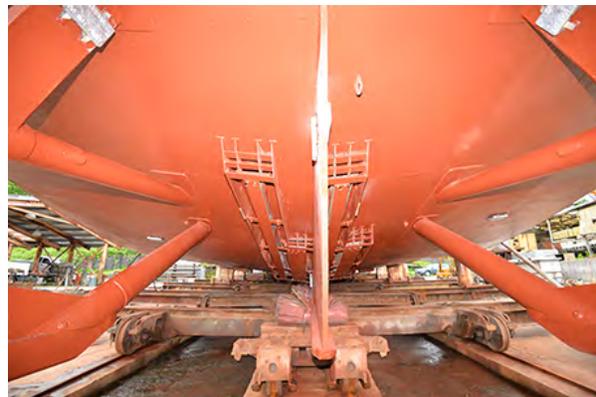
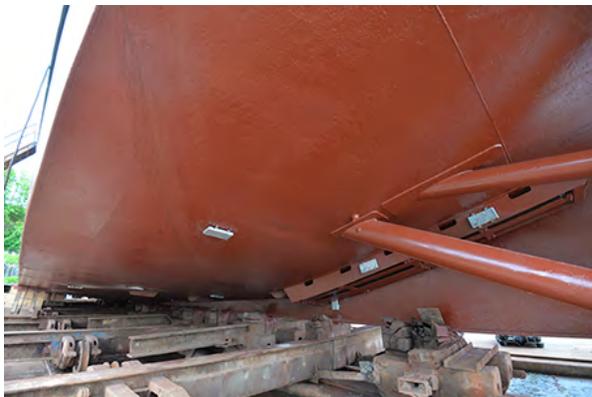
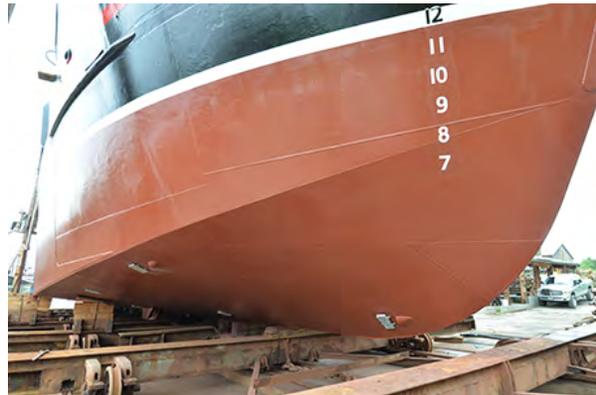
bow: 5.5x4x3/8" angled steel bar on 15" centers

Long. Girders: 12 X 4 1/2 X 1/2" bent rail

Chine bar: 1 1/2" bar

Stem bar: 10"x1-1/2" set on edge

Keel plating: 3/4" x 18" plate over 1 1/2" x various framing.





**Anchor and Ground Tackle**

Anchor: A 3,000 lb. Baldt style anchor is fit with a swivel and hammerlock to a length of 1 3/4" stud link chain which rides over a stem roller, a second roller behind the wave break, and to a capstan and chain pipe leading to a chain locker below the forepeak.

The capstan is fit with a friction brake and is freewheel capable. The chain is stopped with a ratcheting type chain binder.

Port and starboard double bits serve closed chocks set in the bulwarks.



**Navigation**

Navigation lamps are controlled from a fused wheelhouse panel with extinguished alarms and that allows switching to back-up lights.

**Navigation Lamps**

Location	Color	Characteristics
Forward on forward mast	White	Duplex - Forward range
Top of aft light standard (upper)	Red	All around
Top of aft light standard (upper)	Green	All around
Top of aft light standard (lower)	Red	All around
Top of aft light standard (lower)	White	All around
Port side wheelhouse top	Red	Duplex in damper
Starboard side wheelhouse top	Green	Duplex in damper
Aft wheelhouse top	White	Duplex – aft range

Dayshapes: Fishing

Whistle: a single-tone pneumatic horn is mounted on the aft light mast.

A 300mm ship's bell is mounted aft the wheelhouse.



## Safety

### Alarms

The General Alarm activators are Pauluhn Model 893 positive contact switches located in the wheelhouse, engine room and galley.



A machinery alarm annunciator is located at the bottom of the engine room ladder with a repeater in the wheelhouse.

Float type bilge alarms are located fore and aft in the engine room and in the forepeak. Heat sensors (2) are located in the galley and above the main engines.

Hard wired smoke detectors are located in the forepeak, battery room, 01 deck, and galley and engine room.

Fluid level alarms are located Bilges, engine water levels, daytanks and sewage holding tank.

Pressure switch alarms are for engine oil and hydraulic clutch air.

A yellow flashing light in machinery space is for machinery alarm and general alarm.

A red strobe light atop the wheelhouse is integrated with the machinery alarm system to illuminate at the activation of an alarm sender. This light is an external alert primarily of value when the vessel is laid up unattended.



#### Survival Equipment

A DBC 8-person Solas A inflatable pack raft is held in a cradle on the port side of the wheelhouse top is fit with a with a Hammer, model H20R hydrostatic release. Raft next due for service 6/2020. The release is due for service 6/2020.

A DBC 8-person Solas A inflatable pack raft is held in a cradle on the starboard side of the wheelhouse top is fit with a with a Hammer, model H20R hydrostatic release. Raft next due for service 10/2019. The release is due for service 10/2020.



#### EPIRB

One (1) ACR "Global Fix" model V4 406 epirb is mounted on the port side of the lower (aft) step of the wheelhouse in a hydrostatic release bracket. Registration: 2DCD8 760D0 FFBFF Registration expires: 10/15/2019 Battery expires: 6/2027 The hydrostatic release is due for service by 10/2019



#### Exposure Suits

Four (4) adult universal suits, three (3) Jumbo suits and one (1) intermediate size suit are located in a marked location in wheelhouse. Two (2) adult universal suits are located in the Master's stateroom.

Each suit is equipped with a lifting ring, whistle, strobe light, retro-reflective material as required, and an inflatable pillow. The strobe lights are ACE Firefly "Waterbug" lights with batteries expiring 10/2021



Visual Distress Signals

A flare kit located in an orange waterproof box in the wheelhouse contains:

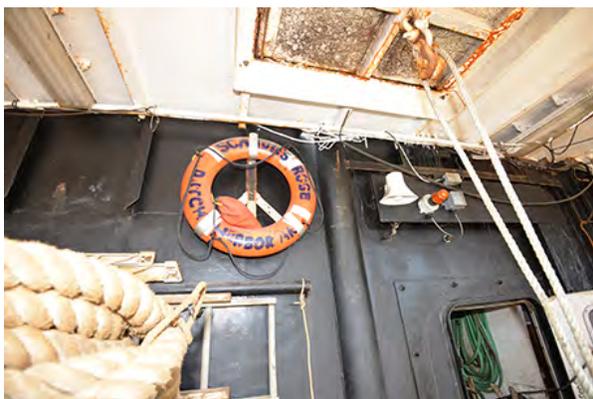
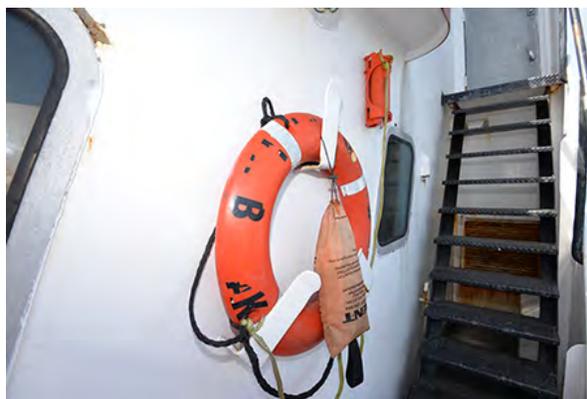
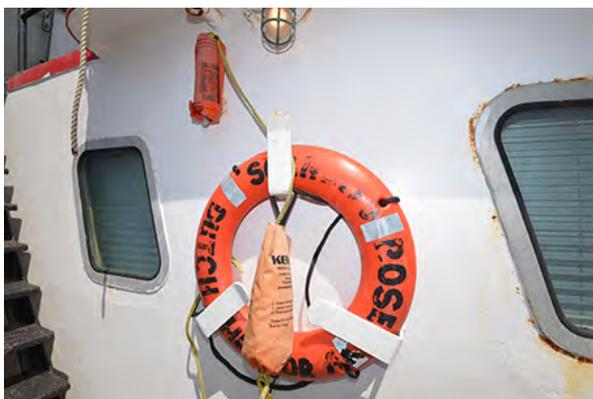
- Six (6) Pains-Wessex red hand held flares expire 3/2021
- Three (3) Pains-Wessex red parachute flares expire 11/2020
- Three (3) Pains-Wessex orange smoke canisters expire 08/2020
- One (1) red flag

Man Overboard Equipment

Rings Buoys:

Location	Size	Vessel Name	Retrieval Line	Light	Light test
Top of aft wheelhouse step	30"	Yes	In throwing bag	ACR SM-2	Pass
Port 01 aft house	30"	Not legible	Yes	ACR SM-2	Pass
Starboard 01 aft house	30"	Yes	In throwing bag	ACR SM-2	Fail
Fishing deck forward bulkhead	30"	Yes	In throwing bag	No	N/A
Fishing deck forward bulkhead	30"	Yes	In throwing bag	No	N/A
Fishing deck crane base	30"	Yes	In throwing bag	No	N/A

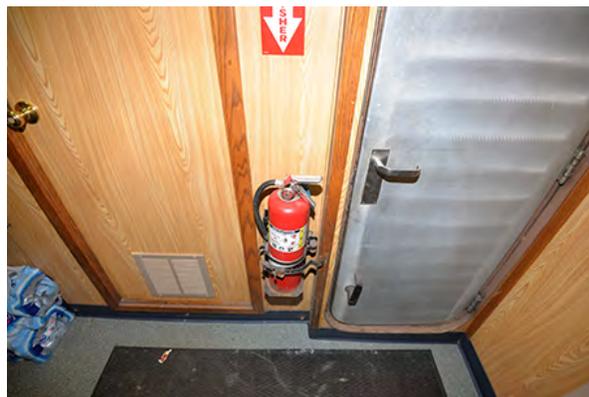
Two (2) Life Sling man overboard retrieval devices are mounted one (1) on the fishing deck and one (1) on the aft 01 weather gallery.



Fire Fighting Equipment

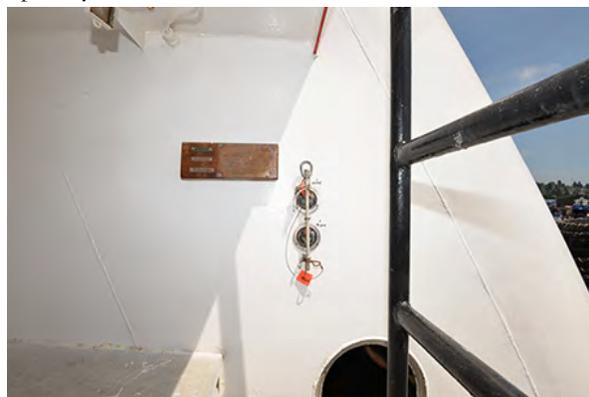
Portable Fire Extinguishers – last serviced 05/2019

Location	Agent	UL Classification
Wheelhouse port	Dry Chemical	3-A 40-B:C
Wheelhouse starboard	Dry Chemical	4-A 60-B:C
01 house passage	Sodium	60-B:C
Master's Stateroom	Dry Chemical	4-A 60-B:C
Forepeak	CO2	10-B:C
Engineer's Stateroom	Dry Chemical	2-A 10-B:C
Galley	Dry Chemical	4-A 60-B:C
Galley	Dry Chemical	4-A 60-B:C
Engine Room	CO2	10-B:C
Engine Room	CO2	10-B:C
Engine Room	CO2	10-B:C
Engine Room	Dry Chemical	4-A 60-B:C



Fixed Fire Systems: The engine room is guarded by a 186 lb. Ansul Halon 1301 fixed fire suppression system located outside the protected space in a locker aft the wheelhouse. Warning alarms are integrated in the system. The actuator is located on the port side of the stack, aft the wheelhouse. Last inspected 5/2019.

SCBA: Racial face mask and compressed air cylinder units are located: one (1) in the starboard galley passage and one (1) in the wheelhouse. SCBAs are one (1) in a wheelhouse locker and one (1) mounted on a galley passage bulkhead adjacent to the engine room ladder. A spare cylinder is carried at each location.



#### Medical Equipment

Medical Kit: a standard Lafferty shipboard medical kit is found. It was last restocked 6/2019.

A first-aid kit is in the galley. Medical oxygen is available.

One (1) Labtron blood pressure monitor

#### Emergency Lights

Emergency Lights: Dual fixture battery powered emergency lights are located in the engine room, steering room, and galley.

#### Other Safety Equipment

Machinery alarm – Federal Signal bell in engine room, galley, upper deck companionway and a piezo-electric buzzer on the alarm repeater.

One (1) 3" x 3" diesel engine trash pump and hoses

Personal floatation vests for deck operations

Two (2) climbing harnesses

#### 02 Level Arrangement

##### 02 Weather Level and Top of Wheelhouse

The top of the wheelhouse is unguarded. A visor runs across the forward and side aspects of the housetop. The housetop carries lights and antennas, including a radar scanner. An exhaust trunk fidley is aft. The housetop supports a tripod light mast that carries fishing, deck and navigation lamps as well as various antennas, including a radar scanner. Two (2) high-pressure sodium lamps are arranged at the front of the wheelhouse top to illuminate deck spaces below.



Antenna/light Mast: an 8" diameter pipe mast with 4" pipe stiffeners leading forward is atop the wheelhouse. Ladder rungs are up the aft aspect of the mast. The mast carries five (5) sodium lamps forward and one (1) aft, as well as navigation lamps, antennas and a forward extending radar antenna platform.

Entrance to the wheelhouse is up a ladder on either side and through weather tight doors.

Ventilation: vents are aft of house and port and starboard behind wheelhouse ladders. Two (2) blowers supply ducted forced air heat or vent to house. Two blowers vent the engine room.



The 02 weather deck is aft the navigation bridge. The area is guarded by 38" high three-tier railing. Access is to a stack room with ventilation fans. A radar mast and an antenna light mast are forward the stack trunk with flanged stacks and a vent exhaust. Two (2) LED lamps are directed to the fishing deck. Ladder: port and starboard inclined ladders are to the 01 level weather galleries and to the wheelhouse top.



Wheelhouse Equipment and Electronics

Maneuvering stations with throttles and steering are port, starboard and center. Throttles operate a cable to pneumatic engine control system.

A Chart table is aft starboard. Eleven (11) viewports are found along the forward aspect of the wheelhouse. Three (3) are port and three (3) are starboard including opening ports two (2) port and two (2) starboard. Six (6) are aft. Four (4) forward viewports are fit with Timon, model S40 window heaters. Weather hatches are aft port and starboard. An inclined ladder to the 01 level is aft.

Chairs: port, starboard. and just starboard of center, two bench seats are aft. Access: port starboard and aft hatches.



## Electronics and Equipment

### Control Systems

Rexroth electronic remote throttle control for propulsion engines (port and starboard cons)  
Steering pump selector panel: on console  
Autopilot: two (2) Sperry 8T (1) each for gyro and magnetic steering  
Sperry course changer  
Hand helm: center, manual hydraulic  
Jog lever: Robertson, center console  
Follow-up steering control: port and starboard.  
Rudder Angle Indicators: Sperry, port, starboard and center  
Main engine start/stop buttons.  
Generator governor controls  
Clutch activator switches for deck hydraulics  
Deck cranes and pilot pump start/stop buttons and emergency shut-down.  
Two (2) Wynstruments window wiper controls

### Radars

Radar: Furuno FR 805D  
Radar: Furuno, model 28x7-BB with 19 inch Dell flat panel monitor

### Navigation and Positioning Equipment

Gyrocompass: Sperry, with repeater and course changer  
Magnetic compass: Ritchie, model SP-6 with Sperry 6151355 heading sensor and course changer.  
Magnetic compass: Ritchie, 3" mounted at the starboard con  
GPS receiver: Trimble Nav Trac XL  
GPS receiver: Furuno GP 39  
GPS receiver: Furuno, model GP-32 "Navigator" GPS/WAAS  
ECC Globe (with Terrain Builder) and Nobeltec computer plotting and charting software with tide and currents running on a computer with a 19" flat screen monitor and with keyboard and pointing device.  
A second copy of the navigation and tide software resides on a laptop computer owned by the vessel master and kept ready for use in the event of failure of the primary system.  
Depth finder: Ross flasher  
Depth finder: Simrad color sounder model FCV-1150  
Tide Computer: Tidefinder software  
Transducer selector switch for data transfer to depth finder: 38 kHz or 50 kHz

### Communication Equipment

SSB radio: Skanti 8000  
SSB radio: SEA 222  
12-volt reading light  
VHF radio: Icom, model IC-M504  
VHF radio: Standard, model HX 250 portable VHF FM transceiver with charger base  
Simrad model RS 35 VHF receiver with a remote communicator for use in the tendering booth. This enables longer range communications from the tendering booth than with a handheld VHF radio.  
2-meter radio: Yaesu, model FT 2600  
Saturn M Satellite communications system with distress signal sender  
Sailor, Iridium Satellite communications system  
Mitsubishi Trac/Tag phone – number (866) 890-7617

Telephone/intercom system: Aiphone model TB 12H  
Loudhailer: two (2) Furuno, model VLH 3000 (one at the port con and one starboard)  
Satellite communications unit: SeaSat 3 C 6003 standard C with Hitachi laptop computer  
KVH, Mini-VSAT satellite communications system  
JRC, model JHS-183, AIS transceiver  
CLS "Thorium" VMS transmitter with broadband email service  
Satellite tag phone in the master's stateroom for emergency calls  
Telephone  
One (1) cell phone signal booster  
Inno Media modem with D-Link DES 1008pA switch  
XM radio receiver  
One (1) Dial Pad "Plus" telephone dialer  
Two (2) V-Tech telephones

#### Weather Monitoring Equipment

Furuno, DFAX model Fax-207 weather fax receiver  
Barometer: Seth Thomas  
Tide Finder tide calculation computer  
Telcor, series 520D anemometer

#### Gauges and Indicators

Three (3) Red Lion hold temperature indicators  
Auxiliary water temp, oil pressure, emergency stop.  
Main engine gauges: Digital panels for port and starboard engines.  
Main engine pyrometers  
Air pressure (port, center and starboard.)  
Auxiliary engine governor controls with hertz meter  
Auxiliary engine oil pressure gauges and water temperature

#### Alarm, Light and Electrical Distribution Panels

Watch alarm: Radar Devices "Bridgwatch" tied to autopilot  
Sea Marine navigation light panel above the chart table and has backup lights and out alarms.  
Machinery alarm panel  
12 and 24-volt electrical panels with volt meters  
Pauluhn general alarm activator

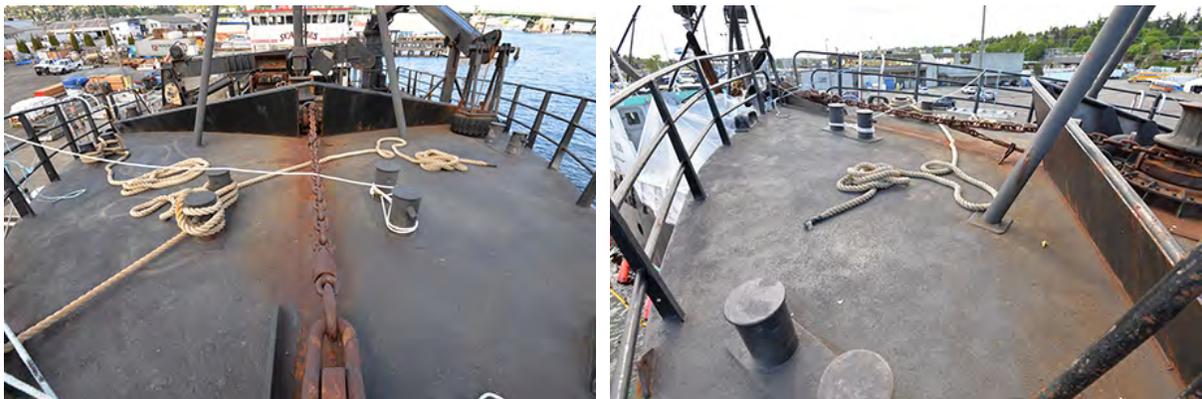
#### Other Equipment

Heaters: two space heaters  
Window Wipers: two (2) Wynstruments model W 1613  
Power supply: TF -G20 12/24/32  
Clock: Boston  
Uninterruptible Power Supply: Data Saver  
Neat document scanner  
HP "Envy" model 7640 printer (in master's stateroom)  
One (1) HP "Pavilion" laptop computer  
One (1) Steiner "Marine" 7x50 binocular  
One (1) Steiner Marine 7x50 binocular  
One (1) Rebel 10x42 binocular  
One (1) Lenovo "Think Pad" laptop computer  
One (1) HP "Office Jet" 5258 printer  
Two (1) reading lamps

**01 Deck Arrangement and Equipment**

**Forward Weather Deck**

A full-width enclosed foc'sle carries a light mast, anchor gear, moorage tackle and other attachments as described below.



Light mast: Tripod style with a mast of 8" diameter pipe supported by 5" diameter pipe supports leading forward. The mast carries six (6) sodium fishing lamps and six (6) LED fishing lamps accessible from a guarded platform reached by a ladder up the aft side of the mast. Two (2) LED and one (1) sodium lamp are directed aft to the fishing deck.



Railings: 3-tiered rail of 2" diameter pipe with a height of 43"

Wave Break: 40-1/2" high at center and 14" at the port and starboard rails

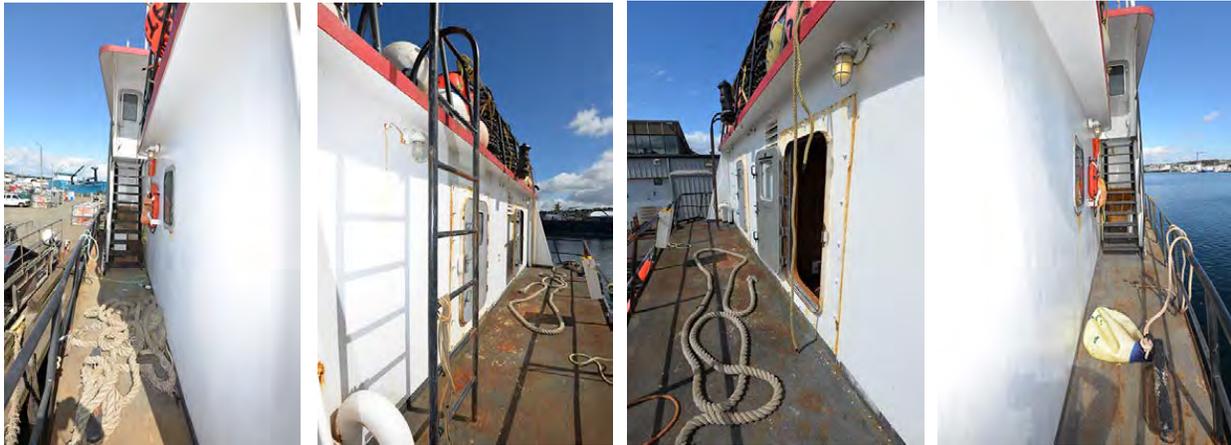
Ladders: a vertical ladder is through an opening in the deck starboard by the picking boom. A 56" x 48" hatch is aft in the shelter deck.

Crane and boom controls are starboard aft.



01 Level Aft House Deck

The 01 house level is a partial-width deckhouse with accommodations and utility spaces. Weather galleries with access ladderways are port, starboard and aft.

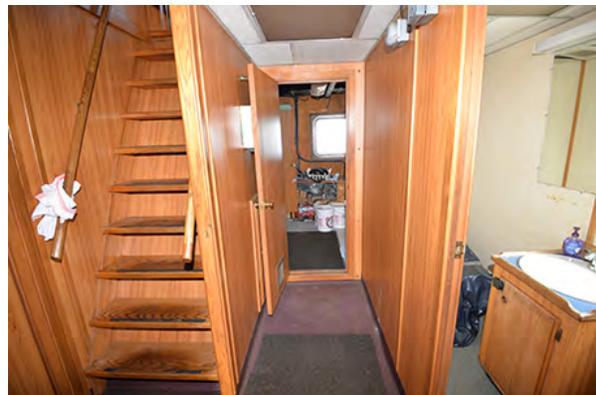


Forward starboard is an electrical equipment and utility space with DC systems, storage, high-pressure sodium lamp ballasts and supporting equipment for wheelhouse systems. The space also houses laundry equipment, including one (1) Whirlpool “Duet” stacked clothes washer and dryer. Port is a space with seven (7) chest freezers and a stainless steel “Beverage Air, model KR24-1AS upright freezer.



A short passage runs down the starboard side to a head with sink, vanity with washbasin and toilet and an aft 2-berth stateroom with a weather hatch aft. Center are inclined ladders to house decks above and below.

Starboard is a master’s stateroom with a desk, office and communications electronics, an electric massage chair, single berth, a head with a washbasin, vanity, toilet and deep jetted bathtub. The stateroom also has video monitors to display information from the radar and plotter.



A weather-tight hatch is aft to the aft weather gallery.



**Main Deck**

**Main Deck Forepeak**

Forward is storage. Aft starboard is a work and storage area with a workbench, parts bins, and equipment. Port is a bait freezer insulated with high density polyurethane foam coated on the bulkheads with FRP and a wood grate floor. Flush hatches in the deck are to a void forward, chain locker and gear storage below.



#### Main Weather Deck

Forward is a bulkhead with a watertight hatch to the forepeak. A shelter deck above extends aft 8-1/2 feet and is supported by a 4 x 4" steel post. A bait chopper and bait box is starboard. Crane and other hydraulic controls are starboard.

A Marco "Kinghauler" power block is hung from a hydraulic articulating power davit starboard. A double-action Yaquina, model PL 102L hydraulic pot launcher with hydraulic pot dogs is forward on the starboard side. The power block feeds a Marco "Kingcoiler" line coiler.

An aluminum crab sorting table on wheels is moved by a hydraulic pulley system running in a track below the work deck.

Aft are access hatched to anterooms port and starboard, each with a weather-tight hatch to the house. In front of the house are refrigeration chillers, a condenser and a receiver. A pot guard constructed of 2-1/2" pipe protects the house front and refrigeration machinery. Tonnage openings (2) are forward in the house bulwarks behind the chillers. Four (4) LED flood lamps are directed forward to illuminate the work deck.





Tendering Gear:

- One (1) aluminum 3-station salmon sorting table
- One (1) aluminum dewatering box
- One (1) aluminum weigh box
- One (1) hydraulic power conveyor
- One (1) Transvac, single barrel model 4315A hydraulic driven auto-cycling fish pump.
- One (1) Ryan, single barrel model 971 electric auto-cycling fish pump.

Assortment 10" fish pump hoses and fittings.  
Salmon brailers and miscellaneous tender gear



Starboard Crane - A straight-boom telescoping crane fit with two hydraulic rams on the main boom and two slewing motors is mounted atop a pedestal from the main deck and integral with the foc'sle deck. The boom carries a Pullmaster winch fit with 9/16" dia. braided line terminating with a safety hook. Controls are on the forepeak deck, forward starboard on the fishing deck, at the crane base and by a radio frequency portable control box.

Port Crane - A North American, model MCK 1250, 12-ton knuckle boom crane, is fit with two hydraulic rams on the main boom, a single knuckle ram and two slewing motors is mounted atop a pedestal of a 12' length of 40" diameter pipe and 5' length of 36" diameter pipe on the starboard mid-deck. The crane boom carries a hydraulic drum winch fit with braided line. Controls are on the forepeak deck, forward starboard on the fishing deck, at the crane base and by a radio frequency portable control box. The crane hydraulic power pack is in the base. The crane is fit with a rotating seal for 360-degree operation. The crane hydraulic power pack is in the base.



Bycatch Release Chutes: Port, forward of the crane, and starboard aft.

Bulwarks: starboard and port bulwarks rise 28" inches off the wear deck and are fit for a removable wave wall rising an additional 58" above the bulwark cap. Port forward the crane is a wave wall rising 100" off the wear deck and has a walkway and 43" high rail on top.

Scuppers: 28 to 30" scuppers are found every 4 feet along weather bulwarks port and starboard.

Chain boxes: six (6) are found fit to the port bulwark.

Wear deck: a wear deck of Apitong hardwood is laid 18" above the steel deck at the rail. Steel diamond plate: in way of the pot launcher and aft the launcher for 8 feet.

Hold Hatches: a 44 x 44" hatch is forward to the forepeak dry stores. A similarly sized hatch is in the shelter deck above.

Hatches: three (3) 9 x 9-ft. cargo hatches with recessed hatch bolts are in the centerline fore to aft on the fishing deck.

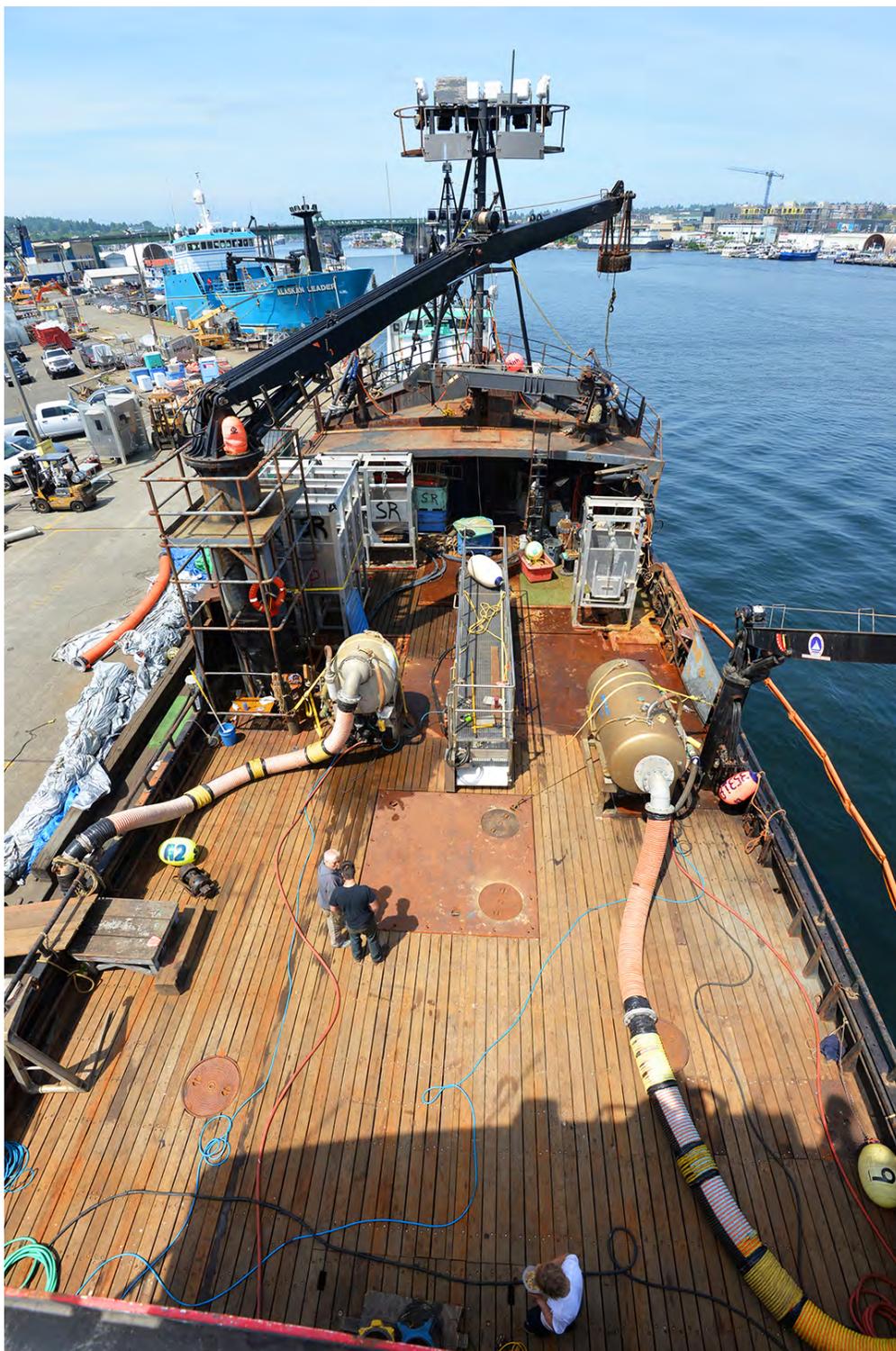
The forward hatch cover has one (1) 24" Baier hatch. The center and aft hatches have two (2) each 24" Baier hatches. In the deck are two (2) 24" Baier hatches for the forward flooded hold and two (2) for the aft flooded hold.

A 4 x 6' hatch is forward in the engine room. A 24" steel Baier hatch is set in the hatch cover. All hold hatch covers are of steel. The Baier hatches are cast iron.

Pot Guard: of 2-1/2" pipe in front of house and around port crane base.

Fuel Containment: Forward on the main deck port and starboard. The fuel tanks are vented through the (former) bulwark cap rail.





#### Main Deck House

The galley deck has a scullery and mess area, utility closets with electrical equipment, four (4) two person staterooms and one (1) head with a sink/vanity, head and shower. Heads are equipped with heaters and vent fans.



Galley- A spacious galley is equipped with a 10' x 4' table with bench locker seats, storage lockers, food preparation counters and the following equipment:

- One (1) Whirlpool refrigerator
- One (1) Kenmore refrigerator
- One (1) Danby microwave oven
- One (1) Oven – Kenmore “Elite”
- One (1) Range - Jenn-Air 6-burner electric with exhaust vent, fan and filter
- One (1) Griddle - Wells cast iron
- One (1) two-pot coffee maker - Bloomfield
- One (1) Kitchen Aid trash compactor
- One (1) Kitchen Aid mixer
- One (1) Sink - 2 well stainless steel
- One (1) 50” Pro Scan LED TV and DVD player
- Six (6) headphones with a Hamilton-Buhl wireless listening station
- One (1) Clock
- One (1) VHF radio - Icom IC M100

One (1) CB radio - Cobra 146 GTL

Laundry- Whirlpool “Duet” clothes washer and dryer units are in the 01-level utility room and the main deck head. An additional clothes dryer is in the forepeak.



**Hull and Machinery Deck Arrangement**

A stem void is forward the collision bulkhead. Next aft is a chain locker. Next aft is gear storage accessed from the forepeak, fishing deck and forward hold. Next aft are centerline forward, center and aft flooded holds.

Fuel tanks are in the wings and below. Next aft is the main engine compartment with propulsion machinery, electrical power generation plants and ancillary machinery.

Aft is a steering room with the main AC switching panels, steering gear, workshop and part storage.





### Flooded Tanks

Flooded holds are arranged along the centerline forward, center and aft. Each tank is fit with 4" PVC circulation piping from 12" headers aft. A 10" PVC perforated drainpipe is aft in each tank. A sump is in the floor. Zinc anodes are spaced throughout. Tank bulkheads are double walled. Each has tank lights and bin-boards of 3" x 12" dimensional lumber.



### Systems and Machinery

#### Propulsion

Port Main Engine: A Detroit Diesel 12V2000 model R1227K22 12-cylinder engines produce 805-hp at 1800 RPM.

The engine is turbocharged, pneumatically started, and raw water cooled through bilge mounted heat exchangers and duplex strainers.

The engine is fit with three (3) Racor 10-micron fuel filters and an Arize Technologies CRS 300 coolant recovery system. Stacks are dry, lagged, and through a venturi trunk.

Serial Number: 5352000359

SO Number: 817268

Service Units: 43,240



Reduction/Reverse gear: The engine is coupled to a Detroit Diesel Model DD-5202-V gear with a 5.04:1 reduction ratio.

Serial number: 3AF258

BOM Number: 43,240

Starboard Main Engine: A Detroit Diesel 12V2000 model R1227K22 12-cylinder engines produce 805-hp at 1800 RPM.

The engine is turbocharged, pneumatically started, and raw water-cooled through bilge mounted heat exchangers and duplex strainers.

The engine is fit with three (3) Racor 10-micron fuel filters and an Arize Technologies CRS 300 coolant recovery system. Stacks are dry, lagged, and through a venturi trunk.

Serial Number: 5352000360

SO number: 815228

Service Units: 25,043

Reduction/Reverse gear: The engine is coupled to a Detroit Diesel Model DD-5202-V gear with a 5.04:1 reduction ratio.

Serial number: 3AF257

BOM number: 40694

Engine control system: Rexroth electronic and Systems Engineering pneumatic controls.

Shaft: port and starboard 6" stainless steel shafts each run through a packing gland with a grease fitting and a cooling water port (with valve), stern tube and rubber cutlass bearing.

Prop: port and starboard 4-blade, 68x53 stainless steel. Line cutters are fit to the shaft guard.



### Steering Gear

Rudders: Twin rudders are fitted with one (1) hydraulic ram each and are connected with a tie bar of 3" pipe. Each rudderpost is 3" stainless steel through a packing gland and supported by a rudder boot. Rudders are 82 x 58" steel with 4 x 5/8" longitudinal stiffeners. Rudders are bolted to the post and further secured with cement.

Steering Hydraulics: Sperry completely redundant system with Vickers directional solenoid valves and vane pumps driven by Lincoln 10 hp motors.

Steering oil reservoir: 40 gallons.



### Electric DC

12 and 24-volt distribution panels are located in the wheelhouse, supplied by a Ratelco FR2450 constant voltage charger and a Ratelco VM 2452 battery charger.

A starboard side utility room on the 01 house level has eight (8) 8-D batteries configured into two (2) 12-volt banks charged by an Analytic Systems, model BCA 1000-1-12 12-volt charger and one (1) NewMar model 115-12-30CD charger.

Three (3) 24-volt banks are charged by one (1) Ratelco, model FR 2450 charger and two (2) Phase Three model PT-24-45U 24-volt chargers.

Two (2) Dyno 8D batteries are charged by two (2) Analytic Systems model BCA610-110-24, 24-volt chargers for the throttle control batteries. The chargers are fit with a rotary selection switch. A NewMar 115-12-30 Power supply is under the chart table.

### Electric AC

Distribution of AC electrical power from the three (3) ship's service generators is through a marine type dead front switching panel. The switchgear is equipped with instrumentation and controls for non-parallel operation.

Bus connections are made with fused circuit breakers within hinged access panels. Electrical conductors are armored type, led throughout



the vessel in cable races with bulkhead and deck penetrations made with adequate seals or glands.

Electrical conductors and fixtures in the switchgear are grounded and are marine type, exteriorly armored. Lighting and receptacles are supplied with 120-volt, single phase, 60-cycle AC power. Motors over 1-hp are supplied with 220-volt, three phase, and 60-cycle power. Two (2) Acme transformers (located in the engine room and forepeak) convert 480 to 208/120 volts AC. A shore power connection is on the main deck port house passage.

#### Generator Sets

Center: A Detroit Diesel model S60 Marine HTEX engine is fit with an electric starter and two (2) Racor, model 75/1000MAX fuel filters. The engine is cooled through a Fernstrom hull mounted heat exchanger.

The engine complies with Marpol 73/78 Annex VI Reg. 13 emission limits for marine engines and is Tier 2 certified.

Family: CODXN14-0MCK 1R  
Serial Number: 06R1052727  
Horsepower: 525  
Service units: 19,821

Armature: Magna-Plus model PSL 6220 (s/n MX128446 11-09) The armature produces 310 kW at 1800 rpm, 480-volts, 466-amps.

Port side: A Detroit Diesel model S60 Marine HTEX engine is fit with an electric starter and two (2) Racor, model 75/1000MAX fuel filters. The engine is cooled through a Fernstrom hull mounted heat exchanger.

The engine complies with Marpol 73/78 Annex VI Reg. 13 emission limits for marine engines and is Tier 2 certified.

Family: CODXN14-0MCK 1R  
Serial Number: 06R1049889  
Horsepower: 525  
Service units: 19,409  
Armature: Magna Max 433 RSL 40 -294 kW: 300

Starboard side: Detroit Diesel 4-71  
Service units: 17,723  
Armature: Detroit Magna Max kW 75

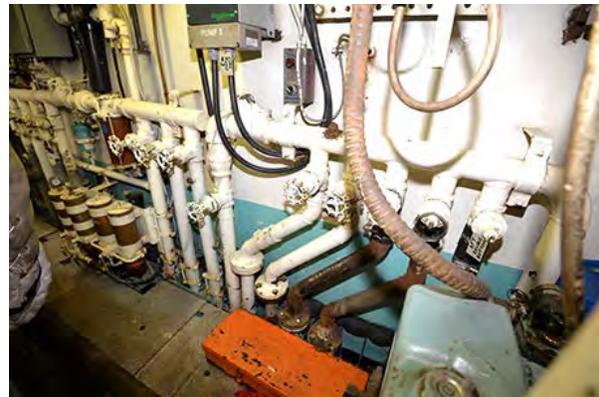


### Bilge Pumping System

Bilge Pumps: a 10-hp motor drives a Carver centrifugal pump. A Barnes pump is driven by a 5-hp motor.  
Manifold: fire/wash-down and bilge – two (2) 3" headers with 2 ½ inch lines and gate valves.  
Suction locations: forward, center and aft in the steering room  
Suctions with screens: yes  
Suctions with openings 2.5 times the pipe diameter: yes  
Suction side strainer and manifold cleanouts: yes - Perko strainer on forward manifold.  
Emergency suction: two (2) 5" lines with knife valves from circulation pumps.  
The refrigeration condenser pump may be used as a bilge pump as well.

Waste oil tank: 750 gal. capacity

Waste oil pump: Roper pump driven by a Baldor, 2 hp motor.



### Sewage

Holding tank: 500 gallons

Discharge pump: macerator pump with 5-hp electric motor.

Flushing Pump: Jacuzzi "J-Class", model JRM1C1-C-SSI jetted pump with 1-hp motor. The discharge line is fit with a Well-X-Trol pressure vessel.

The pump is regulated by a demand pressure switch.



### Fresh Water

Supply pump: One (1) Franklin Pumps model FP1C1-C pump driven by a 1-hp motor. The discharge line is fit with two (2) pressure vessels.

The pump is regulated by a demand pressure switch.

Pressure control: Furnas

Filtration: two (2) in-line canister type filters, one (1) for a sediment filter and one (1) for a charcoal filter.

Tanks: two (2) 7,625 gallon integral tanks (port and starboard)

Hot water tank: One (1) Reliance 40-gallon electric tank heater



**Fuel**

Centrifuge: Westfalia model OTC 2-02-137 oil separator. A centrifuge manifold is constructed of ¾” diameter Steel pipe with gate valves and a GPI digital fuel meter. A 4” dia. X 6” screen is found in the centrifuge suction line. A Lubrifiner filter is in the transfer pump suction line.

A GB 70 fuel filter housing with sight glass in the port aft cofferdam cleans fuel to the transfer pump. The line is fit with a Fill Rite 800B fuel meter.

Fuel transfer pump: One (1) Ingersoll-Dresser, model LI99-1650C gear pump is driven by a 3-hp motor. One (1) 1-½ hp motor drives an Oberdorfer gear pump. A flow sight glass is in line as is a WMStamp model 1450-20-SR-2. Fuel lines are painted red. The fuel manifold is of 2” iron pipe with ball valves. Lines are iron pipe and approved rubber hoses.

An engine fuel supply manifold is port by the transfer pump. Racor filters model 75-1000 FGX clean fuel to engines. Each main has two (2) banks of two (2) filters each. Each auxiliary engine has one filter.

Flo-Scan model 236D fuel monitors feed information on fuel use to the wheelhouse.

A fuel transfer pump is inside the port house deck hatch. A 3-hp Leeson motor drives a Roper pump. Attached are a Racor 75-1000 filter and a Fill Rite 800B fuel meter.



Fuel tanks: 60,832 gallons capacity - all tanks are integral.

Tank	Capacity
F.O. #1 (port and starboard)	8,930 gallons each
F.O. #2 (port and starboard)	5,756 gallons each
F.O. #3 (port)	7,390 gallons
F.O. #3 (starboard)	5,230 gallons
F.O. DB 1	3200 gallons
F.O. DB 2	6300 gallons
F.O. DB 3	6300 gallons
Day Tank	3040 gallons



Fills, vents, and sounding tubes: fills are two (2) port and starboard. Tanks vent through the bulwark cap rail and have sight glasses on feed pipes.

Lines: iron pipe with bulkhead and manifold valves and approved rubber hose.



### Hydraulics

Each of the two (2) Detroit Diesel S60 engines is equipped with a Bevis air clutch driving a Vickers model 45V50A11A22R vane pump and a Vickers 3525V25A21111CC22R vane pump through a Marco Twin Drive model DC26-3-L211-1.1E-C4C4. The clutches are fit with Systems Engineering pneumatic controls.

The deck cranes have self-contained “power pack” units located in each crane base. The port crane contains a Denison, model T6CCWM-B17-014-2R pump driven by a 60kW motor.

Hydraulic oil tank: A 720-gallon integral tank is forward starboard, in the engine room. System filtration is through (4) Baldwin BT 388-10 return filters.



### Sea Water Supply and Pumps

Sea Chests: six (6) (3 each port and starboard) aft, with butterfly or knife valves on the larger feeds and gate valves on smaller feeds.

Pumps: Baldor 40-hp motors drive four (4) 8x6 Deming pumps. Lines to tanks are 8” with 6” diameter crossover piping and some 6” diameter steel pipe components to the RSW chillers. The steel piping has zinc sacrificial anodes and each pump is equipped with a flow alarm and butterfly valves. Each of the pump motors is controlled by a Schneider Electric “Altivar 212” AC Drive, model ATV 212HD37N4 6W1207000081.



The refrigeration condenser supply water is delivered through an MP 15 centrifugal pump driven by a 7.5-hp motor. Either bilge pump may also be used to supply water to the condenser. The bilge pumps and condenser pump also supply water to the deck wash-down hose.

#### Lube Oil

Tank: 1,200 gallons capacity - integral  
Transfer: valve with gravity feed.

#### Compressed Air

Engine Room Compressors: two (2) Ingersoll-Rand model 24 compressors are driven by 5-hp motors.  
Air is supplied to two (2) 100 gallon pressure tanks  
Throttle and Reduction gear actuator: Systems Engineering  
Lines are fit with oilers and dryers

#### Refrigeration

RSW system - three (3) Freon R-22 compressors (two Carrier 5H60 compressors and one Bitzner compressor) in the engine room are driven by a 50-hp motors via v-belts on pulleys. Each compressor is fit with a Schneider, model ATV212HD3704 variable frequency drive.  
The drives adjust the motor speed to the required flow of fluids.



The Bitzer system (one compressor) is independent from the Carrier system (of two compressors).

Two (2) condensers and two (2) receivers are located in front of wheelhouse. The larger of the units serves the Carrier compressors. Suction accumulators and oil separators are located in the cofferdams by the compressors. Temperature sensors and controls are forward in the engine room.

Three (3) Highland Refrigeration, model 100TR 2X 1612D chillers are in front of the house and on the aft bulkhead of the aft tank.

Compressor hours: starboard aft = 4,067, port = 12,697, starboard forward = 10,296

Bait Freezer: a 10-hp motor drives a Bock, type F3 compressor, number AS44342A001 in the dry stores room. The unit is fit with a single fan evaporator.

#### Welding/Repair

One (1) Miller XTM 304 CC/CV  
One (1) Miller SP30A wire feed unit for welder  
One (1) Lincoln LN 25 wire feed unit with Tweco MIG gun  
One (1) Lincoln arc welder  
Five (5) oxygen, two (2) argon and two (2) acetylene bottles are found in the forepeak along with a torch set and regulators  
One (1) Milwaukee ¾-hp bench grinder  
One (1) Jet 6" bench grinder  
One (1) Jet drill press  
tool chests  
hand and electric tools  
One (1) refrigeration vacuum pump  
One (1) Milwaukee chop saw  
One (1) Jet bench vise  
Parker "Enerpac" hydraulic crimping press



### Fishing Gear

Crab pots (approximately 350, 7x8 pots) and a large inventory of fishing gear are reported to be located at the Westward Seafoods storage yard in Dutch Harbor AK.

Cod pots (approximately 140, 7x8 pots) are located at the Westward Seafoods storage yard in Dutch Harbor AK.

Cod pots (approximately 110, 7x8 pots) are stored in King Cove, AK (the pots were re-webbed in 2012).

### Other Equipment

Many spare pumps and motors.

One (1) Portable Jabsco pump with 3/4 hp Leeson motor.

Heaters in forepeak and ante-room

Large inventory engine and machinery parts

One (1) custom built 5-horsepower, 3-phase pressure washer with hose to cover entire vessel.

One (1) 15-foot hydraulic crab conveyor (in storage off vessel)

One (1) 3x3" diesel portable emergency trash pump and flexible hose

Ventilation Fan for forepeak: Tubefan HA 18 with 1-1/2 hp Baldor motor



**Notes and Comments on Condition of Vessel**

**Extent of Inspection**

1. The vessel was surveyed while hauled out and subsequently while afloat.
2. The vessel engines and motors were not run or tested in any way, other than a visual inspection of the equipment and mounts.
3. The water, fuel, oil and ballast tanks were not entered or inspected in any way.
4. Sea suctions, valves and fittings were inspected internally as far as visible.



Documentation, Publications, Logs, and Postings	
Certificate of Documentation	Valid to August 31, 2019
Stability Letter	Bruce Culver 1988
Stability Book	Bruce Culver 1988
FCC Ship Station License	Valid to 9/16/2025
Navigation Log	Found
Navigational Charts for operating area	Found
Navigation charts corrected	No
Compass Deviation Table	last adjusted 6/11/2010
USCG fishing vessel inspection safety decal	Decal 257066 valid to 10/2020
ColRegs	Not Found
Coast Pilots	7=2018, 8=2017, 9=2017
Light List	2018
Tide Tables	Reported on computer
Current Tables	Reported on computer
First Aid Card	Gary Cobban
CPR Card	Gary Cobban
Drug and alcohol testing certification	Gary Cobban
Drug and alcohol testing kits on board	Yes
Drill Instructor	Gary Cobban
Donning of Exposure Suits	Found
Station Bill	Found Posted
Procedures for Making a Distress Call	Not Found
7 Day Injury Notification	Found Posted
Drug Policy	Found Posted
Pollution Placards	Found Posted
Waste Management Plan Posted	Found Posted
Garbage Placard	Found Posted
Man Overboard Procedures	Not Found
Procedures for Rough Weather at Sea	Found Posted
Procedures for Crossing Hazardous Bars	Found Posted
Procedures for Anchoring	Found Posted
Procedures for Firefighting	Not Found
Procedures for Flooding	Found Posted
Fuel transfer procedures	Not sighted

**Construction and Structural**

1. The vessel is well constructed with very good scantlings and workmanship. The construction of this vessel is extraordinary for a boat built by Bender Shipbuilding during the late 1970's. The craftsmanship, materials and design are on par with the best of the West Coast built fishing boats.
2. Welds appear sound. The bulwarks, railings and internal bulkheads available for visual inspection appear sound and in good condition.
3. A crack on port rudder shoe support was repaired while the vessel was in drydock May 2009.

Weather Hatches

02 Level Weather Hatches

Location	Type and Material	Sills	Dogs	Size	Gasket
Starboard side wheelhouse	Hinged aluminum with viewport	13"	2	26x66	Good
Port side wheelhouse	Hinged aluminum with viewport	13"	2	26x66	Good

01 Level Weather Hatches

Location	Type and Material	Sills	Dogs	Size	Gasket
Starboard stateroom to weather deck	Hinged aluminum	14"	2	30x60	Good
Port stateroom to weather deck	Hinged aluminum	14"	2	30x60	Fair
Forward shelter deck to main deck	Steel bolted flush	No	No	56x44	Good

Main Deck Hatches

Location	Type and Material	Sills	Dogs	Size	Gasket
Forepeak to forward void	Aluminum oval flush	flush	no	26"	Good
Forepeak to chain locker	Aluminum oval flush	flush	no	26"	Good
Forepeak to storage below	Steel cover	flush	no	22x22"	Good
Starboard weather to forepeak	Hinged aluminum	19"	2	28x58	Poor
Weather to forward gear storage	Steel flush with wear deck	11"	6	44x60'	Not seen
Weather deck to flooded holds (3)	Steel bolted flush with wear deck	11"	no	8x8'	Not seen
Weather deck to flooded holds (7)	Steel flush with wear deck –quick round	11"	no	24"	Not seen
Weather deck to engine room	Steel flush with wear deck –quick round	11"	no	24"	Not seen
Weather deck to engine room	Steel bolted below wear deck	8"	no	4x6'	Not seen
Starboard weather deck to house	Hinged aluminum w/viewport	21"	2	30x60	Poor
port weather deck to house	Hinged steel –quick action w/viewport	24"	8	30x66	Good
port anteroom to galley	Hinged aluminum	19"	2	36x60	Good
Starboard anteroom to galley	Hinged aluminum	19"	2	36x60	Good

Hold/Machinery Deck Hatches

Location	Type and Material	Sills	Dogs	Size	Gasket
Steering room to engine room	Hinged steel	8.5"	6	28x60	Good
Forward hold to forward gear storage	Hinged steel	40"	6	21x60	Not seen

Condition of Water Tight Hatches

All hatches to watertight spaces were found in good condition, with sound gaskets and closing mechanisms with the following exceptions: the forepeak hatch gasket has minor damage.

Coatings

1. Weather surfaces are generally preserved by paint and found generally without significant deterioration with the following exceptions:
  - a. The coatings of the main deck under the wear deck are worn or missing and large areas of rust are noted.
2. The vessel hull was re-coated in May of 2019.
3. Accommodation finish work, flooring and hardware are well preserved and in fair condition.
4. The machinery spaces, and work areas were found generally in good condition with the following exceptions:
  - a. The forepeak bilges were found with rust and scale.
  - b. The engine room bilges were found with rust and scale.
5. The flooded tanks and port and starboard voids were found with generally strong coatings but with some rust spots and staining.

6. The engine room bilge coatings are generally in poor condition with coatings in most areas worn or removed. Some oil was noted in the engine room bilges.

#### Machinery and Equipment

1. The deck machinery and equipment appear in good and serviceable condition.
2. The wheelhouse arrangement and equipment are standard for this type and size of vessel and are found generally in good and serviceable condition. The equipment was not tested for operability.
3. Machinery appears in operable condition.
4. The AC electrical wiring is armored cable. Wiring and fixtures are installed according to standard industry practice.
5. The steering packing gland appears sound and without evidence of excessive leakage.
6. The propulsion shafting with bearings and packing appears sound and without evidence of excessive leakage.
7. Exhaust stacks are silenced, lagged and away from flammable materials.
8. Overboard lines are fit with butterfly or gate valves.

#### Hull Thickness Testing

A limited audiogauge examination of the hull was performed by the surveyor in April 2003 while the vessel was hauled out.

Instrument: Krautkramer/Stresstel T-Scope III with 7/16" dual probe transducer. Readings were taken through coatings.

Results: Ninety-seven (97) readings were taken of the underwater strakes from bow to stern. Twelve (12) measurements were below 100% of original thickness. Of these, ten (10) were over 90% of original thickness and two (2) were over 80% of original (.285). Additional readings in these areas indicated that this thinning was isolated to an area of a few square inches, and not of concern at present. Overall, based on the results of the gauging, the hull appears in very good condition.

In 2012, audiogauge readings were taken in the three (3) double-bottom fuel tanks by personnel from Northlake Shipyard. All readings were within satisfactory tolerance. Some pitting found in the aft tank was repaired by filling the pits with weld.

#### Safety

1. The safety equipment is standard for vessels of this size and type, and with the exceptions noted under "Recommendations" below are found in compliance with 46 CFR part 28.
2. The bilge alarms are redundant on separate circuits as insurance against float switch or circuit failure.

#### Recent Repairs and Additions

1. The rudderposts were repacked 8/1998.
2. Repairs/additions in 1999 include:
  - a. A new wear deck was installed
3. The following work was don't in 2001:
  - a. The double bottom fuel tanks were cleaned
  - b. Repairs were made to the props and running gear supports
4. The vessel was hauled out in April of 2003. At that time:
  - a. The hull anodes were removed and replaced.
  - b. The hull was partially sand blasted and fully coated
5. Additional repairs/additions in 2003 include:
  - a. The flooded holds were sandblasted and coated.
  - b. The port and starboard voids were sandblasted and coated and the air intakes to the engine room were sand blasted and coated.

- c. All other weather and water surfaces, including the superstructure were cleaned and coated.
  - d. A new storage box containing a steam pressure washer was added aft the wheelhouse port.
  - e. A new deck crane was installed on the port fishing deck.
  - f. New stainless steel hydraulic tubing was installed below the wear deck to both deck cranes
  - g. A new cradle for the starboard crane boom was constructed on the foredeck
  - h. All new emergency lamps were installed a new refrigerator was installed in the galley and a new upright freezer installed on the 01 level.
6. The vessel was hauled out in August of 2005. At that time:
    - a. the hull anodes were replaced as necessary.
    - b. The hull was cleaned and coated.
    - c. The rudder and propulsion shaft bearings were inspected and found suitable for continued use.
    - d. The shaft packing was renewed.
  7. Additional repairs/additions in 2005 include:
    - a. In September 2005 a new satellite phone system was installed.
  8. The following work was done in 2006:
    - a. New refrigeration chillers were installed.
  9. The following work was done in 2007:
    - a. A new catwalk and ladder to the catwalk was installed below the wheelhouse viewports.
    - b. New vinyl flooring was being installed in all of the heads and in the galley area and passages.
    - c. The refrigeration chiller heads were removed in order to repair a manufacturing defect.
  10. The vessel was hauled out in May of 2009. At that time:
    - a. the hull anodes were replaced as necessary.
    - b. The hull was cleaned and coated.
  11. Additional repairs/additions in 2009 include:
    - a. Three hold circulation pumps were replaced or rebuilt to new. Impellers coated and volutes belzoned.
    - b. Work on refrigeration system including:
      - i. Replaced aft refrigeration compressor.
      - ii. Rebuilt other two refrigeration compressors
      - iii. Installed refrigeration oil management system
    - c. Replaced all six sodium lamps on upper row of main mast lights and rebuilt others.
    - d. The three holds were cleaned (stripped) and coated.
    - e. The hold linings were repaired as necessary.
    - f. The lower forepeak was cleaned (stripped) and coated.
  12. The following work was reported done in 2010:
    - a. New suction lines were plumbed individually to refrigeration compressors.
    - b. The piping to the #3 hold pump was cropped and replaced.
    - c. The forward and mid fuel tanks were drained, cleaned and inspected.
    - d. A new non-integral sewage holding tank was installed.
    - e. The starboard crane swing motor, knuckle ram and commutator were rebuilt.
  13. The following work was done in 2011:
    - a. Two (2) new transducers were installed (38 and 50 kHz).
    - b. All fuel tanks not cleaned in 2010 were drained, cleaned and inspected.
    - c. New Rexroth electronic throttle controls for the main engine installed.
    - d. New diamond plate installed on the fishing deck.
    - e. Overboard chutes rebuilt with new plate inserts and overlays.
    - f. The fill line for the aft crab tank was cropped and replaced.
    - g. Sections of the RSW hold circulation system that were previously constructed of PVC pipe were replaced with steel pipe.

- h. The anchor capstan was rebuilt and a friction brake was added making it freewheel capable.
  - i. The starboard deck crane knuckle pin was rebuilt.
  - j. A section of 8" pipe in the hold circulation system was cropped and replaced.
  - k. New ventilation fans were installed in the heads.
  - l. A new battery charger for batteries powering the Rexroth throttle controls was installed.
  - m. A new bushing was installed on the starboard rudder shaft.
  - n. Immersion suits were replaced with new.
  - o. New locks were installed on the house hatches.
  - p. The swing motors on the starboard crane were rebuilt.
14. The following work was done in 2012:
- a. Two (2) new Detroit Diesel S60 auxiliary engines were installed to replace old engines. The PTOs were modified to be compatible with Series 60 engines. Existing armatures were used. The port generator bearing carrier was rebuilt.
  - b. The hydraulic PTOs for the new auxiliary engines were fit with new System Engineering air controls.
  - c. The port side deck crane was removed and replaced with a reconditioned North American MCK 1250 knuckle-boom crane. The pedestal was raised 5' and a guard of 2" diameter pipe was constructed around the additional height of the crane pedestal. A new wireless remote control system was installed. Existing proportional valves were used, with the addition of a new valve for the extension function. The hydraulic reservoir was cleaned and all components inspected and serviced as necessary. New hydraulic hoses were installed.
  - d. The shaft bearings were checked by Pacific Fishermen Inc. and considered adequate for continued use.
  - e. The hydraulic rams for knuckle and extension on the starboard crane were rebuilt. New wear pads were installed.
  - f. An 11.3-foot wide section of the bulkhead between the lower forepeak drystore and the forward flooded hold (frame 11) was cropped from the deckhead to the bilge bottom and replaced with new steel. A horizontal strongback of 13" x 3" x 3/8" flanged plate was installed across the entire bulkhead. New gussets were welded to new and remaining bulkhead stiffeners. The design was done by Gisli Olafsson of Kraftmar Design Services, Naval Architects.
  - g. Transducer runs were cropped and renewed with pipe runs extending above the midpoint bulkhead height.
  - h. The fixed fire suppression system was relocated from within the protected space to a newly constructed locker aft the wheelhouse. The actuator was relocated from the galley to the stack aft the wheelhouse (adjacent to the cylinders).
  - i. A new refrigeration condenser and receiver were installed to isolate the smaller Bitzer compressor from the two Carrier 5H60 compressors. The vessel now has two completely separate RSW systems for salmon tendering;
  - j. . New piping to the condenser from the engine room condenser pump was installed.
  - k. The bilge manifold was modified so either of the bilge pumps or the condenser pump could be use for either purpose. In the process of revising the manifold, much of the old piping was replaced. The condenser pump was replaced with a new pump. A new 3" sea chest valve was installed. The suction strainer was rebuilt. Zinc anodes were installed.
  - l. The overboard discharge piping for the engine cooling systems was serviced. The check valves were replace and piping cleaned or replaced as necessary. Sea suction strainers were serviced and relocated, and new sea chest valves installed.
  - m. The fuel fills and vents were cropped and replaced. Stainless steel sleeves were inserted in deck penetrations. The fills and vents in the entryways were replaced mostly with stainless steel.

- n. A new centrifuge manifold was added and the fuel supply line cropped and replaced. The fuel tanks were opened and cleaned. The lines were also cleaned. A threaded end was installed to facilitate future cleaning of the fuel lines. Some of the scuttle covers were replaced.
  - o. The double bottom fuel tanks were audiogauged. Thicknesses were found acceptable. Some minor pitting was discovered in the number 3 tank and the pits were filled in with weld.
  - p. A new 5" line return water system was plumbed from the circulation system to the deck.
  - q. Fuel lines were extended from the three (3) double bottom fuel tanks to the fuel manifold. Originally these lines were plumbed to the bilge system. Later they were disconnected and a hose could be connected from any of the tanks to the fuel manifold. The plumbing is now complete from each tank with a separate line to the fuel manifold.
  - r. The smaller refrigeration compressor was isolated from the other two. A filter dryer was added to the small refrigeration compressor.
  - s. AC Drives were installed for each of the three (3) hold circulation pump motors. The drives adjust the motor speed to the required flow of fluids.
  - t. Two (2) new gel-type batteries replaced old batteries in the 01-level utility room.
  - u. The hydraulic suction lines to the service tank were cropped and replaced.
  - v. A new battery charger was installed for the 24-volt system.
  - w. The anchor winch hydraulic power circuit was modified to include a selector valve to isolate the winch when not used.
  - x. Wheelhouse computer monitors were replaced.
  - y. Variable frequency drives were installed by Harris Electric to control the three (3) hold circulation pump motors.
  - z. A new air compressor was installed to replace an older compressor.
15. The following work was done in the period from July 2012 to June 2013:
- a. Hydraulic controls for the port side deck crane were installed at the control station. A new hydraulic pump, electric motor and pilot system replaced the existing power pack.
  - b. The roto seals for both deck cranes were rebuilt and hydraulic hoses inside the crane base were replaced.
  - c. The support for the port crane was revised for better support.
  - d. Four (4) LED deck lights were installed on the house front to illuminate the work deck.
  - e. A new safety-latch door was ordered for the bait locker, but not installed at the time of survey.
  - f. A new sea chest valve was installed for the center circulation pump seachest. Two (2) new butterfly valves were installed to replace existing.
  - g. The center circulation pump was rebuilt, including coating the parts exposed to seawater with thermoplastic coating to extend life.
  - h. The bilge pump system was traced out and properly labeled.
  - i. The rub rail (21 feet) on the starboard side in way of the gear hauling area was cropped and replaced with new.
  - j. A new guard was installed on the davit ram.
  - k. The weather areas from the bow to the house were cleaned and coated, including deck equipment, cranes, mast, boom, and house.
  - l. All jumper hoses on the main engines were removed and replaced with new.
  - m. Toilets in all three (3) heads were replaced, along with exposed plumbing.
  - n. New door hardware including locks, was installed on the main deck hatches.
  - o. The port main deck house entry way was sealed to be water resistant, and the starboard entry way was revised with a scupper-drain to limit water incursion into the space.
  - p. One (1) pipe on the fuel manifold was removed and replaced with new.
  - q. New watertight penetrations were added for air and water plumbing from the foc'sle to the deck.
  - r. A threaded coupling (pluggable) was installed for shore power entry to the deckhouse.

- s. The fish conveyor was rebuilt with three (3) new rollers.
  - t. The starboard engine room vent fan (24" fan with 5-hp motor) was removed and replaced with new.
  - u. The following electronic instruments were installed in the wheelhouse:
    - i. One (1) Icom, model IC-M412 VHF radio
    - ii. One (1) Icom, model IC-M504 VHF radio
    - iii. One (1) Standard Horizon, model VLH-3000 loudhailer (on the port side of the wheelhouse. An existing unit is on the starboard side of the wheelhouse).
    - iv. Two (2) rotary switches for steering controls.
16. The following was done during or prior to the September 2015 shipyard period:
- a. A new deck crane was installed to replace the current picking boom.
  - b. A new articulation power davit was installed.
  - c. The bulwark in way of launcher was raised.
  - d. A new hydraulically moved sorting table was installed.
  - e. A new Yaquina pot launcher was installed.
  - f. Six (6) new LED mast lights were installed.
  - g. New wiring installed to mast lights.
  - h. A new stainless steel junction box for the mast wiring was installed in the forepeak.
  - i. The crane base guard was modified and the guarded platform raised to provide better access to the top of the crane.
  - j. Two (2) model 4066 8" circulation pumps were replaced with new and one (1) with a remanufactured pump.
  - k. A new sea chest valve was installed for pump #3.
  - l. A 6 foot section of 8" pipe from the center sea chest to outboard was cropped and renewed.
  - m. The location of the starboard tender crane was moved and a new Seven Stars crane was added (removed at the time of survey). New stainless steel pipe was installed through the void to the tender crane.
  - n. In May of 2015 the vessel was hauled out at Northlake Shipyard, Seattle, WA. At that time:
    - i. A new rudder was installed on the port side to replace a lost rudder. Supporting structured damaged in the loss were repaired or replaced, including the gudgeon, rudder shaft, bearing, shoe and structural supports.
    - ii. Approximately 20 square feet of hull plating was cropped and replaced.
    - iii. Both propellers were repaired and tuned.
    - iv. Forty-three new zinc anodes were installed.
    - v. The underwater hull was cleaned and coated.
    - vi. The shafts were inspected and found suitable for continued use.
  - o. The topsides were cleaned and coated in 2014.
  - p. New LED deck lamps were installed.
  - q. The wave walls were cleaned and coated 2015.
  - r. The refrigeration condenser pumps were rebuilt and fit with new motors.
17. New crab sorting chutes were added with flowing water to assist movement of crab. The following was reported done during 2016:
- a. A new control station for the port crane was added on the foc'sle head.
  - b. Remote control capabilities were added to the forward crane.
  - c. New air lines for the main engine control system was installed.
18. The following was done during or prior to the Spring of 2017 shipyard period:
- a. The vessel was hauled out at Northlake Shipyard. At that time:
    - i. The hull was cleaned and coated.
    - ii. Zinc anodes were replaced as necessary. Twelve 22-pound anodes were replaced. Others were greater than 50% remaining.

- iii. The rudder and propeller were removed and the bearings inspected and found suitable for continued use. The shafts were re-packed.
  - iv. New keel coolers were installed to serve the 60-Series auxiliaries.
  - v. One (1) sea chest valve was replaced.
  - b. One (1) hold circulation pump was rebuilt and sections of the hold circulation piping in the engine room were cropped and replaced with new. One (1) seachest valve and ten (10) butterfly valves were replaced with new.
  - c. The wood wear deck was removed. The steel stringers and vertical supports were cropped and replaced with new. New Apitong deck board were installed.
  - d. A new operator's chair was installed at the starboard control station in the wheelhouse.
  - e. The SEA 222 sideband radio was removed, repaired and re-installed.
  - f. A new loudhailer horn was installed on the forward mast.
  - g. One (1) wheelhouse window was replaced.
  - h. New LED lamps to illuminate the foc'sle were installed to replace quartz lamps that were removed.
  - i. The forward range light fixture was upgraded to LED.
  - j. Two (2) heat detectors and one (1) additional smoke alarm were added in the galley.
  - k. The salt water toilet flushing plumbing was cropped and replaced. A new expansion tank replaced an older tank on the discharge side.
  - l. The starboard refrigeration compressor was replaced with a similar remanufactured unit.
  - m. A new air compressor was installed to replace an old one.
  - n. The overboard lines and check valves for the main engine cooling water discharge were cropped and renewed.
  - o. A new counterbalance valve was installed in the steering hydraulic system.
  - p. The swing boxes on the port crane were reset to limit extraneous travel.
  - q. New ring buoys were installed.
  - r. Two (2) new SCBA units were installed.
  - s. Two (2) canister filters were installed on the discharge side of the potable water pump (one for a sediment filter and one for a charcoal filter)
  - t. The potable water tanks were opened, inspected and cleaned.
  - u. The fuel oil settling tank was opened, inspected and cleaned.
19. The following was done during 2018: nothing reported
20. The following was done during the 2019 shipyard period:
- a. The vessel was hauled out at Loveric's Boatyard in Anacortes, WA. At that time:
    - i. The hull was cleaned and coated.
    - ii. Zinc anodes were replaced.
    - iii. A pin-hole leak in the port aft fuel tank was repaired.
    - iv. A pin-hole leak in the port water tank was repaired.
    - v. The shaft packing was renewed.
    - vi. The rudder post packing was renewed. The port packing gland was replaced to match the starboard packing gland.
    - vii. A hole in the port strut was welded.
    - viii. A snag on a transducer was welded.
    - ix. The raw water screens were cleaned.
  - b. Areas of the wear deck were removed, the steel deck below welded and repaired as necessary.
  - c. The lower valve on the starboard potable water tank was replaced with a new valve.
  - d. A leak in the #2 steering pump flow valve was repaired.
  - e. The hydraulic systems was inspected and repaired as necessary including:
    - i. Various leaks in the hydraulic system were repaired.

- ii. The crane boom hydraulic ram was replaced and a spare ram was mounted for storage in the forepeak.
- iii. The hoses to the davit and sorting table were replaced with hard tubing.
- iv. The crane hydraulic oil tank (lower) was checked.
- v. The hoses to the coiler were replaced with hard tubing and shorter hoses.
- vi. The hoses under the console were removed and replaced with new.
- vii. The inboard picking boom ram was repaired
- f. The hold circulation pumps and system were serviced including:
  - i. impellers were checked and components and seals repaired or replaced as necessary.
  - ii. The pumps were re-aligned to the motors.
  - iii. The pump seals were re-packed.
  - iv. The variable frequency drives were serviced as necessary.
  - v. Zinc anodes in the circulation system were replaced with new.
- g. Leaking at the fuel transfer pump seal was repaired. The Racor filters were cleaned and the centrifuge was serviced.
- h. A gate valve on the small bilge pump was replaced and a leak in the overboard valve was repaired.
- i. The packing of the deck hose/condenser pump shaft was replaced.
- j. All 8D batteries were checked and batteries replaced as necessary.
- k. All the fuel tanks were opened and cleaned.
- l. The sewage tank alarms and the day tank high level alarm was checked and serviced as necessary.
- m. The fish holds were cleaned and coated. The circulation piping was removed and re-installed after the holds were coated.
- n. The refrigeration system was inspected and serviced as necessary, including:
  - i. The compressors were serviced.
  - ii. The condensers were cleaned and rodded.
  - iii. The chillers were flushed.
- o. The air compressors were serviced and repaired as necessary. Leaks in air lines were repaired.
- p. The crew's head was remodeled with a new toilet, shower and fixtures.
- q. Deck boards were replaced as necessary.
- r. The starboard trash chute was rebuilt and the starboard forward chute was removed.
- s. The anchor winch was repaired as necessary.
- t. The following repairs were made to wheelhouse electronics and equipment:
  - i. The AIS was replaced with a new unit.
  - ii. The Simrad RS 35 VHF radio was repaired.
  - iii. The starboard rudder indicator light was replaced.
  - iv. The port loudhailer microphone was replaced with new.
  - v. The port side SSB antenna was repaired.

#### Engine Repair and Rebuild History

##### Port Main Engine - Detroit Diesel 12V2000:

1. installed 12/99.
2. An overhaul was done 10/2000 with the installation of new pistons, rings and liners.
3. In September 2005, the clutch was rebuilt and upgraded. A new coupling was installed after determination was made that the original couplings were not suitable for the intended application.
4. In 2008 the fresh water and salt water pumps were replace. The heat exchanger was opened, cleaned and serviced as necessary and reinstalled.
5. In October of 2010 new injectors and fuel pumps were installed.
6. In 2011 new Rexroth remote electronic throttle controls installed.

7. In 2011 the shaft brake was removed and replaced with a new brake of the same type.
8. In 2011 the engine was tuned and new injectors were installed.
9. Portions of exhaust stack lagging replaced.
10. In 2012 the engine was serviced and received new nozzles and valves.
11. In 2013, all jumper hoses were removed and replaced with new.
12. In 2017 the engine was inspected and serviced.
13. A 9,000 hour or two-year warranty was purchased.
14. In 2019 the engine was tuned up including the following.
  - a. The water supply line to the engine was replaced with new.
  - b. The port main engine air control/shaft brake was serviced.
  - c. The exhaust lines were inspected for holes.

Starboard Main Engine - Detroit Diesel 12V2000:

1. Installed 12/99.
2. An overhaul was done 10/2000 with the installation of new pistons, rings and liners.
3. In September 2005, the clutch was rebuilt and upgraded. A new coupling was installed after determination was made that the original couplings were not suitable for the intended application.
4. In 2005 new flex elbow was installed on the starboard main engine to repair an exhaust leak.
5. In 2008 the fresh water and salt water pumps were replaced. The heat exchanger was opened, cleaned and serviced as necessary and reinstalled.
6. In 2010 the raw water overboard was replaced.
7. In October of 2010 new injectors and fuel pumps were installed.
8. In 2011 new Rexroth remote electronic throttle controls installed.
9. In 2011 the engine was tuned and new injectors were installed.
10. Portions of exhaust stack lagging replaced.
11. In 2012 the engine was serviced and received new nozzles and valves.
12. In 2013, all jumper hoses were removed and replaced with new.
13. In 2017 the engine was inspected and serviced.
15. A 9,000 hour or two-year warranty was purchased.
16. In 2019 the engine was tuned up. The water supply line to the engine was replaced with new. The exhaust lines were inspected for holes.

Port Auxiliary Engine - Detroit Diesel S60:

1. Installed June 2012.
2. Inspection and service - 2013
3. A 9,000 hour or two-year warranty was purchased in 2013.
4. In 2017 the engine was converted from a raw-water cooling system to cooling through a hull mounted Fernstrom heat exchanger.
5. In 2018 a new block was installed after the old block was holed by a piston failure.
6. In 2019 the engine was tuned. The PTO air controls were serviced.

Center Auxiliary Engine - Detroit Diesel S60:

1. Installed June 2012
2. Inspection and service - 2013
3. A 9,000 hour or two-year warranty was purchased in 2013.
4. The engine was rebuilt in May of 2013, as a result of a problematic rebuild in 2011.
5. In 2017 the engine was converted from a raw-water cooling system to cooling through a hull mounted Fernstrom heat exchanger.
6. In 2019 the engine was tuned.

Starboard Auxiliary Engine - Detroit Diesel 4-71:

1. Installed in March 2001
2. In 2007 the engine was overhauled
3. Rebuilt in-frame May 2009
4. In 2011 the engine was tuned.
5. Inspection and service - 2013
6. In 2019 the engine was tuned. A leak in the rear cam seal was repaired. Injectors were replaced as necessary.

General

As far as may be ascertained from a general examination of the F/V SCANDIES ROSE, inspected while hauled out and afloat, it is the opinion of the undersigned surveyor that the vessel is well kept and maintained, and with completion of the following recommendations, is suitable for operation in its intended service.

Precautionary Notes

1. Test general alarm and bilge alarms prior to departure and regularly throughout voyage.
2. Periodically test emergency lighting fixtures to ensure operable condition.
3. Monthly drills to be conducted by a qualified drill instructor and entered in the log with signatures of participants.
4. Correct navigation charts for area of operation per "Notice to Mariners". Chart corrections may be found at <http://pollux.nss.nima.mil>, or go to: <http://www.nauticalcharts.noaa.gov/staff/charts.htm> for complete charts (Print on Demand).
5. The fishing day shape should be displayed only when engaged in fishing activities.
6. Update station bill and oil transfer procedures with personnel changes.

Recommendations

1. The engine room breaker panel has an open position that should be occupied by a breaker or blank.
2. Bring the strobe light on the starboard side of the 01 house to operable condition or remove.
3. Post the following emergency procedures per 46 CFR 28.285: making a distress call, fire fighting, and man overboard.
4. Ensure fuel transfer procedures are complete and available.

Valuation

Definitions

Market Value - The amount of consideration expressed in monetary terms that may be expected from a property exchange between a willing buyer and seller with equity to both and neither being under any compulsion to buy or sell; both aware of all relevant facts as of a specific date, with no time constraint.

Replacement Cost - The amount of consideration expressed in monetary terms that would be required for construction of a new vessel of similar size and capability in today's market.

Approaches to Estimating Market Value

The practice of assigning value to fishing industry vessels is based on one or more of the following methods:

1. Market Approach – an analysis of recent sales of similar vessels in the same industry sector or with vessels in unlike sectors in which the subject may participate with minimal cost of conversion and/or; a recent "arm's length" sale of a subject vessel. Identical fishing vessels are rare among fishing boats. Efforts are made to find the most closely comparable vessels.
2. Income Approach – an analysis of potential earnings based on earning history and future earning potential.
3. Cost Approach – a determination of the current cost of producing a new piece of equipment that

will have equal utility and then deducting appropriate amounts for the various elements of depreciation. Generally considered are: physical deterioration, functional obsolescence and economic obsolescence.

In assigning a market value to fishing vessels, the following parameters must also be considered; the stability of the resource species and market, the risk of market share loss, and the availability and cost of similar vessels that participate in or can easily enter the fishery.

#### Approaches to Estimating Replacement Value

Replacement values may be estimated by using one or more of the following approaches:

1. "Black book" – cost estimators create formulas, tables, and charts based on years of experience, industry trends, recent new construction costs and vendor data. Typically, estimators guard this information closely, thus making its accuracy difficult to confirm.
2. Parametric approach – System and subsystem costs are characterized as a proportion of overall metrics such as length, volume, displacement and propulsion power. The proportions are estimated through comparisons with similar ships.
3. Standard ship approach – Some shipyards offer standard ship designs for which cost characteristics are well known.

Valuation of the fishing vessel "SCANDIES ROSE"

The valuation includes the vessel's hull, machinery, equipment and appurtenances. The estimated market value is based on considerations of market and income approaches. The replacement value was estimated using the Parametric and "Black Book" approaches.

Estimated Market Value: \$3,500,000

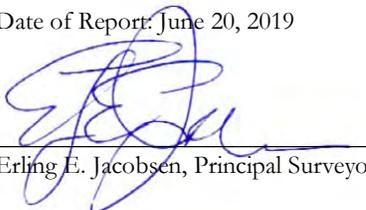
Estimated Replacement Value: \$15,000,000

#### Terms and Conditions of Survey

1. This survey sets forth the apparent condition and value of the vessel to the best of the surveyor's ability without borings, removal of bulkheads, paneling, or ceilings; without opening tanks or climbing masts, and without the operation or opening of her machinery, auxiliaries or electronics. It represents the surveyor's honest and unbiased opinion.
2. No evaluation was made of the vessel's stability.
3. Measurements and capacities were taken from the vessel's documents.
4. This survey is not an evaluation of compliance with OSHA or Alaska Dept. of Environmental Conservation requirements.
5. The vessel was appraised without knowledge or acknowledgement of any debt, encumbrances, mortgages or special liens.
6. By accepting this survey, all parties acknowledge that its accuracy is not guaranteed, and that it does not create any liability on the part of the surveyor for any situation arising out of reliance on information in the survey. No responsibility is assumed by Fishermen's Maritime Services, Inc. or the undersigned surveyor for any unknown present or latent defects of any nature that could affect vessels value or suitability for service.
7. This report was prepared for the vessel owners, as noted herein, in order to provide an opinion of value under an assumed set of circumstances as requested and by mutually agreement.
8. This report was produced by Fishermen's Maritime Services, Inc. and is considered confidential. Copies of this report must not be made available to other parties unless with prior consent from the vessel owners.

This survey is submitted without prejudice.

Date of Report: June 20, 2019

  
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Erling E. Jacobsen, Principal Surveyor