

**Report Date:** 14 Apr 2014

**Summary Report for Individual Task  
551-88K-4709  
Monitor Operations of a Vessel's Electric Gyro System  
Status: Approved**

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DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

**Condition:** Assigned as a Small Tug Vessel Master/First Mate or Boatswain onboard an Army vessel, given an Operation Order/Operation Plan (OPORDER/OPLAN), a completed risk assessment, and an electric gyro system, day or night, in all weather conditions, in an operational environment scenario. Some iterations of this task should be performed in MOPP 4.

**Standard:** Verify crewmember starts the gyrocompass using normal and heavy sea starting procedures, performs routine operation checks, stops the compass, and starts the compass using emergency restarting procedures without damage to equipment, and records any deficiencies on DA Form 2404.

**Special Condition:** None

**Safety Level:** Low

**MOPP:** Sometimes

**Task Statements**

**Cue:** Given an OPORDER/OPLAN to monitor operations of a vessel's electric gyro system.

**DANGER**

None

**WARNING**

None

**CAUTION**

None

**Remarks:** None

**Notes:** None

## Performance Steps

1. Monitor crewmember performing normal starting procedures.
  - a. Positions repeater (RPTR) switch to off and mode selector switch to SLEW.
  - b. Notes if CAGED lamp is lit. If not, depresses caging control on top of binnacle to cage the gyro and waits 5 minutes for ballistic fluid to stabilize.
  - c. Uses the TILT/AZIMUTH switch to rotate the compass card to the approximate ship's heading.  
Note: In the (+) position, the card rotates counterclockwise, and in the (-) position, the card rotates clockwise.
  - d. Positions MODE SELECTOR switch to START position. Waits 10 minutes before proceeding.
  - e. Depresses caging control on top of binnacle. Notes that CAGED lamp extinguishes.
  - f. Positions MODE SELECTOR switch to MANUAL LEVEL position.
  - g. Operates TILT/AZIMUTH switch to level the gyro as indicated by the level meter indicating zero.
  - h. Positions MODE SELECTOR switch to RUN.
  - i. Positions SPEED COMPENSATOR control to ship's speed.
  - j. Positions N-S switch to either N (north) or S (south) as required.
  - k. Positions LATITUDE control to ship's latitude.
  - l. Positions RPTR switch to ON if a repeater is used.
  - m. Adjusts DIMMER control as required.
2. Monitor crewmember performing routine checks while operational.
  - a. Checks the LATITUDE control and resets as needed.
  - b. Checks the N-S switch and resets as needed.
  - c. Checks SPEED COMPENSATOR control and resets as needed.
  - d. Makes normal azimuth checks to determine accuracy of heading indicator.
  - e. Notes that level meter is indicating properly.
3. Monitor crewmember stopping the compass.
  - a. Places RPTR switch to OFF.
  - b. Places MODE SELECTOR switch to SLEW.
  - c. Pushes caging control on top of binnacle to cage gyro.  
Note: CAGED lamp should light.

d. Positions MODE SELECTOR switch to OFF.

4. Monitor crewmember performing heavy sea starting.

a. Positions RPTR switch to off and MODE SELECTOR switch to SLEW.

b. Notes that CAGED lamp is lighted. If not, perform step 1(b).

c. Performs step 1(c).

d. Positions the MODE SELECTOR switch to START. Waits 30-35 seconds, depresses cage control on top of binnacle and notes that CAGED lamp extinguishes.

e. Checks level meter swing. If equal swing, proceed to step 6; if not, perform step 1(g) until equal swing on both sides of meter.

f. Observes compass card and determines the direction of movement with respect to the required course.

g. If card is moving toward heading, allows movement to within 2 degrees of desired heading and then operates TILT/AZIMUTH switch to level gyro as close to zero as possible.

h. Performs steps 1(h) through 1(m)

5. Monitor crewmember stopping the compass as in step 3.

6. Monitor crewmember performing emergency restarting procedures.

a. Positions MODE SELECTOR switch to AUTO LEVEL. Notes that compass stops slewing and settles at random heading.

b. Positions MODE SELECTOR switch to MANUAL LEVEL.

c. Depresses caging control on top of the binnacle and notes CAGED lamp is lighted.

d. Uses TILT/AZIMUTH switch to go to desired heading. Ensures that rotation is slow and allows compass card to rotate 2 or 3 degrees past heading.

e. Depresses caging control on top of binnacle and notes that CAGED lamp extinguishes.

f. Positions MODE SELECTOR to AUTO LEVEL and notes that the gyro comes to an approximate level as indicated by level meter.

g. Positions MODE SELECTOR switch to MANUAL LEVEL, and operates the TILT/AZIMUTH switch to obtain a zero indication level.

h. Positions MODE SELECTOR switch to run.

7. Monitor crewmember stopping the compass as in step 3 and 5.

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** Score the Soldier GO if all performance steps are passed (P). Score the Soldier NO-GO if any performance step is failed (F). If the Soldier fails any step, show what was done wrong and how to do it correctly.

**Evaluation Preparation:** Ensure that all information, references and equipment required to perform the task are available. Use the TC and the Evaluation Guide to score the Soldier's performance. Brief the Soldier. Tell the Soldier what is required IAW the task condition and standard.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Monitored crewmember performing normal starting procedures.			
2. Monitored crewmember performing routine checks while operational.			
3. Monitored crewmember stopping the compass.			
4. Monitored crewmember performing heavy sea starting.			
5. Monitored crewmember stopping compass as in step 3.			
6. Monitored crewmember performing emergency restarting procedures.			
7. Monitored crewmember stopping the compass as in step 3 and 5.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
	TC 4-15.51	MARINE CREWMAN`S HANDBOOK	Yes	No

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

AR 200-1 delineates TRADOC responsibilities to integrate environmental requirements across DOTMLPF and ensures all training procedures, training manuals, and training doctrine includes sound environmental practices and considerations. The Army's environmental vision is to be a national leader in environmental and natural resource stewardship for present and future generations as an integral part of all Army missions. Environmental protection is never completed. Continuously be alert to ways to protect our environment and reduce waste.

Leaders must ensure that their unit has an active and strong environmental program. They must understand the laws and know what actions to take. Leaders bring focus, direction, and commitment to environmental protection. Commanding officers should ensure the following environmental programs are in place and are being maintained:

- Hazardous materials program.
- Hazardous waste program.
- Hazardous communications program.
- Pollution prevention and hazardous waste minimization recycling program.
- Spill prevention and response plan program.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

All operations will be performed to protect and preserve Army personnel and property against accidental loss. Procedures will provide for public safety incidental to Army operations and activities and safe and healthful workplaces, procedures, and equipment. Observe all safety and/or environment precautions regarding electricity, cable, and lines. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required IAW AR 385-10, the Clean Air Act (CAA) and the CAA amendments, and the OSHA Hazard Communication standard.

Accidents are an unacceptable impediment to Army missions, readiness, morale, and resources. Decision makers at every level will employ risk management approaches to effectively preclude unacceptable risk to the safety of personnel and property affiliated with this task.

- (a) Take personal responsibility.
- (b) Practice safe operations.

- (c) Recognize unsafe acts and conditions.
- (d) Take action to prevent accidents.
- (e) Report unsafe acts and conditions.
- (f) Work as a team.

**Prerequisite Individual Tasks :**

Task Number	Title	Proponent	Status
551-88K-3706	Monitor a Vessel Electronic Gyro System	551 - Transportation (Individual)	Approved

**Supporting Individual Tasks :**

Task Number	Title	Proponent	Status
551-88K-4715	Monitor Operations of Navigational Equipment Onboard a Vessel	551 - Transportation (Individual)	Obsolete
551-88K-4713	Monitor Operations of a Vessels Magnetic Compass	551 - Transportation (Individual)	Obsolete

**Supported Individual Tasks :**

Task Number	Title	Proponent	Status
551-88K-3708	Monitor Navigational Duties Onboard a Vessel	551 - Transportation (Individual)	Approved

**Supported Collective Tasks :**

Task Number	Title	Proponent	Status
55-2-0039	Conduct Towing Operations.	55 - Transportation (Collective)	Approved

**ICTL Data :**

ICTL Title	Personnel Type	MOS Data
MOS 88K Watercraft Operator SL 4	Enlisted	MOS: 88K, Skill Level: SL4, Duty Pos: TFJ