



CIVIL AIR PATROL
U.S. AIR FORCE AUXILIARY

CAPP 70-15

CAP Maintenance Pilot Guide

CIVIL AIR PATROL NATIONAL HEADQUARTERS
MAXWELL AIR FORCE BASE, ALABAMA

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Purpose and Scope

This pamphlet provides standardized guidance for CAP pilots authorized to conduct maintenance-related flights and new CAP aircraft pickup. It supplements directive requirements from both Operations and Logistics Regulations, as well as specific forms used throughout each process. This guide defines the expectations, procedures, and professional standards for CAP Maintenance Pilots (CMP) during:

- Post-Maintenance Acceptance Flights
- Engine Break-In Flights
- New Aircraft Acceptance Flights

The core goal of this guide is to promote consistent, professional execution of maintenance flight activities while safeguarding CAP's fleet, personnel, and reputation.

Overview of the CAP Maintenance Pilot Program

CMPs are trusted representatives of both CAP Operations (DO) and Logistics/Maintenance (LGM). They perform the critical function of verifying that CAP aircraft are safe, airworthy, and ready for operational use following maintenance or acquisition.

These flights are not routine proficiency events. They are the first operational verification of maintenance work performed or of a new aircraft entering CAP service. CMPs must therefore exercise heightened discipline, technical understanding, and judgment during every phase of these missions.

Qualification and Appointment Requirements

To operate as a CMP, the CAP Pilot member must meet the criteria established in CAPR 70-1, *Civil Air Patrol Flight Management*:

- Be qualified as a Transport Mission Pilot (TMP).
- Be current and qualified as a CAP Pilot in the specific aircraft type to be flown.
- Have completed the CAP Engine Break-In Course within the past 12 months or as updated by NHQ.
- Be designated as a CAP Maintenance Pilot by the Wing Commander, with concurrence from the Wing DO (or their designee), and Wing Maintenance Officer, with the appointment documented in Ops Quals.

Additionally, as with all other appointments, wings are encouraged to validate knowledge and understanding of the worksheets and processes within this guide prior to making a CMP designation and appointment. These checks should generally be conducted by the Wing Maintenance Officer or another qualified and experienced CMP.

The CMP designation authorizes the member to conduct maintenance, acceptance, and engine break-in flights on behalf of CAP. At the discretion of the Wing Commander or their designee, the appointment may be removed at any time.

Note: This designation is not required to conduct the routine movement of aircrew in support of maintenance activities. In those instances, CAP Pilots only need to be designated as a TMP.

Roles, Responsibilities, and Coordination

The activities where a CMP will utilize their designation are generally multi-faceted, and therefore will require coordination efforts with multiple parties, each with varying sets of responsibilities and duties:

- CAP Maintenance Pilot (CMP) Responsibilities:
 - Acts as the Pilot in Command (PIC) for the flight being conducted. As the PIC, they maintain the final authority of flight operations and safety.
 - When applicable, receives a full briefing from the Wing Maintenance Officer prior to flight, including review of maintenance actions, logbook entries, and deferred discrepancies.
 - Completes the Aircraft Maintenance Acceptance Worksheet before accepting the aircraft from the maintenance facility.
 - Confirms the scope of work is complete and resolves all discrepancies before flight.
 - If discrepancies are discovered and are unable to be corrected prior to flight, consult the Wing Maintenance Officer.
 - The Wing Maintenance Officer shall make the final determination on whether to accept the aircraft or not.
 - If determined that the aircraft will be accepted, the CMP must determine that the aircraft is airworthy and safe to fly.
 - Where possible, conducts the flight under Day Visual Meteorological Conditions (VMC).
 - Flights conducted at night or under Instrument Meteorological Conditions (IMC) should be pre-coordinated with the Wing Maintenance Officer and Wing DO prior to flight.
 - Submits the completed Aircraft Maintenance Acceptance Worksheet and, where applicable, CAP Engine Break-In Checklist information to the Wing Maintenance Officer.
 - Immediately reports any in-flight discrepancies or malfunctions to the Wing Maintenance Officer and reports any safety issues through CAP's Safety Information System (CAPSIS). A discrepancy discovered after a successful flight may also be entered directly into the Maintenance Information System. All such reports must be submitted promptly to ensure accurate maintenance tracking and accountability.
- Wing Maintenance Officer Responsibilities:
 - Provides a detailed pre-flight maintenance briefing and verifies the aircraft is ready for release from the maintenance facility.
 - Ensures discrepancies and any aircrew questions are resolved prior to flight.
 - Notifies CAP/LGM of any maintenance quality issues, turn-backs, or non-support by the maintenance facility.
 - Communicates relevant mission details as necessary to the FRO prior to flight release.
- Wing Director of Operations and Wing Commander Responsibilities:
 - Assigns only qualified CMP's to post-maintenance, engine break-in, or new aircraft delivery and acceptance flights.
 - Enforces operational limitations for flight release (e.g. weather minimums, regulatory compliance, etc.).

When a Transport Mission Pilot (TMP) is assigned to support a CAP CMP in the execution of maintenance-related flights, the following apply:

- The TMP may transport the CMP to or from the maintenance facility in support of aircraft acceptance, post-maintenance, or return-to-service operations.
- The TMP should remain on station until the CMP has completed pre-flight inspections and the aircraft has been accepted for flight.
- The TMP should remain available to recover and return the CMP should the aircraft require a return to the maintenance facility following a failed or incomplete check flight.
- The TMP **may not** act as PIC in any flight operations involving the aircraft under maintenance unless separately qualified in that type airplane and designated as a CMP. The TMP may, however, serve as an additional aircrew member in support of a CMP in accordance with the requirements of this guide.
- The TMP's role is strictly limited to transport and logistical support functions in coordination with Wing Operations.

Professional Conduct and Maintenance Facility Relations

CMPs act as CAP's professional representatives when interacting with maintenance facilities. Maintenance facilities are for-profit businesses operating under defined scopes of work. CAP's maintenance partners provide critical support but are not CAP-controlled entities. As such, CMP's must:

- Maintain courtesy, professionalism, and fairness at all times when representing CAP.
- Understand that maintenance facilities are compensated for specific authorized tasks, and that minor conditions discovered after maintenance completion (e.g., normal tire pressure loss) may not fall within the vendor's contractual scope.
- Recognize that the Wing Maintenance Officer, or CAP/LGM when applicable, is the primary point of contact with the maintenance facility.
- The CMP is not authorized to make maintenance-related decisions, accept or reject maintenance work, or negotiate corrective actions without consultation with the Wing Maintenance Officer.
- Any maintenance-related concerns or findings must first be reported to the Wing Maintenance Officer for coordination and resolution.
- Promptly report any concerns directly related to completed maintenance to the Wing Maintenance Officer for review and follow-up.
- Recognize that professionalism, accuracy, and reasonableness in all communications preserve long-term vendor relationships and sustain CAP's reputation for integrity and cooperation.

NHQ CAP Directorate Roles and Responsibilities

CAP/LGM is the program owner for CAP's fleet maintenance ecosystem. They:

- Select and approve maintenance vendors and coordinate scopes of work and delivery schedules.
- Coordinate new-aircraft onboarding (e.g., ORMS setup, decals/placards shipment to the manufacturer, initial documentation package, etc.) and ensure maintenance data is readied in the Maintenance Information System at acceptance so the aircraft can be authorized for release in CAP's Mission Management System.
- Initiate engine break-in status via a Maintenance Information System discrepancy, monitor data, and determine completion of break-in/oil stabilization where applicable.
- Publish and maintain the Engine Break-In Process requirements (oil schedule, SOAP cadence, etc.) and data-collection pathways (e.g., SmartSheet) as well as provide updates to CAP/DO for updating the Engine Break-In Course (Absorb) and related CAP Engine Break-In Checklist and Aircraft Maintenance Acceptance Worksheet.
- Process regulatory waivers (with CAP-USAF, as needed) for logistics/maintenance prerequisites affecting new-aircraft relocation and maintenance operations (e.g., targeted waivers to CAPR 70-1/CAPR 130-2 items when timing or system transitions require).
- Coordinate ferry permits with the maintenance facility and/or FAA when required by the maintenance action or aircraft status.
- Provide weight & balance (W&B) documentation to CAP DO/DOV for ForeFlight profile creation.
- Own the Maintenance Information System and ensure the maintenance records are properly uploaded for the aircraft and available to the aircrew.

CAP/DO is the operational policy and standardization authority and will:

- Publish/maintain pilot-facing standards and guides (this pamphlet; related regulatory language, etc.) and qualifications (e.g., CAP Maintenance Pilot criteria, Mission Symbols, etc.).
- Publish the CAP Engine Break-In Course (Absorb) and related CAP Engine Break-In Checklist and Aircraft Maintenance Acceptance Worksheet for aircrew use.
- Ensure AIF/ForeFlight compliance tasks are clear; build ForeFlight profiles upon receipt of W&B from CAP/LGM and confirm the pickup crew has the required AIF artifacts (hardcopy or digital) before launch.
- Coordinate pickup-crew travel/accommodations for new-aircraft deliveries in concert with LGM timelines and manufacturer availability.

Note: The duties above intentionally codify the CAP/LGM ↔ CAP/DO interface so wings and crews understand who owns vendor/records (LGM) vs pilot procedures/standards (DO).

Post-Maintenance Acceptance Flights

Aircraft Acceptance Process

After an aircraft is released from a routine maintenance event (not requiring engine break-in), the following standardized sequence applies:

1. Briefing and Maintenance Record Review:
 - Receive a detailed maintenance briefing from the Wing Maintenance Officer, including a summary of all work performed, replaced parts, and deferred discrepancies.
 - Review all logbook entries for completeness and accuracy.
2. Worksheet Completion:
 - Complete the Aircraft Maintenance Acceptance Worksheet before flight, in addition to the routine preflight inspection of the aircraft.
 - Document any discrepancies and resolve them with the Wing Maintenance Officer prior to departure.
3. Flight Conditions
 - Flights should be conducted under Day VMC conditions, with qualified maintenance personnel available at the pick-up facility in the event that issues present, and the aircraft needs to be returned to the facility.
 - Flights may be conducted after normal business hours, at night, or under IMC with pre-coordination from the Wing Maintenance Officer and Wing DO (and CAP/LGM or CAP/DO, as appropriate). However justification should be made, and additional risks considered and properly mitigated under these rare circumstances.
4. Post-Flight Reporting
 - Submit the completed Aircraft Maintenance Acceptance Worksheet to the Wing Maintenance Officer within 2 hours of completion of the sortie.
 - The Wing Maintenance Officer will upload the Aircraft Maintenance Acceptance Worksheet to the Maintenance Information System within 24 hours of the sortie and transmit any information to CAP/LGM as necessary.

Aircraft Inspection and Acceptance Procedures

When accepting a new aircraft from the manufacturer or from a maintenance facility following maintenance work, CMP's must perform an inspection above and beyond the normal POH preflight. Key areas of focus include:

- Verification of all maintenance-affected systems for proper function and integrity.
- Confirmation of correct control movement, rigging, and trim operation.
- Inspection of all access panels, cowlings, and fasteners for completeness and security.
- Verification of Hobbs and Tachometer readings with prior entries in the Aircraft Information File (AIF).
- Inspection for fluid leaks, loose hardware, or physical damage.
- Verification that any Kinds of Equipment List (KOEL) items are installed, operative, and appropriate for the intended type of operation (e.g., VFR, IFR, day, night), and that any inoperative equipment is properly documented and permitted in accordance with the KOEL and applicable regulations.
- Verification that all required equipment and documents (AROW Documents, AIF, POH/AFM, CAP checklists) are aboard.

During flight, the CMP should confirm engine performance, power settings, temperatures, and avionics operation, noting any anomalies for follow-up. The Aircraft Maintenance Acceptance Worksheet provides the recommended structure for conducting these inspections.

Engine Break-In Flights

Engine break-in flights are specialized post-maintenance operations governed by the same requirements outlined in the Post-Maintenance Acceptance Flights section on the previous page. These flights serve the added purpose of properly seating piston rings to the cylinder walls, achieving a tight gas seal, stabilizing oil consumption, and ensuring maximum engine longevity. Because this is the most critical period of an engine's operational life, these flights must be conducted only by qualified CMPs under controlled conditions.

The CAP Engine Break-In Process applies to newly installed engines, overhauled engines, and any aircraft that has undergone cylinder replacement. The process begins when CAP/LGM creates a Maintenance Information System discrepancy initiating the engine break-in process. All engine break-in flights are conducted under the wing's Maintenance Mission (A9 Mission Symbol), with sortie type designated as "Engine Break-In." Only authorized crews may operate aircraft under this classification.

Throughout the break-in period, CAP/LGM monitors engine performance data, oil consumption, and maintenance reports submitted after each flight. The aircraft remains under engine break-in status until CAP/LGM verifies oil stabilization and formally closes the discrepancy. Once closed, the aircraft is released for normal CAP operational use.

Operational Procedures

- Pre-Flight:
 - Conduct normal preflight with additional attention to oil levels, leaks, and density altitude planning ($\leq 7,000$ ft DA).
 - Use mineral oil (Phillips Type M 20W-50; Phillips XC 20W-50 if unavailable).
 - Use CAP Engine Break-In Checklist.
 - *Note: It may be necessary to temporarily reposition an aircraft to a location where $\leq 7,000$ ft DA is able to be achieved. This should be coordinated with CAP/LGM and the Wing Maintenance Officer as needed.*
- In-Flight:
 - Maintain 65–75 % power and monitor CHT (< 425 °F preferred).
 - Vary power settings every 20 minutes after the first hour.
 - Avoid high-DA operations that prevent achieving 75 % power.
 - Monitor all engine indications and record CHT, oil temperature, and pressure every 20 minutes.
- Descent and Landing:
 - Reduce power gradually to prevent shock cooling.
 - Use high-drag configurations to maintain engine temperature.
 - Allow a minimum one-hour cool-down before post-flight oil check.

Data Collection and Reporting

- Record all parameters on the CAP Engine Break-In Checklist.
- Enter data into the SmartSheet link following each sortie.
- CAP/LGM reviews data and Spectrometric Oil Analysis Program (SOAP) results to determine completion.

Break-In Status Completion

Engine stabilization and the associated "Engine Break-In" status within the Maintenance Information System will be made by CAP/LGM prior to the aircraft being released from operational restrictions.

New Aircraft Delivery and Acceptance Flights

New aircraft acquisitions involve coordination from the manufacturer (e.g., Textron), CAP/LGM, CAP/DO, and the receiving wing/region. CMPs selected for pickup represent CAP in a professional and highly visible setting. These flights are governed by the same requirements outlined in the Post-Maintenance Acceptance Flights section and will also follow the requirements from the Engine Break-In Flights section, as new aircraft engines are part of the CAP Engine Break-In Process.

Mission Authorization

- All new aircraft delivery flights are conducted under the Wings Maintenance Mission (A9 Mission Symbol) and the sortie type should be appropriately designated as “Engine Break-In”, not “Relocation”, as all new CAP aircraft require completion of the engine break-in prior to being placed into service.
- The aircraft remains in engine break-in status until oil stabilization is confirmed by CAP/LGM (*see Engine Break-In Flights section*).
- Aircraft acceptance and maintenance records begin at delivery hand-off. All sortie time and data must be entered into CAP’s Mission Management System just like with any other sortie. In addition, CAP/LGM will update the Maintenance Information System appropriately.

Pre-Delivery Coordination

Prior to departing for the manufacturer to pick up the new CAP aircraft, CMPs:

- Coordinate with CAP/DO for travel, lodging, and scheduling.
- Verify the presence of all required aircraft documents and equipment (AIF, checklists, survival kit).
- Verify that the aircraft profile is built in the Operational Resource Management System (ORMS), which makes the aircraft available in CAP’s Mission Management System and able to be released for flight in accordance with normal procedures.
- Confirm that the manufacturer has officially released the aircraft for flight.
- Document any open items or minor discrepancies prior to departure.

Professional Conduct

- Maintain the highest standards of professionalism, courtesy, and respect in all interactions with manufacturer representatives and other CAP personnel.
- Recognize that manufacturers operate under defined scopes and schedules. Exercise reasonableness in expectations.
- Report legitimate discrepancies promptly to CAP/LGM for coordination. Avoid confrontational or unilateral requests for non-contracted services.
- Remember that CMPs reflect CAP’s image to national-level partners.

Flight Operations

- Conduct the flight in accordance with CAP Engine Break-In Process (*see Engine Break-In Flights section*).
- Maintain 65–75 % power settings, as appropriate, in accordance with the process requirements.
- When possible, utilize two qualified aircrew - one to fly and one to monitor systems and record data.
- Coordinate with the receiving Wing Maintenance Officer as applicable and complete the CAP Engine Break-In Checklist(s).
- *Note: Only the PIC of the flight must be qualified as a CMP.*

Post-Delivery Actions

- Enter all flight data into CAP’s Mission Management System and submit all collected information from the CAP Engine Break-In Checklist using the designated Smartsheet.
- Coordinate with the Wing Maintenance Officer for follow-up inspections. The Wing Maintenance Officer will coordinate with CAP/LGM as part of the normal engine break-in process following the return flight to the Wing.
- Report any discrepancies discovered during or after flight to the Wing Maintenance Officer immediately.

Attachments

Attachment 1: Engine Break-In Checklist

USE OF THIS FORM				
<ul style="list-style-type: none"> This form is used to collect information on an engine break-in sortie. There are TWO types of engine break-in sorties: <u>INITIAL</u> sorties that are conducted when the airplane is first picked up at the maintenance facility and the <u>ONGOING</u> sorties that are conducted after the airplane has completed the initial sortie. <u>For INITIAL Engine Break-in Sorties:</u> <ul style="list-style-type: none"> The goal of the flight is to conduct a <u>one-hour</u> sortie that remains over the departure airport at altitude. This flight is still considered an engine break-in sortie, however due to the increased risk following these types of maintenance events, this sortie enables the crew a designated landing location in the event of an inflight emergency or situation. During this sortie, the crew must be EXTREMELY AWARE of all operations of the engine systems and the power it is producing. THE FLIGHT SHOULD REMAIN WITHIN GLIDING DISTANCE AT ALL TIMES. 				
GENERAL INFORMATION				
CAP Maintenance Pilot (CMP) Name	CAPID	Date of Flight (Z)		
CMP Phone No.	CMP Email Address			
Mission No.	Sortie No.	Aircraft Tail No.		
Engine Break-In Sortie Type (select one)				
<input type="checkbox"/> INITIAL Engine Break-In Sortie		<input type="checkbox"/> ONGOING Engine Break-In Sortie		
Propeller Type (select one)				
<input type="checkbox"/> Fixed Pitch Propeller		<input type="checkbox"/> Constant Speed Propeller		
TACH TIMES		HOBBS TIMES		
Stop		Stop		
Start		Start		
Total		Total		
FLIGHT PLANNING AND PREFLIGHT				
<ul style="list-style-type: none"> <u>For INITIAL Engine Break-in Sorties:</u> <ul style="list-style-type: none"> Prior contact with the tower at controlled airfields is advisable. Let ATC know your intentions and that you wish to remain within gliding distance at altitude for the flight. At non-towered airfields, make traffic and position calls periodically and remain at least 1000 ft above the normal traffic pattern. <u>For ALL Engine Break-In Sorties:</u> <ul style="list-style-type: none"> Verify the condition of the airplane belly. Taking a picture would be helpful in making post-flight assessment for oil overboard determination. Conduct a full preflight inspection as well as the Aircraft Maintenance Acceptance Worksheet. Record cold engine oil level (oil quantity <u>before</u> adding any oil): _____ qts Record amount of oil added to achieve <u>8</u> qts (172/182T/T182T), <u>9</u> qts (GA8), <u>11</u> qts (T206H), <u>12</u> qts (206H): _____ qts Confirm total oil in sump is at recommended level (8 qts, 9 qts, 11 qts, or 12 qts based on A/C type) <u>Density Altitude (DA) Planning for ALL Engine Break-In Sorties:</u> <ul style="list-style-type: none"> Determine and record the expected settings you will be using at the expected cruise altitude you are planning. Max 7,000 ft DA based on engines ability to produce at 75 % power (lower DA is preferred if obstacle clearance assured). <ul style="list-style-type: none"> Note: This is N/A for turbocharged aircraft, as they can maintain 75% power at higher altitudes Write these figures below. Adjust as necessary once at altitude (consult POH for accuracy). 				
	Planned Density Altitude	Equivalent Indicated Altitude (from POH)	Required RPM (fixed pitch propellers)	Required MP (constant speed propellers)
75% Power Setting				
65% Power Setting				
TAXI				
<ul style="list-style-type: none"> Limit ground time where possible. Conduct a normal run-up in accordance with manufacturer guidance. For Constant Speed Propellers: limit prop cycling to +/- 100 RPM. <ul style="list-style-type: none"> Record oil pressure during taxi: _____ PSI Record oil temperature before departure: _____ PSI Record time of departure (Z): _____ (Z) 				

CLIMB

- Where possible, maintain a shallow climb angle until cruise (300 FPM).
- Monitor CHT, Oil Pressure, and Oil Temperature during climb.
- Climb with cowl flaps OPEN (if applicable)

CRUISE

(Max 7,000 ft DA if non-turbocharged)

- For **INITIAL Engine Break-In Sorties and for the First Hour of ONGOING Engine Break-In Sorties:**
 - Maintain 75% power during cruise.
 - Monitor CHTs. Maintain temperatures as low as practicable (richer mixtures).
 - Record data below every 20 minutes.
 - **Never allow any of these procedures to jeopardize safety and success of the flight. Land as soon as practicable if any issues or abnormalities present during flight.**
- For **ONGOING Engine Break-In Sorties during the SECOND (and subsequent) Hour(s):**
 - **Alternate between 65% and 75% power settings every 20 minutes.** (starting at T + 80 Time Record)

Time Record (Time (Z) + X min)	Indicated Altitude	Outside Air Temperature (OAT)	Oil Temperature	Oil Pressure (PSI)	CHT (Highest Temp & Cylinder #)	EGT (Highest Temp & Cylinder #)	Fuel Flow (GPH)
<i>T + 0 starts when aircraft reaches cruise altitude and 75% power setting</i>							
T + 0							
T + 20							
T + 40							
T + 60							
<i>If INITIAL Engine Break-In Sortie: Flight complete – begin descent and preparing for landing at FBO for post-flight inspection If ONGOING Engine Break-In Sortie: First hour complete – begin alternating power between 65% and 75% power settings</i>							
T + 80							
T + 100							
T + 120							
<i>Second hour complete – continue alternating power between 65% and 75% power settings or begin descent for landing</i>							
T + 140							
T + 160							
T + 180							
<i>Flight complete – begin descent and preparing for landing at FBO for post-flight inspection</i>							

- **Cruise Table Notes:**
 - Some carbureted engines may only have a single cylinder monitored for CHT or EGT. In these cases, record the temperature indicated.
 - Some EGT gauges do not have numeric values shown. In those cases, the EGT recording is not required.
 - All engine parameters should be monitored and remain in the “GREEN” areas of performance.
 - Temperatures may be higher than normal during the engine break in period but must remain in the “GREEN”.
 - **If at any time you suspect something unusual - land and assess.**

DESCENT/LANDING

- Avoid large power reductions unless necessary. “Chopping” the power leads to extreme temperature changes.
- Achieve a cruise descent. Start by reducing RPM by 200 RPMs/MP by 2 inches and allow CHT to stabilize appx. 5 minutes. If additional descent is required, repeat as necessary.
- Use of flaps (high drag configuration) supports maintaining higher RPM (and thus higher CHT) at reduced speed.
- Cowl flaps CLOSED in descent
- Aim to maintain CHT between 300°F and 400°F.
- Pattern work and touch and go landings are prohibited.
- Record landing time (Z): _____ (Z)

POST FLIGHT

- Secure aircraft following the normal shutdown/secure procedures.
- Inspect the airframe for signs of oil. Consult the picture from preflight to compare.
- Inspect all openings, fasteners, and connections.
- Report any findings to Wing Maintenance Officer.
- Wait one hour after engine shutdown and record “cold” engine oil level: _____ quarts
- **Engine will still be hot! Exercise caution when checking oil level.**

RECORDKEEPING AND NOTES

- Use this link to electronically transmit information to CAP/LGM:
<https://app.smartsheetgov.com/b/form/feb530e7e064f53b9dbd990ebd705c6>
- If the link is not working, please email a copy of this completed sheet to LGPSD@capnhq.gov.
- Advise the Wing Maintenance Officer of the flight status. If any discrepancies or issues are discovered, ensure the Wing Maintenance Officer knows so that discrepancies can be recorded in the Maintenance Information System.

Attachment 2: Aircraft Maintenance Acceptance Worksheet

USE OF THIS FORM			
<ul style="list-style-type: none"> The purpose of this worksheet is to thoroughly examine an aircraft ABOVE and BEYOND the POH preflight inspection after maintenance has been performed. The primary goal is to detect any defects that may have been introduced during maintenance which would render the aircraft not airworthy or which might present a danger to the crew. Additionally, this worksheet will help to ensure that all aircraft records are correct IAW 14 CFR Part 43. Any discrepancies found with the aircraft or documentation must be resolved prior to departing the maintenance facility. Allow at least 20 minutes in the schedule for completion of these tasks. Attention to detail is crucial. 			
GENERAL INFORMATION			
CAP Maintenance Pilot (CMP) Name		CAPID	Date of Flight (Z)
CMP Phone No.		CMP Email Address	
Mission No.	Sortie No.	Aircraft Tail No.	
Starting Tach Time (Recorded from A/C)		Starting Hobbs Time (Recorded from A/C)	
<p><i>Compare the actual tach and hobbs readings from the A/C to the last recorded readings recorded on the Aircraft Flight Time Log located in TAB 1 of the AIF. If they do not agree, create an entry for CMX on the Aircraft Flight Time Log as a Maintenance Engine run. Ensure that this entry is also entered into CAPs Mission Management System (WMIRS).</i></p>			
PREPARATION			
<ul style="list-style-type: none"> Receive briefing from the Wing Maintenance Officer concerning the maintenance performed and any items deferred. Discuss with the Wing Maintenance Officer the appropriate actions if an issue arises after takeoff, including whether to return to the maintenance facility or continue on to destination. Obtain aircraft keys, maintenance records, and logbooks from Maintenance Facility. Verify overall aircraft condition. Take note of dents, wrinkles, or hangar rash that may be new. If issues are identified, discuss with the Wing Maintenance Officer prior to departure. Ensure all required maintenance has been completed as specified in the logbook entries. Record Tail No., Hobbs, and Tach readings from the aircraft and ensure accuracy with maintenance entries. Ensure Loose/Removable Equipment (as recorded on the back cover of AIF) is in aircraft or documented as removed. Verify full range and correction direction of movement of elevator, rudder and trim tabs. Check cowl flaps for full range of motion. (If applicable) Check the cabin doors/windows (and photo window, if applicable) for proper operation. 			
AIRCRAFT GROUND INSPECTION			
<p><i>The following items are special interest areas that should be checked by the CMP following all post-maintenance activities. When a relocation flight following a maintenance activity is required, these items are <u>in addition to</u> the manufacturer's preflight checklist items.</i></p>			
Left Wing <ul style="list-style-type: none"> <input type="checkbox"/> Inspection access panels secure - all screws present and tight. <input type="checkbox"/> Wing tip and strut fairings are attached, and all screws are tight. <input type="checkbox"/> Pitot tube, secure and undamaged. <input type="checkbox"/> Ailerons and flaps have full range of motion and proper deflection. <input type="checkbox"/> Static dissipaters present and intact. <input type="checkbox"/> Fuel drains work normally and do not leak. <input type="checkbox"/> Fuel cap is in place and chain is attached. 		Left Fuselage <ul style="list-style-type: none"> <input type="checkbox"/> Tire condition and inflation. <input type="checkbox"/> Brake pads and rotor condition/wear. <input type="checkbox"/> No caliper or brake hydraulic line leaks. <input type="checkbox"/> All access panels secure. <input type="checkbox"/> Cargo door condition and security. <input type="checkbox"/> Presence and security of all antennas. <input type="checkbox"/> Missing/loose screws/fasteners. 	
Empennage <ul style="list-style-type: none"> <input type="checkbox"/> Check condition of complete elevator/rudder assembly, end caps, and loose/missing hardware. <input type="checkbox"/> Check condition of tiedown ring, note scuffing, not bent, security. <input type="checkbox"/> VOR/ILS antennas secure. 			
Right Wing <ul style="list-style-type: none"> <input type="checkbox"/> Inspection access panels secure - all screws present and tight. <input type="checkbox"/> Wing tip and strut fairings are attached, and all screws are tight. <input type="checkbox"/> Pitot tube (if present), secure and undamaged. <input type="checkbox"/> Ailerons and flaps have full range of motion and proper deflection. <input type="checkbox"/> Static dissipaters present and intact. <input type="checkbox"/> Fuel drains work normally and do not leak. <input type="checkbox"/> Fuel cap is in place and chain is attached. 		Right Fuselage <ul style="list-style-type: none"> <input type="checkbox"/> Tire condition and inflation. <input type="checkbox"/> Brake pads and rotor condition/wear. <input type="checkbox"/> No caliper or brake hydraulic line leaks. <input type="checkbox"/> All access panels secure. <input type="checkbox"/> Cargo Door (C206) latches will fully engage. <input type="checkbox"/> Presence and security of all antennas. <input type="checkbox"/> Missing/loose screws/fasteners. 	

AIRCRAFT GROUND INSPECTION (cont.)

Nose

- Check inside the cowling for anything out-of-place, or any anomalies through available access points.
- Check the oil dipstick for the presence, color, and amount of engine oil.
- Check the prop for nicks or dents and the spinner for cracks and the presence/tightness of all screws.
- Cowling screws/fasteners present, tight, and fully engaged.
- Check heater connectors for condition and security.
- Check landing gear strut for proper inflation, condition, presence and condition of all required nose hardware.
- Check wheel assembly, tire for condition and proper inflation.
- Fuel drains work normally and do not leak.

AIRCRAFT PREFLIGHT INSPECTION

When a post-maintenance flight is to be conducted, such as when relocating an airplane back to a home base, the following items are special interest areas that should be checked by the CMP in addition to the manufacturer's preflight checklist items.

Voltage Check

- Before engine start, approximately 24 volts, amperage slight discharge.
- After engine start, approximately 28 volts, amperage slight charge at idle.

After Starting Engine

- Oil Pressure to idle level within 5 seconds, oil temp rising.
- After energizing the electrical buss, check for unusual odors, visible smoke or anomalous electrical equipment operations.
- All instrument systems check, GARMIN system check (if applicable), engine monitor check (if applicable).
- Check "Mission Master" switch (if applicable) and VHF-FM/ Becker/DF function.
- Check electric elevator trim (if applicable) for correct movement stop-to-stop.

During Taxi Check

- Brakes check, steering check, instruments check, attitude, DG/HSI, turn and bank indicator.

Before Takeoff

- Check engine instruments, engine monitor indications (CHT/EGT and TIT, if applicable), vacuum check, oil temp, flaps check.

Be prepared to abort the takeoff or remain in the pattern for landing should any malfunction occur.

After Takeoff

- After takeoff when safe to do so, check systems and equipment that was repaired.
- Check cabin heat controls and cooling vents.
- After clear of the pattern, during cruise flight, check autopilot system in accordance with proper procedures.
- During cruise flight check for proper EGT/CHT, and TIT (if applicable) and correct effect of cowl flaps.

After Landing

- Complete a thorough post flight inspection, paying attention to anything that had been repaired, or anything that may have been suspicious during the flight.
- Return the logbooks to their proper location.

RECORDKEEPING AND NOTES

- Send a copy of the completed Aircraft Maintenance Acceptance Worksheet to the briefing Maintenance Officer.
- Advise the Wing Maintenance Officer of the flight status. If any discrepancies or issues are discovered, ensure the Wing Maintenance Officer knows so that discrepancies can be recorded in the Maintenance Information System.