

R/V SEWARD JOHNSON



R/V SEWARD JOHNSON, namesake of HARBOR BRANCH founder J. Seward Johnson, Sr., is a 204 foot oceanographic and submersible-support research vessel that was built in 1984, commissioned in 1985 and extensively rebuilt and stretched in 1994. With an 6,000 nautical mile range and cruising speed of 12 knots, the vessel is capable of traveling and working in any of the world's oceans while accommodating up to 40 people.

R/V SEWARD JOHNSON is one of three HARBOR BRANCH-owned research vessels that are operated by experienced personnel, expert in surface oceanographic procedures and submersible vehicle launch and recovery supported by in-house ocean engineers. With 360 degree bow and stern thrusters, twin propellers and rudders, dynamic positioning and state-of-the-art precision navigation, this vessel has the capability to maneuver and position easily and efficiently and station-keep with the accuracy required by today's undersea and oceanographic research missions. R/V SEWARD JOHNSON is part of the University-National Oceanographic Laboratory System (UNOLS) fleet.

Typical applications include submersible/ROV support, large towed systems support, deployment and retrieval of moored devices, surface oceanographic/hydrographic applications, and diving support.

Length Overall	204 feet	Fuel Consumption	70 gal./hour, normal cruise
Length between perpendiculars	183 feet	Potable Water	18,000 Gal. With RO Unit (4,000 gal./day)
Beam, Overall	36 feet	Galley Messing	14
Draft	12 feet	Speed	12 knots
Displacement (weight)		Range	6,000 nautical miles
Nominal Full Load	1,282 Tons	Year Built/Converted	1984/1994
Gross Tonnage	285 GRT		
Fuel Capacity	63,000 Gal.		

HARBOR BRANCH HAS A SPECIAL FLEET TO MEET YOUR NEEDS

Owned and Operated by HARBOR BRANCH Oceanographic Institution, Inc.

Contact Director, Marine Operations – 561-465-2400 ext. 262/271

FAX – 561-465-2116

<http://www.hboi.edu>

Classification:

American Bureau of Shipping: Hull and Machinery

Normal Complement:

11 ship's crew
29 other (including technicians & sub crew, if required)

Berthing Accommodations:

40 air conditioned berths

Propulsion:

(2) Caterpillar 3512 TI engines, 850 hp @ 1200 rpm each driving fixed-pitch props through Lufkin reverse-reduction gearboxes.

Bow and Stern Thrusters and Dynamic Positioning:

(2) 360° Rotatable Elliott White-Gill 32 T3 Thrusters, 7,000 lbs. thrust each, powered by General Electric 325 hp DC/SCR-drive motors
Simrad/Robertson Dynamic Positioning System/Autopilot with position and attitude hold on submersible vehicle or pinger, wind direction or Differential GPS fix.

Generators:

(3) 295 kw. Generators driven by Cat. 3406 engines 480v, 3ph, 60hz
(1) 110 kw. Emergency set driven by Cat. 3304 engine (with auto-starting)

Flume anti-roll tank, capacity 15,000 gallons

Navigation Equipment:

Integrated Mission Profiler/Navigation System on stand-alone IBM PC or in conjunction with mainframe/server system; provides differential GPS track for ship and any submersible vehicles deployed.
Sperry Mark 37 Gyrocompass (stepper output)-on bridge
Sperry Mark 37 Gyrocompass (synchro output)-in Data Acquisition/ROV Lab.
Magnetic Compass with sensor pick-up
Raytheon Pathfinder ST A.R.P.A. S-band (10 cm) Radar
(2) Magnavox MX300 DGPS sets
(1) Magnavox MX200 (differential) GPS set
Sperry SRD 331 Doppler Speed/Distance Log
Raytheon Pathfinder ST Alpha X band 3cm Radar

Communications Equipment:

NERA Satellite Communications System (with Inmarsat "B" voice, fax, data)
Inmarsat "C" (data only)
Harris – RF 230M SSB HF transceiver
SEA 330 SSB HF transceiver
NECODE Model 321 AR selcall system
(2) bridge-to-bridge radiotelephones
(5) hand-held VHF radiotelephones
Intra-ship PBX type telephone and intercom system
Sound-powered telephone system
NAVTEX receiver
Cortex Weatherfax for Windows
Simrad model 1550 VHF – ADF
Seanet Computer/Satellite Data Terminal

Acoustical and Sounding Systems:

ORE-Trackpoint Model 4410C Acoustic Position System
Straza UQC Model ATM 504-15/TIP underwater telephone/transponder
Simrad EQ50 video echosounder, dual frequency 38-50 kHz
Data Marine 1000 digital depth finder
12 kHz transducer (for PDR)
3.5 kHz transducer (for sub-bottom profiler)
RDI 150, 600, 38 kHz ADCP

Computer and Data Processing:

Network server computers with multiple remote terminals
Mission-required PC computers at various points throughout ship
Ethernet LAN
Fibre-optic LAN
Video/coax inter-lab distribution

Deck Equipment:

A-frame on stern, 18 ton capacity (ABS certified) for towed systems or submersible vehicles
A-frame on side, with forward (1.5 tons), center (10 tons) and after (5 tons) lift points
Appleton crane, 10 ton capacity @ 38 foot outreach
Appleton lightweight crane 3.5 ton capacity with 21 ft outreach, installed if required
(2) capstans at stern
New England Trawler anchor windlass (2) anchors and (2) rope heads at bow
Various trawl, hydrographic, conductor, CTD and constant tension tow winches available
Various small boats available

Laboratories:

Dry Lab (468 sq. ft.)
Wet Lab (288 sq. ft.)
Environmental Lab (85 sq. ft.)
Mechanical Maintenance, with mill drill, lathe, sander band saw, vise, etc. (272 sq. ft.)
Electronics Lab, with test equipment, spares, etc. (224 sq. ft.)
Video & Computer Lab (136 sq. ft.)
Data Acquisition and R.O.V. Lab (152 sq. ft.)
Briefing room with 27" monitor, stereo (192 sq. ft.)
Compressor room with two Mako 5000 PSI compressor: McElroy 90 cu. ft./min @ 150 PSI Ship's Compressor 208v. 1ph. 60 hz. and UPS receptacles available in labs
Haskell Oxygen and Helium pumps
Mako air filters, four T-cylinders (scuba air bank) and 12,000 cu. ft. air and oxygen storage.

Optional Mission Support Equipment:

Seabird 911CTD/Carousel
MOCNESS (1 meter or 10 meter)
Real-time, continuous flow uncontaminated seawater sampling system with fluorometry, salinity and temperature measurements with supply of product to the laboratory:
Complete meteorological sensor and data logging system wet and dry bulb temps., rel. humidity, heat index, true relative wind, position, wind chill, solar radiation.

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