

SEA STATE

The sea state will be assessed against NATO STANAG 4149 Table F-1.

TABLE F-1 – NATO SEA STATE NUMERAL TABLE FOR THE OPEN OCEAN NORTH ATLANTIC

| Sea State Number | Significant Wave Height (m) | | Sustained Wind Speed (Knots)* | | Percentage Probability of Sea State | Model Wave Period (sec) | |
|------------------|-----------------------------|------|-------------------------------|------|-------------------------------------|-------------------------|------------------|
| | Range | Mean | Range | Mean | | Range** | Most Probable*** |
| 0 - 1 | 0 - 0.1 | 0.05 | 0 - 6 | 0.5 | 0 | — | — |
| 2 | 0.1 - 0.5 | 0.3 | 7 - 10 | 3.5 | 7.2 | 3.3 - 12.8 | 7.6 |
| 3 | 0.5 - 1.25 | 0.88 | 11 - 16 | 8.5 | 22.4 | 5.0 - 14.8 | 7.5 |
| 4 | 1.25 - 2.5 | 1.88 | 17 - 21 | 19 | 28.7 | 6.1 - 15.2 | 8.8 |
| 5 | 2.5 - 4 | 3.25 | 22 - 27 | 24.5 | 15.5 | 8.3 - 15.5 | 9.7 |
| 6 | 4 - 6 | 5 | 28 - 47 | 37.5 | 18.7 | 9.8 - 16.2 | 12.4 |
| 7 | 6 - 9 | 7.5 | 48 - 55 | 51.5 | 6.1 | 11.8 - 18.5 | 15.0 |
| 8 | 9 - 14 | 11.5 | 56 - 63 | 59.5 | 1.2 | 14.2 - 18.6 | 16.4 |
| >8 | >14 | >14 | >63 | >63 | <0.05 | 15.7 - 23.7 | 20.0 |

* Ambient wind sustained at 19.5 m above surface to generate fully-developed seas. To convert to another altitude, H_2 , apply $V_2 = V_1 (H_2/19.5)^{1/7}$

** Minimum is 5 percentile and maximum is 95 percentile for periods given wave height range.

*** Based on periods associated with central frequencies included in Hindcast Climatology.

BRd6600 – Royal Marines Landing Craft & Small Boat Operations Table 4-3, usefully adds descriptive terms to the sea state figures.

Table 4-3. Maritime Forecast Sea State Code

| STATE OF SEA CODE FIGURE | DESCRIPTIVE TERMS | METRES | HEIGHT* FEET (APPROX) | |
|-----------------------------|-------------------|----------|--------------------------|---|
| 0 | CALM (GLASSY) | 0 | 0 | * The average wave height as obtained from the larger well formed wave of the wave system being observed. |
| 1 | CALM (RIPPLED) | 0-0.1 | 0-1/3 | |
| 2 | SMOOTH (WAVELETS) | 0.1-0.5 | 1/3-12/3 | |
| 3 | SLIGHT | 0.5-1.25 | 12/3-4 | |
| 4 | MODERATE | 1.25-2.5 | 4-8 | Note. The exact bounding height is to be assigned to the lower code figure e.g. a height of 4 metres is coded as 5. |
| 5 | ROUGH | 2.5-4 | 8-13 | |
| 6 | VERY ROUGH | 4-6 | 13-20 | |
| 7 | HIGH | 6-9 | 20-30 | |
| 8 | VERY HIGH | 9-14 | 30-45 | |
| 9 | PHENOMENAL | OVER 14 | OVER 45 | |

| | | |
|---------------------------------|---------------------------------|-------------------|
| Survey and Trials form 2A | HARBOUR ACCEPTANCE TRIAL | V 1.0 16/10/23 |
|---------------------------------|---------------------------------|-------------------|

HARBOUR ACCEPTANCE TRIAL

The craft Harbour Acceptance Trial must be conducted iaw the craft's BR pre-sailing checks. The following lists highlights relevant areas to check.

| | | |
|---|---|--|
| Hull. | Visual inspection. Check for any sign of damage. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Collar. | Visual inspection. Check the collar is not damaged and secure to the hull. For RIB floatation collars check it is evenly inflated. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Deck. | Visual inspection. Check for damage. Ensure deck is clear and miscellaneous items are stowed away. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Lifting points. | Visual inspection. Check for damage. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Consoles. | Visual inspection. Check console secure to deck and free from damage. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Seating. | Visual inspection. Check seats are securely fixed to the deck. Check condition of foot straps where fitted. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Hatches. | Visual and functional inspection. Check they are functional and are secure. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Fire Fighting. | Visual inspection. Check fire alarm system is undamaged and operational. Check fixed and portable fire extinguishers are in date and undamaged. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Bilges. | Visual inspection. Confirm areas clean and free from debris and liquid. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Bilge System. | Visual and functional checks iaw BR. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Fuel and oil systems. | Visual inspection and functional checks iaw BR. Confirm hose fittings and pipework secure. Check for contamination in tanks and filters. Confirm fuel volume carried meets requirement for the trial. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Engines & Gearbox. | Visual inspection and functional checks iaw BR. Confirm in good condition, equipment is secure, and oils topped up as required. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Engine controls and instrumentation. | Visual inspection and functional checks iaw BR. Confirm correct operation of the controls. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Steering. | Visual inspection and functional checks iaw BR. Check that the steering is unobstructed and free to move from hard over port to hard over starboard. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Electrical System. | Visual inspection. Ensure all cabling correctly secured and terminated. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Batteries. | Visual inspection. Check for any signs of damage and loose terminals. Confirm batteries are securely tied down. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Navigation lights. | Visual and function inspection. Check for damage and confirm all functioning correctly. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Compass. | Confirm compass swings completed, deviation card provided. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Navigation system. | Visual inspection and functional checks. Confirm latest charts loaded on chart plotters. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |

| | | |
|-----------------------------------|---|--|
| Communications - External | Visual inspection and functional checks of fixed and portable communication equipment. Confirm operating channels and power settings for intended transmission range. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Communications - Internal. | Visual inspection and functional checks of internal communication system. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Mast and antennas. | Visual inspection. Check for damage to mast and antennas. Confirm all antennas secured. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |

MISCELLANEOUS EQUIPMENT

The craft iaw its relevant BR must carry emergency and repair equipment. The following list highlights the equipment that should be carried. Confirmation of the full list must be made with reference to the craft BR.

| | |
|--|--|
| Fire extinguishers x2. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Paddles. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Inflation bellows. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Sea anchor and warp. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Hand-held searchlight/signalling lantern. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Compass. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Mooring warps. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Collar repair kit. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Bilge pump handle. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Emergency steering tiller. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Emergency inflation bladders (2 off). | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Rescue throwing lines (2 off). | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Lanyard for Deadman's Switch. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Radar reflector. | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| First aid kit in waterproof case (must reseal after use) | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Rescue flares | Yes <input type="checkbox"/> / No <input type="checkbox"/> |

LIFE JACKETS, PPE AND SAFETY

| | |
|---|--|
| Confirm the following: | |
| Life Jackets. (Confirm all PAX are supplied and wearing appropriate size, type and in-service dated maintained life jackets) | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| PPE. (Confirm all PAX are aware of the environmental conditions of the trial and wearing appropriate PPE ie Eye protection, & clothing appropriate for weather conditions) | Yes <input type="checkbox"/> / No <input type="checkbox"/> |
| Safety Brief. (Confirm all PAX are briefed on the trial conduct and personal safety (WBV) guidance.) | Yes <input type="checkbox"/> / No <input type="checkbox"/> |

PAX ON BOARD

A nominal of those on board the trials craft is to be taken and details held at the trials host base.

| Role | Names |
|---|-------|
| Coxswain: | |
| Second Coxswain/Crew: | |
| MOD/PDH representative: | |
| Contractor support representative / engineer: | |
| Visitors: | |

SEA ACCEPTANCE TRIAL

| | | | | | | | |
|---|--------------|-----------------------|-----------------|--|-------------|-----------------------|-------|
| Survey and Trials form 2A | | Speed Trial | | | | V 1.0 16/10/23 | |
| Boat Type: | | Boat Number: | | | Trial Date: | | |
| Trials Location: | | | | | | | |
| Sea State: | | Wind Force: | Wind Direction: | Air Temperature (°C): | | Sea Temperature (°C): | |
| Craft loaded condition: | | Weight of craft (Kg): | | Ballast added (Kg): Type of ballast: | | Fuel (ltr): | |
| Time trial started: | | | | Time trial finished: | | | |
| | | | | | | | |
| <p>Craft engines are to be run in and at operating temperature. The craft is to accelerate up to its speed. The craft is to maintain its maximum speed for a 1nm distance. (Distance to be established using measured mile markers or GPS chart plotters.) The craft is to conduct a total of 3 runs sailing a 1nm transit in to the sea and 3 runs sailing a 1nm transit with the sea. The time to complete each run is to be recorded. The average speed of the craft is to be calculated from the recorded data.</p> | | | | | | | |
| Engine 1 = Single or Port Engine. Engine 2 = STBD Engine | | Trial Runs | | | | | |
| | | Run 1 | Run2 | Run 3 | Run 4 | Run 5 | Run 6 |
| Engine 1 | RPM | | | | | | |
| | Oil (BAR) | | | | | | |
| | FW Temp (°C) | | | | | | |
| Engine 2 | RPM | | | | | | |
| | Oil (BAR) | | | | | | |
| | FW Temp (°C) | | | | | | |
| Time to complete the run (seconds) | | | | | | | |
| Average Speed (knots) | | | | | | | |
| Average speed of Runs 1-6 (knots) | | | | | | | |
| Did the trial speed recorded meet the craft requirements as detailed in the craft's BR | | | | Yes <input type="checkbox"/> / No <input type="checkbox"/> | | | |