

SOP-EMMA-002 Loss of Steering

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1.0 Introduction

The purpose of this procedure is to establish general instructions for responding to a loss of steering event onboard the *R/V Emma McCall*. This vessel may lose steering control at any time due to a variety of mechanical, electrical or physical problems. Understanding and following established protocols may mitigate the severity of the incident.

2.0 Responsibility

The Master has overall responsibility and coordinates all activities in the event of the vessel losing steering. The Master will begin procedures on the vessel to restore steering. The Master will contact the engine room and inform the engineering staff of the situation. The Chief Engineer is responsible for beginning any procedures or repairs necessary to restore steering capability. If steering cannot be restored on the vessel, the Master will call for outside assistance.

3.0 Procedures

There are four modes of steering on the R/V Emma McCall: auto pilot, non-follow up and remote.

When steering is lost the following steps should be taken:

- After switching steering motors, try all the systems to see if there is steering control with any one of them. If not, switch to the other pump and try all the systems again.
- Notify the engine room of the problem and call the Master, immediately.
- Use the engines to maneuver the vessel away from any danger.
- Inform any nearby vessels of the loss of steering by Channel 16.

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- Use the appropriate signals (day-two black balls on yard arm, night-turn off white mast light and turn on 2 red mast lights) to let vessels know steering ability is compromised.
- Contact the engine room and have the engineering staff visually inspect the steering pump motors.
- If the motors are not operational, then the engineers will inspect both the breakers at the power supply panel and the motor controller (contactor) switch boxes.
- The engineers will attempt to engage the motors by shifting to “hand” mode at motor controller switch boxes.
- Should one of steering pump motors be operational and steering control is still absent on the helm, then via communication lines, the Master or master's designee will issue commands to the engineer to manually operate the steering solenoids.
- Should the pump motors be inoperable, instruct the engineering staff to manually center the rudders and use the vessel's three engines to control vessel movement.
- Contact the home office and any other resources for assistance.

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