



Department of Transportation and Communications
PUNONGHIMPILAN TANODBAYBAYIN NG PILIPINAS

Headquarters Philippine Coast Guard
139 25th Street, Port Area
1018 Manila

08 November 2012

O/CG10

STANDING OPERATING PROCEDURE
NUMBER 13-12

**MAINTENANCE AND REPAIR OF PCG VESSEL, SMALL CRAFT
AND AIRCRAFT**

I. PURPOSE:

To prescribe policies on the maintenance of vessels, small craft and aircraft and to define responsibilities of personnel involved in maintenance and repair activities.

II. SCOPE:

This SOP applies to all PCG units and personnel involved in the maintenance and repair of PCG vessels, small craft and aircraft.

III. DEFINITIONS:

For the purpose of this SOP, the following words and phrases shall be defined as:

- A. ***Aircraft*** – refers to air assets in the PCG inventory.
- B. ***Maintenance*** – is any action or step performed to keep a piece of machinery, equipment, or material in a serviceable condition, and/or to prevent breakdown or failure. Maintenance includes proper operation, cleaning, adjusting, oiling and similar actions. In a strict sense, maintenance is a ship's force job.
- C. ***Maintenance Level:***
 - 1. ***Depot Level Maintenance*** – shall be performed by a yard to address the repair requirements that are beyond the scope of Intermediate Level of Maintenance.
 - 2. ***Intermediate Level Maintenance*** – shall be performed to address the repair requirements of floating assets that are beyond the ship's crew capability.
 - 3. ***Organizational Level of Maintenance*** – shall be undertaken by the ship's crew to ensure shipboard preventive maintenance and to avoid untimely breakdowns and costly expenses.
- D. ***Maintenance Procedure Manual*** – a manual approved by the Deputy Chief of Coast Guard Staff for Ships and Aircraft Engineering, CG-10 giving detailed procedures of the method of maintenance and repair.

- E. **MRG, CGRF** – a Special Unit under the Headquarters Coast Guard Ready Force that supports maintenance and repair of machineries and equipment of every Coast Guard floating assets.
- F. **MRO, CGRF** – Staff of Commander Coast Guard Ready Force for Ships and Aircraft Engineering.
- G. **MRO, CGFLEET** – Staff of Commander Coast Guard Fleet for Ships and Aircraft Engineering.
- H. **Preventive Maintenance System (PMS)** – servicing system for the purpose of maintaining machineries and equipment in satisfactory operating condition by providing systematic inspection, detection and correction of incipient failures either they occur or before they develop into major defects.
- I. **Repair** – is any work necessary to restore to serviceable condition of any defective machinery, electrical distribution system, automation and electronics, navigational and communication equipment, or material without change in design, number, location or relationships of component parts.
- J. **Repair Type:**
 - 1. **Voyage Repair (VR) / In-House Repair (IR)** – one (1) week to one (1) month – Shall be undertaken by the MRG which is subjected to the group's capability. Aircraft maintenance repair shall be conducted by CGAG Aircraft Mechanics.
 - 2. **Restricted Availability (RA)** – one (1) month to three (3) months – Shall be undertaken by the shipyard / aircraft repair facility.
 - 3. **Regular Overhauling (RO)** – three (3) months to Six (6) months – Overhauling of small craft Main and Auxiliary Engines shall be undertaken by the Maintenance and Repair Group (MRG) subject to the availability of repair parts, while the Main Engines of the Aircraft shall be undertaken by competent aircraft repair facilities.
 - 4. **Major Drydocking (MD)** – three (3) months to one (1) year – Drydocking of capital ships shall be undertaken by qualified repair facilities.
- K. **Small Craft** – refers to non-commissioned floating assets including indigenous watercrafts that are listed in the PCG inventory.
- L. **Commissioned Vessels** – shall mean Search and Rescue Ships, Buoy Tenders, Gunboat and Tug Boat in the inventory of the PCG.

IV. POLICIES:

- A. Maintenance and Repair of all PCG floating and air assets is a command responsibility.
- B. MRG, CGRF personnel shall be composed of technical and duly trained personnel associated in electrical/electronic, mechanical and structural ships repair that will be assigned at CGRF for a period of not less than ten years.
- C. It is the duty of every individual to properly maintain all machineries, equipment or materials directly under his cognizance in accordance with established operating and maintenance procedure.

- D. Maintenance shall be performed on a following maintenance level (*please see Definition of Terms, Maintenance Level*) to ensure proper accomplishment, taking into consideration all applicable regulations, urgency, priority, crew impact, capability, capacity and the total cost:
1. Organization
 2. Intermediate
 3. Depot
- E. Repair of any vessel or any of its sub-systems shall be in accordance with the following order of priority:
1. Hull and Structural Repair – to ensure watertight integrity of the vessel for maintaining her stability on her upright position.
 2. Propulsion System and Auxiliary Plants – to ensure mobility and maneuverability through proper maintenance of reduction gears and propeller shafting; as well as availability of power for shipboard services.
 3. Automation and Electronics System – to ensure continuous maintenance of electrical system for deck, engineering and operations department.
 4. Fire Fighting and Life Saving Equipment – to enhance the safety of personnel and the protection of property at sea.
 5. Habitability Requirements – to provide comfortable living conditions and sanitary environmental aboardship.
- F. In order not to jeopardize operational commitments of the floating assets, the duration of the repair availability must be strictly adhered to the following Repair Types (*Please see Definition of Terms*) :
1. Voyage Repair (VR) / In-House Repair (/ IR)
 2. Restricted Availability (RA)
 3. Regular Overhauling (RO)
 4. Major Drydocking (MD)
- G. Farm-out repairs shall not commence unless there is duly funded and approved work order or contract by proper authorities in accordance with the existing regulations. No growth repairs or offsetting from the approved contract/ scope of works are allowed without the approval of CPCG.
- H. To reduce the cost of repair, all repair activities shall be awarded directly to legitimate contractors, preferably those with shipyard or repair facility that is known to have quality and standard repair services rendered to the PCG.

V. RESPONSIBILITIES:

A. Commander, Coast Guard Fleet (C, CGFLEET):

1. Shall assess / evaluate the formulation of policies pertaining maintenance and repair prior endorsement to Commandant, Philippine Coast Guard (Attn: CG-10).
2. Shall endorse the pertinent documents and repair request thru the evaluation of MRO, CGFLEET to CPCG (Attn: CG-10).
3. Shall ensure proper endorsement of CG personnel to CPCG (Attn: CG-12) who will be recommended for domestic / foreign trainings, seminars and schoolings.

B. Commander, Coast Guard Air Group (C, CGAG):

1. Shall formulate policies pertaining maintenance and repair of CG Air assets prior endorsement to C, CGFLEET.
2. Shall ensure proper validation of the repair prior endorsement to C, CGFLEET.

C. Commander, Coast Guard Ready Force (C, CGRF):

1. Shall formulate and publish a Shipboard Deck Equipment and Engineering Machineries Operating and Maintenance Manual.
2. Shall provide a copy of the Shipboard Deck Equipment and Engineering Machineries Operating and Maintenance Manual to all vessels.
3. Shall require all the Commanding Officers to strictly adhere to the Shipboard Deck Equipment and Engineering Machineries Operating and Maintenance Manual.
4. Shall ensure assignment of appropriate ratings to ships who will operate and maintain the equipment and machineries onboard.
5. Shall ensure proper validation of the repair prior endorsement to C, C, CGFLEET.
6. Shall evaluate prior endorsement to C, CGFLEET the recommended Maintenance and Repair personnel who will participate in trainings / seminars both domestic and foreign.

D. Commanding Officer / Boat Captain of CG Vessels and Craft:

1. Shall designate Personnel-In-Charge (PIC) to every equipment and machineries onboard who will subsequently maintain history logbook for assigned equipment or machinery.
2. Shall ensure full compliance to the scope of work and accept the same after satisfactory conduct of sea trial and endurance run if necessary.
3. Shall ensure that the maintenance carrying by Ships Force is in accordance with the Maintenance Procedure Manual including the conduct of Preventive Maintenance System.

E. Maintenance and Repair Group (MRG), CGRF:

1. Shall maintain a pool of repair technicians who are readily available for deployment.
2. Shall validate and assess the extent of derangement prior endorsement to MRO, CGRF
3. Shall provide and render technical assistance upon request by the personnel afloat due to their limited capability to ensure proper conduct of maintenance and repair equipment and machineries
4. Shall determine repair priorities prior and submit same to higher headquarters for programming purposes.
5. Shall supervise Depot Level of maintenance in the conduct of in-house and farm out repair activities of PCG floating and air assets.
6. Shall optimize the utilization of Maintenance and Repair Teams (MRTs) upon availability of necessary spares and fast moving items.
7. Shall assess as well as conduct engine overhauling and other related machineries / equipment of small crafts as per request by the Boat Captain / Commanding Officer.
8. Shall ensure and validate the repairs that are being farmed-out in compliance with the approved repair request by the Headquarters thru O/CG-10.

F. Ship's Force / Aircraft Crew:

1. Shall perform preventive maintenance in accordance with approved Maintenance Procedure Manual.
2. Shall maintain complete reports and up-to-date records that identified as machinery and equipment history which can be used as a reference during the conduct of repair.
3. Shall maintain and logged properly all machineries and equipment running hours that can be used as a reference during the conducting PMS.
4. Shall recommend appropriate measures to keep their ship adequately maintained and be able to meet every assigned mission.
7. Shall prepare repair request for repair activities that are beyond their capability (i.e. general overhauling, drydocking, technical troubleshooting, etc..) to be performed by either the MRG, Private Yard or Contractors. Preparation and routing of repair request shall be in accordance with current procedures.
8. Shall conduct minor repair of shipboard equipment, machinery, electrical distribution system, electronics, communication and navigation equipment within their capability.
9. Shall perform the Organizational Level Repair activities.

10. Shall ensure good quality and reliability of the component's installed / fitted onboard ships or watercraft.

G. Maintenance and Repair Officer, CG Fleet (MRO, CGFLEET):

1. Shall strictly and effectively implement adherence to the Shipboard Deck Equipment and Engineering Machineries Operating and Maintenance Manual.
2. Shall supervise the enforcement of maintenance, plans and policies issued by higher headquarters.
3. Shall formulate policies, guidelines and submit necessary reports and recommendations to improve current system.
4. Shall ensure all justifiable repair requests and other related aspects are properly endorsed to CPCG (Attn: CG-10).
5. Shall maintain an effective Price Monitoring System and Repair Tariff Rate for price cross referencing.
6. Shall manage and facilitate the acquisition, storage and issuance of procured spare parts, repair materials and equipment.
7. Shall supervise the conduct of farmed-out repair activities and to conduct spot inspection to all floating assets in order to countercheck or verify the proper implementation of Maintenance and Repair Policies, Guidelines and related activities set by higher headquarters.
8. Shall ensure quality, assurance and reliability of delivered items in coordination with HPCG Technical Inspection and Acceptance Committee,
9. Submit the following reports to CPCG (Attn: CG-10):
 - a) Periodic Repair Status Report;
 - b) After Repair / Drydocking Report; and
 - c) Waste Material Report.
10. Ensure the availability of necessary plans and drawing of PCG vessel as ready references for the repair and construction.

H. Maintenance and Repair Officer, CG Ready Force (MRO, CGRF):

1. Shall compose a pool of rated and specialized repair technician.
2. Shall ensure the proper training of MRG personnel is properly implemented.
3. Shall screen all repairs request prior submission to MRO, CGFLEET.
4. Shall ensure full compliance to the scope of work and accept the same after satisfactory conduct of sea trial and endurance run if necessary.
5. Shall Advice C, CGRF on the status and performance of machineries and equipment.

6. Shall advice C, CGRF on matters pertaining to the maintenance and repair of machineries / equipment.
7. Shall be responsible for the implementation of plans, doctrines and SOP pertaining to the maintenance and repair of machineries / equipment.
8. Shall be responsible to C, CGRF in rendering status and performance of machineries / equipment aboard PCG vessels / crafts.
9. Shall conduct technical measures necessary to keep ships within their command are adequately maintained to be able to meet assigned mission.
10. Shall conduct inspection of floating and air assets programmed for repair and develop / establish an accurate technical specs / scope of work, cost estimate and timely preparation/submission of needed documents
11. Shall conduct technical inspection of vessels and regular intervals to ascertain the vessel's implementation of approved Maintenance Procedure Manual and submit necessary reports.

I. Deputy Chief of Coast Guard Staff for Ships and Aircraft Engineering, CG-10:

1. Shall formulate, publish and disseminate plans and policies for PCG-wide maintenance program.
2. Shall monitor the enforcement of maintenance plans and policies.
3. Shall conduct technical inspection of vessels and equipment as necessary, to ascertain how effective such plans and policies are being carried out and formulate necessary corrective actions.
4. Shall concur to nomination to the Education and Training Board thru CG-12 on names of CG personnel who will represent the PCG to take domestic and foreign trainings, seminars and schoolings .
5. Shall review / validate all Work Request to be performed by a private yard prior to preparation of PCG Work Order for the subsequent approval of CPCG.
6. Shall be responsible for the formulation, dissemination and publication of plans, policies and instructions relative to the proper operation and maintenance of vessels and equipment.

J. Commander, Coast Guard Legal Service (C, CGLS):

1. Shall ensure that legal matters enclosed in terms and conditions of every repair should be properly assessed / evaluated.
2. Shall represent the command on legal issues arising from repair contracts and agreements.

VI. RESCISSION:

All other instructions or publications in conflict with this SOP are hereby rescinded.

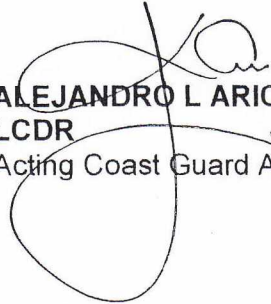
VII. EFFECTIVITY:

This SOP takes effect upon publication:

BY COMMAND OF REAR ADMIRAL TUASON JR:

OFFICIAL:

AARON T RECONQUISTA
COMMO PCG
Chief of Coast Guard Staff


ALEJANDRO L ARICA PCG
LCDR PCG
Acting Coast Guard Adjutant *Am.*
09/11/21