



# MANAGEMENT SYSTEM MANUAL

## ARM 7.5.1 R/V Armstrong Chief Engineer's Standing Orders

Originator:

Gary McGrath

Approved By:

AL Suchy

### 1. Purpose

The purpose of this procedure is to set forth general guidance from the Chief Engineer to the Engine Department on the Armstrong.

### 2. General

A. Watchstanders will be alert, well rested and sober

1. If your relief appears to be anything but the above, notify the Chief Engineer

B. Oncoming Engineers

1. Become familiar with the equipment you are responsible for
2. Know how to start/stop an engine and put it on/off line
3. Know how to start fire pumps and put proper pressure on line.
4. Know how to pump bilges and transfer ballast
5. Know how to transfer fuel
6. DO NOT be afraid to ask questions
7. Know your Fire and Boat Drill Station
8. Carry a flashlight and wear PPE when required

C. Inspect all equipment before starting

1. Check fluid levels
2. DO NOT start any equipment that status is not known:
  1. If you are not sure how to operate
  2. If recently has been worked on
  3. If equipment does not appear to be in working order

D. Rounds of the main and auxiliary engine, switchboard, drive, MSD and steering gear rooms are to be made once every hour during watch

1. Twice by the Engineer during the watch
2. Twice by the Oiler during the watch
3. The rounds should also include the workshop area with particular attention to the CPP HPU's and water quality package for stern tube cooling.
4. Rounds will be made more often if situations warrant, (i.e.: weather or machinery problems)

E. Rounds of the outside engine spaces are to be done twice per watch.

1. Areas include fan, bow thruster with particular attention to the refrigeration systems, stern thruster, emergency generator, forward mechanical,



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- transformer, transducer, UPS and winch room. This round is to include the hydrographic winches or any science winches that are operating on deck.
2. In general, a walk-through of the ship looking for anything out of the ordinary. (i.e. leaks, vibrations, and odors)
    - a. Rounds will be made more often if situations warrant, (i.e.: weather or machinery problems)
  
  - F. During rounds, watchstanders will check all operating machinery including the emergency generator and the auto-standby engine.
    1. Fluid levels are to be adjusted as necessary.
      - 1a. Fuel, oil, and water levels
    2. Temperatures and pressures
    3. Inspect for leaks, odd vibrations, and unusual noises
  
  - G. Notify the Bridge when changing engines and when science gear is ready to be used
    1. Also inform Bridge if any major equipment cannot be used, i.e.:
      - a. Repair in progress
  
  - H. The first engineer and chief engineer shall be notified if any of the following should occur. The Bridge will also be notified so they can slow down/stop or take whatever action is necessary to prevent any further damage to the equipment.
    1. Main engine or main motor failure
    2. Steering or control failure
    3. Blue Drive failure
    4. Science gear problems
    5. Any problem that is critical and cannot be solved by you.
  
  - I. DO NOT attempt to make any repairs or adjustments to operating machinery.
    1. Notify the first assistant or chief engineer
    2. Secure the equipment if necessary
    3. Put another unit on line if available
    4. Wait until equipment is secured
  
  - J. DO NOT engage in a work project that will take your full attention
  
  - K. There shall be an engineer or oiler available in the following areas at all times:
    1. In the control room if situations warrant
      - a. Bad weather (i.e.: heavy seas, ice, or reduced visibility)
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- b. Maneuvering (i.e.: entering/leaving port, high traffic areas)
  2. In the main/auxiliary engine room
  3. In the shop
    - a. Be aware of the phone
- L. Bow thruster operations
1. The oiler on watch shall make a thorough inspection of the bow thruster before it is operated:
    - a. Oil levels
    - b. Proper operation of motors/pumps
    - c. Area under and around thruster is clear
    - d. Bilge is dry
  2. Notify the engineer when bow thruster is ready, that engineer shall then notify the bridge that it is okay to operate.
  3. Standby the thruster until control is acquired on the bridge and has been operated satisfactorily.
- M. Keep all engine spaces clean
1. Clean up oil spills/leaks
  2. Pick up rags/trash
  3. Put tools away where they belong
- N. Watertight Boundaries
1. Maintain watertight boundaries as required.
  2. Verify and secure all hatches in spaces that are unoccupied
- 3. Reporting**
- The Chief Engineer shall maintain a set of standing orders. These standing orders shall be provided to the Ship Operation Group. Any time standing orders are changed or new ones promulgated, a copy of these orders shall be provided to the Ship Operations Group.