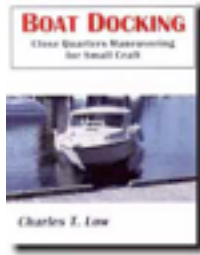


Boat Lists

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ctLow's Boat Lists

1/ - Leaving Dock

- empty bladder(s)
- canvas down
- lifejackets on/out - whistles worn
- boathook/rescue aids/charts out
- sun block
- battery(s) on 'ONE'
- fume detector on - check fire extinguishers
- stow supplies & baggage
- fridge on and adjusted/icebox cooling
- sufficient fuel/oil/water/cooking fuel/holding
- phone/VHF/GPS connected & on
- doors/hatches/portholes/windows adjusted & secured
- seacock(s) open
- flags up
- *** shore power disconnected ***
- *** blower on ***
- swim ladder up
- outdrive(s) down
- *** start engine(s) ***
- check gauges
- warm engine(s)
- passenger check
- get stepping stool
- adjust battery switch(es) as desired
- test transmission and steering
- check for clear egress
- *** cast off ***
- stow lines/fenders up
- blower off - drain bilges

2/ - Arriving at Dock

- ready fenders/lines/boathook(s) (outdrive raised)
- test transmission and steerage
- estimate course and ranges
- scan for traffic
- adjust mental state
- coordinate crew
- **pray!**

3/ - Heavy Weather

- seek shelter when feasible
- reduce speed/lifejackets on
- organize crew
- batten down hatches & loose gear/secure doors
- take bearings
- check eqpt. (bilge pumps, steerage/throttles, sound signals, flares)
- consider: reporting in - running lights - preparing nourishment

4/ - Departing the Boat

- stow cockpit equipment - tidy, pack up supplies
- secure doors/hatch/windows/fridge
- flags down/cover boat
- check fridge
- check lines & fenders, anchor & line, dinghy
- head - on dry - shocked
- seacock(s) closed
- turn off:
 - lights/fridge/panel switches
 - helm switches/battery switches
 - spot light
 - heater
- connect and check shore-power
- check AC charger
- ventilate interior
- complete ship's log
- empty garbage

5/ - Refuelling

- securely moored/engine off
- no flame/electronics all off
- close ports/hatches
- passengers ashore
- fuel quantity estimated/nozzle grounded
- *** fill ***
- wipe up spills
- test for vapour (electronic and biologic sniffers!)
- **blower on**
- open ports/hatches
- start engine - passengers re-embark

6/ - Departing Home

- **boat keys!!**
- telephone & accessories
- food, drink, dishes
- photo gear - still (tripod)/video
- clothing - warm/dry/extra/sleeping/swimming/towels/hat, sunglasses
- bedding/pillows/toiletries
- reading, music! (computer!!!)
- (for air-travel: earphones, neck-pillow/travel-pillow, reusable bags, computer/memory-card-reader)
- (sometimes: US dollars; subway tokens)
- medications

7/ - Anchoring and Mooring

- remove keys/adjust battery switches
- depth gauge/fume detector off
- adjust fridge
- adjust fenders

8/ - Information for Guests

- Only two rules:
 - Number Two: have as much **fun** as possible at all times, except that:
 - Number One: **safety is always the first priority.**
- Everything else flows from these.
- Things often happen quickly on boats: kindly **follow the skipper's "orders"** first and find out why later; you just have to trust (and say, "Aye-aye, Captain")!
- Apart from that, if you have questions: **ask!**
- Always keep all body parts out from between the boat and anything else; protecting the boat is not worth the serious risk of personal injury.
- Always **step** on and off the boat - no jumping!
- A boat can move unexpectedly and violently. Always be ready to steady yourself. In whatever you do: one hand for yourself, one for the boat.
- If the thought crosses your mind than perhaps you would be safer, doing whatever you're doing, with a PFD on, then **put a PFD on!**
- **Learn the location of the PFD's.** (Fire extinguishers and life ring too.)
- **Lines** (a.k.a. "ropes" for landlubbers): generally a line is much easier to handle if you simply *take a turn* around a cleat or piling, rather than holding it freehand. There are several useful things you can do with a line:
 1. pull it in;
 2. *ease* it (i.e. let it out a bit);
 3. *snub* it (i.e. take a turn or two around a cleat or piling, then apply some tension to stop it from sliding);
 4. *secure* or *cleat* it (i.e. tie a knot so that it stays put - let the skipper show you, the first time, a good, non-slipping but quick-release knot).
- A few other useful nautical terms to learn:
 1. directions: **fore and aft, port and starboard, ahead, astern and abeam;**
 2. locations: **cockpit, cabin, companionway, foredeck, bow, transom, quarter.**
- Use as little of the boats tanked water as possible, and
- learn how operate the head ("toilet") before using - and then flush as little as possible, but *enough*.
- Tidiness matters in a small space - please keep all of your belongings together and preferably stowed in your luggage when not in use.

9/ - A few useful formulas and rules of thumb

- **hull speed**, in knots, from waterline length:
 $s = K * \text{SQR}(\text{length})$
 - if length is in feet, $K = 1.34$
 - in metres, $K = 2.43$
- **distance to horizon**, in nautical miles, from height of eye:
 $d = K * \text{SQR}(h)$
 - if h is in feet, $K = 1.17$
 - in metres, $K = 2.1$

- **distance from measured angle**, in nautical miles, from minutes of arc:
 $d = K * h / \text{angle}$
 - if h is in feet, $K = 0.56$
 - in metres, $K = 1.85$
- **dip to horizon**, in minutes of arc, from height of eye:
 $\text{dip} = K * \text{SQR}(H.E.)$
 - if H.E. is in feet, $K = -0.97$
 - in metres, $K = -1.76$
- **echoes**, from time in seconds:
 $d = K * \text{time}$
 - if d is in feet, $K = 550$
 - in metres, $K = 167$
 - in nautical miles, $K = 0.1$
- **speed of current**, in knots, from boat speed (up- and downstream) in knots:
 $S_c = S_b * (t_u - t_d) / (t_u + t_d)$
- **distance off formulas:**
 - doubling angle on bow:
distance at second angle equals distance run between the two angles (bow and beam bearing being a simple example)
 - 7/10 Rule:
distance travelled between 22.5° & 45° equals 10/7's of distance off when abeam
 - 26.5/45 Rule:
distance run between these angles equals distance off when abeam
- **useful approximations:**
 - **1 thumb's width** (at arm's length) = visual angle of 1.5°
 - **1 fist-width** (from thumb to little finger knuckles) = visual angle of 10°
 - **3 horizontal fingers** (at arm's length) = distance 10 times the charted height
 - a **small buoy will be visible** at 1.5 miles, its **colour and shape** at 1 mile
 - a **moving person looks like a limbless black dot** at a distance of 1 mile
 - **faces without features** can be seen at a distance of 300 metres
 - **shore visible** at 4 miles
 - **building windows visible** at 2 miles

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