CIVIL AIR PATROL
NATIONAL HEADQUARTERS
MAXWELL AFB AL 36112-6332

EMERGENCY CHANGE 2
CAP REGULATION 66-1
27 MAY 2005

Aircraft Maintenance

CIVIL AIR PATROL AIRCRAFT MAINTENANCE MANAGEMENT

CAP Regulation 66-1, 1 February 2000, is changed as follows:

Page-Insert Changes.

Remove	**Insert**
3/4	**3/4**

Note: Shaded areas identify new or revised material.

OPR: LGM
Distribution: In accordance with CAPR 5-1.

b. 100-Hour. A 100-hour inspection shall be performed and the aircraft returned to service in accordance with FAR Part 43. An aircraft shall not be operated unless within the preceding 100 hours time in service the aircraft has received an annual or 100-hour inspection, and has been approved for return to service in accordance with FAR Part 43, or has received an inspection of issuance of airworthiness certificate in accordance with FAR Part 21. Ten percent (10 hours) over fly is authorized only to reach a designated place of inspection. The excess time to reach the designated place of inspection will be included in computing the next 100-hour inspection due time.

c. Annual Inspection. The annual inspection shall be performed and the aircraft returned to service in accordance with FAR Part 43 by an FAA certified mechanic holding an inspection authorization, FBO, or certified repair station. An aircraft shall not be operated unless an annual inspection has been performed within the preceding 12 calendar months. Over fly is not authorized. Certain maintenance may require relocation of the aircraft. In this case the aircraft can be moved if the requirements of a special airworthiness certificate are met and the certificate is obtained from the local FSDO. In addition, paint touch-up shall be accomplished as required. Preventive maintenance that will enhance the appearance of the aircraft and maintain airworthiness shall be performed.

d. Progressive Inspection. A progressive inspection program that is approved by the local FSDO and is part of the manufacturer's approved maintenance procedures may be used to maintain CAP corporate aircraft.

e. Calendar Inspections. CAP corporate aircraft shall not be operated unless the following components are inspected and logbooks updated at prescribed intervals in accordance with FAR Part 91:

1) Pitot Static/Altimeter. (Required for Instrument Flight Rules (IFR) flight.) Inspection shall have been accomplished within the preceding 24 months; tested, inspected, and found to comply with Appendix E of FAR Part 43.

2) Transponder. (Required for all aircraft equipped with an Air Traffic Control (ATC) transponder.) Inspection shall have been accomplished within the preceding 24 calendar months; tested, inspected, and found to comply with Appendix F of FAR Part 43.

3) Very High Frequency Omnidirectional Range Station (VOR). (Required for IFR flight.) Inspection shall meet the requirements of FAR Part 91, which includes as a procedure an operational test check, within the preceding 30 days and found to be within the limits as indicated in FAR Part 91, and is recorded in an appropriate logbook in the aircraft.

4) Emergency Locator Transmitter (ELT). (Required for all aircraft.) Inspection shall be accomplished within 12 calendar months after the last inspection, FAR Part 91.207. The battery shall be replaced no later than the manufacturer's recommended life cycle.

f. Periodic Inspections. The aircraft maintenance officer or representative shall inspect all CAP corporate aircraft periodically to assure assigned aircraft meet the requirements of this regulation. This inspection shall be performed using a CAPF 71, *CAP Aircraft Inspection Checklist.*

9. Organizational Maintenance. This consists of preventive maintenance performed by the user, operator, or personnel specifically assigned to maintain the aircraft (FAR Part 43 Appendix A, Items C1 to C30.) Preventive maintenance includes routine care, such as cleaning, servicing, replacement of minor parts and hardware, and preflight and postflight inspections.

a. Oil Changes. Oil and oil filters shall be changed and the engine logbook annotated in accordance with the following schedule:

1) 25-hour interval oil change and screen cleaning for all engines without oil filters.

2) 40- to 60-hour mid-cycle interval oil change and filter replacement for all engines with oil filters. Exception: Dehavilland aircraft screen cleaning shall be completed.

3) Oil Changes shall not exceed 4 calendar months for both systems listed under paragraphs 9a1) and 9a2) above.

4) Engine break-in oil changes for new, overhauled, or rebuilt engines shall be in accordance with engine manufacturer's recommendations.

b. Corrosion Control. Special emphasis shall be placed on corrosion prevention to assure safety of flight and extend the aircraft service life. Perform clear water rinse after flights below 200 feet Above Ground Level (AGL) over any body of salt water or dry salt beds to reduce corrosion. Aircraft shall be washed at least every 6 months to prevent corrosion and enhance the aircraft's appearance. Aircraft located in coastal and corrosion prone areas will be treated with Corrosion Preventive Compound (CPC), i.e., ACF-50, annually. Additional treatments may be required as the ACF-50 compound loses its effectiveness (usually detected by a white chalky film). Aircraft located in low corrosion areas will be treated biennially. NHQ CAP may assess a $500 penalty to the wing for each occurrence of non-compliance of corrosion prevention.

c. Aircraft Environmental Protection. When available, aircraft windshield covers should be installed when an aircraft is not in use to protect the windscreen, and interior, and to prevent component damage from the environmental elements. Pitot tube covers shall be utilized, and engine plugs should be installed when aircraft is not in use to preclude the infestation of bird nests, dirt daubers, etc.

d. Aircraft Security. All aircraft shall be locked, securely tied down, and wheels chocked when not in use. The control lock shall be installed in the aircraft when not in use, whether it is in a hangar, or parked on the ramp. The avionics/control lock shall be installed and utilized on all aircraft with upgraded avionics packages when the aircraft is not in use. Additionally, parking brakes shall not be used in excess of 1 hour to hold aircraft as this will result in damage to the aircraft braking system.

e. Airworthiness Directives. All aircraft shall reflect the current status of applicable ADs by including an AD compliance listing in the aircraft logbooks. NHQ CAP/LGM receives all FAA ADs and manufacturer's service bulletins. NHQ CAP/LGM sends the documents to all wings for dissemination to all squadrons for compliance. Also, a copy shall be sent to the CAP-USAF liaison regions and CAP Supply Depot. After compliance, the wing maintenance officer will report the AD and service bulletin findings to NHQ CAP/LGM.

f. Engine Cowling. During preflight and postflight inspections, the engine cowling should be inspected for proper fit, security, and contour.

g. Cannibalization. Cannibalization is defined as removing parts from an aircraft to replace defective parts in another aircraft to maintain airworthiness. The cannibalization method of maintaining aircraft is not authorized.

h. Other Aircraft Maintenance. The maintenance program shall be based on inspection requirements and information provided by the pilots who discover anomalies during the course of day-to-day operation of the aircraft. A clear and concise method of reporting these discrepancies is essential to a safe aviation maintenance program.

10. Engine Management Program (EMP). The engine management program consists of an engine replacement schedule, engine top overhaul or major repairs, propeller and prop governor overhaul, engine Spectrometric Oil Analysis Program (SOAP), and preventive maintenance. This program requires proper management to asssure all CAP corporate aircraft are maintained in the highest of airworthy and safety standards, as well as reducing the amount of time the aircraft is in a non-flying status.

a. Engine. An engine shall be replaced with a new, rebuilt, or overhauled engine at the manufacturer's recommended Time Before Overhaul (TBO) regardless of engine's performance or integrity. Flying beyond the manufacturer's recommended TBO is not authorized. A Cessna 172 160 HP engine will be replaced with a 180 HP engine through attrition. The engine mounts will be replaced at engine overhaul/replacement or in accordance with manufacturer's recommendation, whichever is first. The fluid carrying hoses, from the firewall forward, will be replaced every 5 years or at engine overhaul/replacement or in accordance with manufacturers' recommendation, whichever comes first. The Cessna 172R and later model engine fluid hoses will be replaced every 10 years, or engine overhaul/replacement, whichever comes first.

b. Propeller and Prop Governor. Propellers and prop governors shall be replaced with new, rebuilt, or overhauled equipment at the manufacturer's recommended TBO. Flying beyond the manufacturer's recommended TBO is not authorized

c. Engine Spectrometric Oil Analysis Program (SOAP). Engine oil samples may be taken prior to every oil and filter change. The oil filter should be cut open and inspected for metal particles. A copy of the analysis report shall be maintained in the aircraft engine maintenance log to monitor trends in engine wear/breakdown conditions. Sample kits can be ordered through the CAP Supply Depot.

11. Required Equipment

a. Aircraft Shoulder Harness. All CAP corporate aircraft (except balloons) must be equipped with shoulder harnesses at the pilot and co-pilot positions. It is strongly recommended that all seats are equipped with shoulder harnesses. Newly assigned aircraft shall have shoulder harnesses installed not later than 90 days after assignment. Failure to comply shall result in automatic grounding of the aircraft. If shoulder harnesses cannot be installed as prescribed above, the aircraft will be sold, unless a waiver is granted from NHQ CAP/LG.

b. Aircraft Fire Extinguisher. A serviceable, appropriate for use in aircraft fire extinguisher with a gauge indicating serviceability shall be permanently mounted in the cockpit of all CAP corporate aircraft

c. Secondary Seat Stops. All Cessna aircraft (except Cessna 172R and later models) shall have a secondary seat stop installed on the pilot's right seat rail to prevent seat slippage. The Cessna 172R and later model seat rails were redesigned and do not require a secondary seat stop.

d. Avionics and Control Lock. An avionics control lock shall be installed and utilized on all aircraft with upgraded avionics packages while the aircraft is not in use to prevent theft of high cost avionics.

e. Cabin Door Hinge Pins. Only manufacturer's authorized hinge pins will be installed in CAP aircraft. Quick release pins are not allowed unless a written waiver is received from NHQ CAP/LGM.

f. Cargo Tie Down or Cargo Net. Cargo will be properly secured using a safety belt or other tie down method having enough strength to eliminate the possibility of shifting during aircraft operation. A cargo net is recommended for the cargo compartment.

g. Carbon Monoxide Detectors. For safety, 12- to 18-month disposable carbon monoxide detectors shall be installed in all CAP corporate aircraft. The disposable detectors will be replaced every 12 calendar months.

h. Survival Kit. Each wing shall determine an appropriate survival kit with items to be carried. This kit shall be carried at all times, for every flight. Contents may be adjusted for seasonal requirements.

12. Aircraft Major Maintenance Reimbursement.

a. Strict guidelines must be adhered to for proper use and control of Air Force appropriated funds. NHQ CAP/LGM will reimburse only the following major maintenance items/actions: