

PATROL/INTERCEPTOR VESSEL PROCUREMENT – RBR COAST GUARD – RBRCG2026

(ANNEX G) - SHIPPING/DELIVERY/COMMISSIONING/FAT, HAT, SAT

1.1 General Delivery Requirements

1.1.1 The Proponent shall be responsible for delivering the Vessel to Bermuda in fully operational condition.

1.1.2 All transportation, packaging, insurance, and logistics costs shall be included in the Proponent's bid.

1.1.3 The Vessel shall be shipped in a manner that prevents structural damage, corrosion, or equipment failure during transit.

1.2 Shipping Requirements

1.2.1 The Vessel will be shipped:

- a. On a trailer,
- b. As deck cargo on a commercial ship.

1.2.2 The Vessel shall be shrink-wrapped or otherwise protected from salt spray and environmental exposure during transit.

1.2.3 All loose equipment shall be labelled, packaged securely, and documented.

1.2.4 Electrical power systems shall be isolated for shipping.

1.2.5 Fuel tanks shall be secured and partially filled per shipping regulations.

1.3 Insurance

1.3.1 The Proponent shall provide full maritime insurance coverage for the Vessel from shipment departure until arrival and offloading in Bermuda.

1.3.2 Insurance shall cover:

- a. Loss,
- b. Damage,
- c. Theft,
- d. Marine transit risks.

2.1 Delivery to Bermuda

2.1.1 Upon arrival to Bermuda, the RBRCG shall oversee the unloading and delivery of the Vessel to the RBRCG facility.

2.1.2 The Proponent shall oversee:

- a. Inspection of shipping condition,
- b. Removal of protective wrappings,
- c. Preparation for Harbour Acceptance Trials (HAT).

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2.1.3 The Proponent shall notify RBRCG at least 14 days in advance of the Vessel's arrival.

3.1 On-Island Commissioning

3.1.1 The Proponent shall complete all commissioning tasks in Bermuda, including:

- a. Reassembly of dismounted components,
- b. Electronics recommissioning,
- c. Network configuration (NMEA 2000/Ethernet),
- d. Engine startup checks,
- e. Charging system checks,
- f. Steering system checks,
- g. Safety equipment installation verification.

3.1.2 Commissioning shall be documented and signed off by RBRCG before HAT begins.

3.2 Post-Delivery Support

3.2.1 The Proponent shall provide on-island technical support during HAT and SAT.

3.2.2 A minimum of two (2) Proponent technicians shall be available for troubleshooting and corrective actions.

3.2.3 If deficiencies are found, the Proponent shall correct them at no additional cost to RBRCG.

4.1 General Requirements

4.1.1 The Proponent shall conduct Factory Acceptance Testing (FAT) prior to shipment of the Vessel.

4.1.2 FAT shall verify that all systems, equipment, and components meet the specifications outlined in the RFP.

4.1.3 FAT shall be performed at the Proponent's facility in the presence of RBRCG representatives (in person or via video inspection at RBRCG's discretion).

4.2 FAT Procedures

4.2.1 At minimum, FAT shall include:

- a. Structural inspection of hull and deck,
- b. Verification of welding and fabrication quality,
- c. Inspection of console layout and ergonomics,
- d. Inspection of steering system,
- e. Engine rigging inspection,
- f. Verification of electrical installations,
- g. Verification of all navigation and communications wiring,

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- h. Dry testing of electronics (power-up tests),
- i. Verification of communication installations,
- j. Evaluation of workmanship and cleanliness,
- k. Confirmation of installed mission and safety equipment.

4.3 Documentation Requirements

4.3.1 Proponent shall provide RBRCG with a full FAT checklist outlining:

- a. Tests performed,
- b. Acceptance criteria,
- c. Results,
- d. Observed deficiencies,
- e. Corrective actions taken.

4.3.2 FAT documentation shall be submitted to RBRCG before the Vessel is approved for shipment.

4.4 FAT Deficiencies

4.4.1 Any deficiencies identified during FAT shall be corrected at the Proponent 's expense.

4.4.2 Corrective actions must be documented and verified by RBRCG.

4.4.3 RBRCG reserves the right to require re-testing of any systems following corrective actions.

HARBOUR ACCEPTANCE TRIALS (HAT)

5.1 General Requirements

5.1.1 Following delivery to Bermuda, the Vessel shall undergo Harbour Acceptance Trials (HAT) to verify proper installation, integration, and function of all systems while the Vessel is dockside or operating at low speed.

5.1.2 HAT shall be conducted jointly by the Proponent and the RBRCG.

5.1.3 The Vessel shall not proceed to Sea Acceptance Trials (SAT) until HAT is successfully completed.

5.2 HAT Evaluation Areas

5.2.1 HAT shall include inspections and tests of the following:

- a. Electrical Systems
 - i. Verification of DC and AC electrical functions,
 - ii. Shore power and inverter operation,
 - iii. Circuit breaker and fuse panel checks,
 - iv. Battery charging performance.

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b. Navigation & Electronics

- i. MFD power-up and functionality,
- ii. Radar, sonar, AIS, GPS operation,
- iii. Heading sensor calibration,
- iv. FLIR imaging and control functions,
- v. DVR recording and playback,
- vi. Live streaming function.

c. Communications Systems

- i. VHF radio transmit/receive tests,
- ii. UHF radio transmit/receive tests,
- iii. SSB radio transmit/receive tests,
- iv. AIRBAND radio transmit/receive tests,
- v. SIS communications transmit/receive tests,
- vi. Digital Intercom System tests.

d. Mechanical & Structural Review

- i. Inspection of steering system,
- ii. Engine start-up/running tests,
- iii. Deck drainage and bilge system tests,
- iv. Hull, welds, and compartment integrity check.

e. Safety Equipment Verification

- i. Life raft in cradle,
- ii. EPIRB and PLB installation,
- iii. First aid kit (FAK451) mounting,
- iv. Fire extinguisher placement,
- v. MOB equipment.

5.3 Documentation Requirements

5.3.1 The Proponent shall provide a HAT checklist for review and approval by RBRCG.

5.3.2 Any deficiencies discovered shall be listed, corrected, and re-inspected.

5.3.3 HAT results must be approved by RBRCG before the Vessel may proceed to SAT.

5.4 HAT Deficiencies

5.4.1 All deficiencies identified during HAT shall be corrected at the Proponent's expense.

5.4.2 RBRCG may require retesting of any system not meeting specified standards.

5.4.3 Unresolved deficiencies are grounds for delaying acceptance and payment milestones.

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SEA ACCEPTANCE TRIALS

6.1 General Requirements

6.1.1 Upon successful completion of HAT the Vessel shall undergo Sea Acceptance Trials (SAT) in open water.

6.1.2 SAT shall verify full operational capability under realistic conditions, including speed, maneuverability, electronics performance, and mission system functionality.

6.1.3 SAT shall be conducted jointly by the Proponent and RBRCG representatives.

6.1.4 The RBRCG shall supply all fuel, lubricants, and crew required for SAT.

6.2 SAT Performance Requirements

6.2.1 The Vessel shall demonstrate:

- a. Top speed ≥ 50 knots, fully loaded,
- b. Cruise speed between 25–30 knots,
- c. Acceleration suitable for interdiction operations,
- d. Stable handling in turns and during rapid course changes.

6.3 SAT Maneuvering Tests

6.3.1 Tests shall include:

- a. Slow-speed manoeuvring,
- b. High-speed turns,
- c. Crash-stop from planning speed,
- d. Figure-eight manoeuvre,
- e. Station-keeping,
- f. Reverse thrust performance.

6.3.2 Steering must remain responsive with no cavitation or instability.

6.4 SAT Systems Testing

6.4.1 Navigation systems:

- a. Radar range and target discrimination,
- b. Chartplotter accuracy,
- c. Sonar clarity at various speeds,
- d. AIS transmit/receive,
- e. GPS fix stability,
- f. Heading sensor accuracy.

6.4.2 Communications systems:

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- a. VHF radio functions at various distances,
- b. SSB capability check,
- c. Airband capability check,
- d. UHF Sepura system confirmation,
- e. SIS capability check.

6.4.3 Thermal & visual systems:

- a. Image stability,
- b. Joystick camera control,
- c. Thermal, lowlight, and Sport light tests,
- d. DVR recording validation.

6.4.4 Electrical systems:

- a. Charging system performance,
- b. Inverter load testing,
- c. Shore power testing,
- d. Lighting systems (nav, deck, red-light mode, blue emergency lighting).

6.4.5 Machinery:

- a. Engine RPM range and performance,
- b. Fuel consumption measurements,
- c. Vibration and noise assessment,
- d. Rigging inspection underway.

6.5 SAT Documentation Requirements

6.5.1 Proponent shall provide RBRCG with a SAT results package including:

- a. Test procedures,
- b. Actual performance values,
- c. Pass/fail results,
- d. Any corrective actions taken.

6.5.2 SAT documentation must be approved by RBRCG before final acceptance of the Vessel.

6.6 SAT Deficiencies

6.6.1 Any deficiencies identified shall be corrected at the Proponent's expense.

6.6.2 If corrections materially affect performance, RBRCG may require additional SAT testing.

6.6.3 Final acceptance of the Vessel is contingent upon complete SAT compliance.