



# MANAGEMENT SYSTEM MANUAL

## ARM 6.4 – R/V ARMSTRONG SMALL BOAT OPERATIONS

Originator:

Kent Sheasley

Approved By:

Al Suchy

### 1. Purpose

The purpose of this procedure is to set forth the standards for small boat operations and the qualifications for a small boat operator. These guidelines shall be used while operating the small boats on board the R/V Armstrong.

It should be understood that the safe operation of small boats is a top priority. Having quality small boats and qualified operators are assets to the vessel. They are assets, however, only as long as they are operated safely.

Items to be considered at all times will be “safe speed”, the readiness and experience of all other occupants of the small boat, sea state and wind, and the particular requirements of the job at hand.

### 2. Responsibility

All small boat operations are conducted at the discretion of the Master. Such discretion is obtained through the Mate on watch. The Bosun, a Mate or a qualified AB will direct the launch of the small boat.

The small boat operator is in charge of all aspects of the small boat while it is underway. The small boat operator is responsible for the safe and proper operation of the small boat under his/her control. Only those crewmembers with the training designator “Small Boat Operator” will be assigned as a small boat operator.

### 3. General

#### A. Pre-launch:

Before the small boat is removed from the cradle, the operator will remove the boat cover and begin an inspection and pre-launch check of the boat and equipment. This could include adding air to the pontoons (if required), checking gas supply, checking steering and throttle functions, as well as examining any other equipment as required.

The Bosun, Mate, or qualified AB in charge of launching the small boat will ensure that adequate personnel are available to handle tag lines and run the crane.

When all hands are ready, the small boat will be swung out from the cradle to outboard of the bulwarks. At all times tag lines will be tended to control the boat from excessive swinging. Once the boat is against the bulwarks, the crane will be swung inboard to keep the boat firmly held against the side of the bulwarks as the ship rolls.

At this time, the operator will don a work vest and hardhat before entering the boat, and continue systems checks before starting the engine. Note that all passengers will



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be required to wear work vests and must have them on before going down the embarkation ladder.

### B. Engine Start up:

Follow manufacturer's recommended start up procedure. Using the cooling water adapter attached to the end of the deck hose, make sure that water is being pumped out of the engine cooling water "tell tale" on the back of the engine after start up. If water is not visible after several seconds, SHUT DOWN THE ENGINE and call an engineer. Do not rev the engine excessively during warm up.

After approximately five minutes of warm up, shut down the engine and secure the cooling hose. Using a VHF radio, pass the word to the bridge that you are ready and standing by to launch.

### C. Launch

When it is time to launch the boat, the bridge will notify the small boat by a single blast on the ship's whistle and/or confirm by VHF radio. The ship will make a lee to assist in the launch process, if necessary. The Bosun/Mate/AB shall ensure that the boat operator, line handlers and crane operator are ready. When they are ready, the Bosun/Mate/AB will instruct the crane operator to swing out and lower away. The boat operator will be in a braced and upright position, wearing a hardhat, with one hand on the boat sling and the other on the crane hook. At the first opportunity when the boat is lowered on to the swells, the crane hook will be unhooked. When it is, the Bosun/Mate/AB will lift the crane whip clear and out of the way of the boat operator and secure the crane.

### D. Tending The Boat While Alongside

When the small boat is alongside, it will become apparent that line-handlers can either be of great help or present a hazard. On several occasions while tending small boats, line handlers have both secured their lines only to have the swell drop away from under the boat jerking the boat suddenly and tossing the occupants about.

The objective of handling bow and stern lines while the boat is alongside is to continually have the boat return to a position under the embarkation ladder with each passing swell while passengers embark or to keep the boat in a position to be recovered if needed in the event of engine malfunction. It has been noted above that we do not expect to be able to secure both lines and walk away. The following are a few general guidelines.

1. In general the bowline is the control line. Sea and swell will for the most part be coming from the bow of the ship towards the stern. The bowline will be used to



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measure the right distance needed to return the boat to a position under the ladder with each passing swell. Once this distance is gauged, the bowline should be held with several figure 8's on the cleat and tended only as needed in the case of larger swells. Remember that if you pay out too much slack, the boat will drift back past the ladder, requiring the boat operator to engage the engine and drive back into position, as it will be difficult to pull the boat back into position by hand.

2. The stern line on the other hand should be held with only one round turn or half of a figure 8 on the cleat, and continually hauled in and slacked off with each passing swell to achieve the most control without jarring the boat and its occupants.
3. Once the engine is started and the boat is tended under the embarkation ladder, the operator will call for passengers to embark, or will call the line handlers to pass down stern line (first under most circumstances) and then the bowline. The line handler shall try to partially coil the line and toss it in the direction of the operator for the best chance to get control of the bow and stern lines so they can be secured quickly before the small boat departs the side of the ship.

### E. Underway Guidelines

Underway operations require a combination of skill and common sense. The operator is in charge and is responsible for the safety of all hands in the boat, as well as avoiding damage to the boat and associated gear.

Once the boat is away from the side of the ship, it should be hove to for several minutes to properly secure the bow and stern line. Do not drive over your own docking lines. Next, the operator shall make sure that any passengers are positioned in the boat in such a way that they are not blocking the operator's view, are not all on one side so as to affect the way the boat handles and are securely positioned to avoid falling while the boat is underway.

### F. Returning To The Vessel

Before returning to the vessel, an assessment will be made by all hands in the boat.

1. Prepare the bow and stern line in a small diameter coil, split that coil in half, and have it ready to throw to the line handlers on the deck of the ship.
2. Make sure the lifting bridle is free and clear to be used when needed alongside.
3. Radio the ship and inform them you are ready to come alongside. Expect the ship to take several minutes to give you a lee, sheltering you from wind, sea and swells if necessary.
4. When coming alongside gauge your speed to safely heave to under the embarkation ladder. The engine may need to be kept in gear for a few moments



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until the bow line is secure and tended on a cleat. Note: do not come alongside if the deck crew is not ready. This should be visually apparent.

5. When the bowline is passed and secure, and the stern line passed and tended, check to see that the boat is properly lined up under the embarkation ladder. If not, instruct the line handlers to make adjustments. If the boat needs to go aft have the bowline slacked off and stern line taken in as needed. If the boat needs to go forward, put the boat in gear and slowly move forward, as the stern line is slacked and the bow line taken in. When satisfied that the boat is in a good position, pass the word that passengers may disembark. **NO ONE IS TO DISEMBARK WITHOUT WORD FROM THE BOAT OPERATOR.** It is the job of the bosun/mate/AB to ensure that the embarkation ladder is secure and ready for use at all times during boat operations.
6. Once passengers if any are disembarked, prepare for boat recovery.

### G. Boat Recovery

Boat recovery involves coordination between deck personnel and the boat operator. As with launching the boat, the boat operator, line handlers, crane operator and bosun/mate/AB must work as a unit to safely recover the boat. Here are a few guidelines:

1. Line handlers – as the boat is lifted out of the water, slack in the bow and stern lines must be taken up to prevent the boat from swinging excessively.
2. Crane operator – follow the directions of the person in charge.
3. Bosun/Mate/AB – Make sure all hands needed are present and ready for the launch or recovery. Spot the head of the boom of the crane out over the embarkation ladder before recovery begins. Have the whip of the crane lowered to the rail and secured there. A strap of about 3' length with attached cargo hook should be hung from the block of the crane. This is to keep the heavy "headache ball" away from the boat operator. The crane block is to be tended with a tag line.
4. To recover the boat, the crane is slewed outboard as needed, and the whip is lowered. The person in charge on deck tends the block with a tag line and by hand lowers the attached sling and hook towards the boat operator.
5. Wearing a hardhat, the boat operator shall stand and brace himself/herself as much as possible. The boat's three-part sling should be lifted and held up clear of all obstructions in the boat with one hand. The other hand should be ready to grab the sling and hook as it is lowered and hook it to the boat bridle at the first opportunity. When completed, the person in charge on deck will immediately instruct the crane to hoist the whip up until the boat is level with the bulwarks. At this point with bow and stern lines being tended, the crane will be instructed to slew in until the boom is in board of the bulwarks and the boat is being held with



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some pressure against the outboard side of the bulwarks so as to be secure and not swing outboard as the vessel rolls.

6. The boat is now temporarily secure for unloading and preparation for movement to the storage cradle.

### H. Movement To And From The Cradle

Each movement of the boat requires supporting tag lines and some coordination between all hands involved.

1. When moving the boat, the person in charge on deck will direct the crane. The bow and stern lines will be tended on cleats or some other fixed means.
2. An effort should be made to maintain some strain on tag lines to prevent the boat from swinging out of control.

### I. Swimmers

Occasionally, boat operations may include swimmers. The boat operator is in charge of the swimmers actions while they are in the boat. It is the boat operator's job and responsibility to support their actions while they are in the water. A list of guidelines follows.

1. No swimmer is to enter the water, or closely approach the boat prior to getting into the boat, without the boat operator first confirming that the engine is out of gear. This is most frequently done by the boat operator calling out "NEUTRAL."
2. The boat operator may be able to reduce needless fatigue of the swimmers by dropping them off up wind of an object to be worked on, and picking them up down wind of said object.
3. The boat operator shall heave to in the vicinity of the swimmers, bow into the wind with minimum turns, or drift in neutral so as to remain in voice contact with them, and be able to pass on information as passed from the ship via VHF radio.
4. The operator is to act as a lookout for the swimmers warning them of hazards in their area as well as being ready to come to their assistance if needed.

### J. Safe Speed

It is the boat operator's responsibility to maintain a safe speed to ensure no injury to the occupants or damage to the boat. Be mindful that excessive speed when coming off sea or swell into a strong wind may cause the bow to rise and put you in danger of flipping the boat.

Use the following factors as listed in USCG Navigation Rules to assist you in determining safe speed.



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1. The state of visibility
2. The traffic density including concentrations of any other vessels
3. The maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions.
4. At night in the presence of background light such as shore lights or from the backscatter from the boats lights.
5. The state of wind, sea and current, and the proximity of navigational hazards.
6. The draft in relation to the available depth of water.

#### 4. Reporting

Upon demonstration of competency in the requirements above to the satisfaction of the Chief Mate or Master, "Small Boat Operator" (formerly known as "Avon Operator") will be added to the Training Section of the crewmember's personnel record in NS5.