

Civil Air Patrol

Maule MT-7-235 – N136CP

CAUTION

Prior to moving the flaps beyond the zero position ensure the cargo and right passenger door are closed. Lowering the flaps with the cargo or passenger door open will cause damage to the flaps.

Failure to fully engage the flap release button prior to moving the flap handle may result in damage to the flap handle. Never force the flap handle.

INTERIOR INSPECTIONS

1. Pilot's Operating Handbook Available
 2. Parking Brake – AS DESIRED
 3. Hobbs & Tach – CHECK
 4. Fire Extinguisher – CHARGED
 5. Squawk Sheet – CHECK
 6. Documents – AROW in airplane
 7. Control Lock – REMOVE
 8. Battery Switch – OFF
 9. Fuel Selector – BOTH (Handle =big end, pointer=little end)
 10. Avionics Power Switch – OFF
 11. All Electrical Switches – OFF
 12. Battery Switch – ON
 13. Fuel Gauges – CHECK
- ### **INDICATIONS**
14. Pitot Heat – CHECK, then OFF (As Required)
 15. Stall Warning System – CHECK
 16. Exterior Lights – CHECK
 17. Battery Switch – OFF
 18. Flaps – FULL DOWN (3rd Notch)
 19. Elevator Trim – Set Neutral

LEFT WING SECTION

1. Fuel Drains (Behind Step) – DRAIN (2)
2. Main Landing Gear – CHECK
 - a. Tire Condition
 - b. Brake Line Security
3. Main Fuel Tank Drain – DRAIN (1)
4. Flap – CHECK (Hinges and Control Attachments)
5. Aileron – CHECK (Hinges and Control Attachments)

6. Wing Top – CHECK (Wrinkles Indicate Internal Damage)
7. Wing Tip & Nav Light – CHECK
8. Wing Tie down – REMOVE
9. Aux Fuel Tank Drain – DRAIN (1)
10. Aux Fuel Tank Quantity – CHECK
11. Landing Light – CHECK
12. Pitot Tube – CHECK
13. Stall Warning Switch – CHECK
14. Vortex Generators – CHECK (MAX 5 Total Missing on Aircraft)
15. Main Fuel Tank Quantity – CHECK

NOSE SECTION

1. Gascolator – DRAIN (1)
2. Oil Quantity – CHECK (8 qt max, 6 qt min)
3. Cowl – CHECK
4. Propeller – CHECK
5. Air Inlets – CHECK
6. Nose Gear – CHECK
 - a. Tire Condition
 - b. Strut Extension and Clean Strut (min. 2-3 in)

RIGHT WING SECTION

1. Main Landing Gear – CHECK
 - a. Tire Condition
 - b. Brake Line Security
2. Main Fuel Tank Drain – DRAIN (1)
3. Vortex Generators – CHECK (MAX 5 Total Missing on Aircraft)
4. Main Fuel Tank Quantity – CHECK
5. Wing Tiedown – REMOVE
6. Aux Fuel Tank Quantity – CHECK
7. Aux Fuel Tank Drain – DRAIN (1)
8. Wing Tip and Nav Light – CHECK
9. Wing Top – CHECK (Wrinkles Indicate Internal Damage)
10. Aileron – CHECK (Hinges and Control Attachments)
11. Flap – CHECK (Hinges and Control Attachments)

EMPENNAGE

1. Right Fuselage, Side and Top – CHECK (Wrinkles Indicate Internal Damage)
2. Right Side Static Port – CHECK

3. Right Stabilizer – CHECK (Attachment Points and Strut)
4. Vortex Generators – CHECK (MAX 5 Total Missing on Aircraft)
5. Right Elevator – CHECK (Hinge Points)
6. Rudder – CHECK (Hinge Points and Control Attachments)
7. Navigation Light – CHECK
8. Tail Skid – CHECK
9. Tail Tie down – REMOVE
10. Left Elevator – CHECK (Hinge Points)
11. Left Stabilizer – CHECK
12. Vortex Generators – CHECK (MAX 5 Total Missing on Aircraft)
13. Left Fuselage, Side and Top – CHECK
14. Left Side Static Port – CHECK

BEFORE STARTING ENGINE

1. Preflight Inspection – COMPLETE

PASSENGER BRIEF

1. Seat Belts / Shoulder Harness
 2. Personal Electronic Devices off
 3. Air Vents / Comfort
 4. Fire Extinguisher Location / Operation
 5. Emergency Procedures & Exits
- #### **MISSION BRIEF**
1. Mission Objective
 2. Destination, WX, Route, Alt, ETE
 3. NOTAMS
 4. Crew Coordination & CRM
 5. Sterile Cockpit Procedures
 6. Cockpit Layout
 7. Intercom & Radio Usage
 8. Seats, Seatbelts, Doors
 9. Emergency Action & Equipment

2. Passenger/Egress Briefing – COMPLETE
3. Personal Electronic Devices – OFF
4. Rear Doors – CLOSED/LATCHED
5. Seat Belts and Shoulder Harnesses – FASTENED
6. Flaps – RETRACTED
7. Avionics Power Switch – OFF
8. Electrical Equipment – OFF
9. Circuit Breakers – CHECK IN

STARTING ENGINE

1. Parking Brake – AS DESIRED

2. Fuel Selector Value – FULLER TANK or BOTH (If Equal)

NOTE

Do not confuse handle (large part) with pointer (small pointy part)

3. Anti-Collision Lights -- ON
4. Battery Switch – ON
5. Throttle – OPEN 1/4 INCH
6. Propeller – HIGH RPM
7. Prime – AS REQUIRED (Do Not Prime for Hot Starts)
 - a. Fuel Boost Pump – ON
 - b. Mixture – FULL RICH (Until a slight/steady flow is indicated, approx. 3 to 5 Seconds)
 - c. Mixture – IDLE/CUTOFF
 - d. Fuel Boost Pump OFF

NOTE

If engine does not start, repeat priming. Over prime can be detected by fuel coming from the cowl bottom center drain.

8. Propeller Area – CLEAR
9. Ignition Switch – START
10. Mixture – FULL RICH (When Engine Starts to Fire)
11. Ignition Switch – BOTH (When Engine Starts)
12. Throttle – ADJUST to 900 – 1000 RPM
13. Oil Pressure – CHECK

CAUTION

If oil pressure does not exceed 25 PSI within 30 seconds, shut down engine.

14. Mixture – ADJUST
15. Alternator – ON
16. Ammeter – CHECK (Positive Indication)
17. Starter – CHECK DISENGAGED
18. Avionics Power Switch – ON
19. Radios – ON
20. Transponder – TEST/STBY

BEFORE TAXI

1. Anit-Collision/Nav Lights – AS DESIRED
2. Taxi Lights – AS DESIRED
3. ATIS / AWOS – Copy
4. Altimeter – SET (Verify Within 75' of Fld Elev.)
5. Clearance Delivery/Ground Control – Contact

TAXI

1. Brakes – CHECK
2. Turn and Slip – CHECK
3. Instruments – CHECK
4. Fuel System – CHECK

ENGINE RUN UP

1. Parking – ON and SET
2. Prop Blast – CLEAR
3. Engine Instruments – CHECK
4. Mixture – FULL RICH
5. Throttle – 2000 RPM
6. Engine Instruments – CHECK
7. Magnetos – CHECK

CAUTION

A RPM drop of more than 175 RPM or a difference between left and right of more than 50 RPM is unacceptable.

8. Propeller Control – EXERCISE
 - a. Retard Slowly Until Max of 500 RPM Drop
 - b. Return to High RPM
 - c. Repeat Twice for First Flight of the Day
9. Alternate Air Control – CHECK
 - a. Turn Left and Pull Out
 - b. Check for 50 RPM Drop
 - c. Push In and Turn Right to Lock
10. Vacuum Gauge – CHECK
11. Ammeter – CHECK
12. Alternator Light – OUT
13. Throttle – RETARD (900 – 1000 RPM)

BEFORE TAKEOFF

1. Seat Belt and Shoulder Harnesses – RECHECK FASTENED
2. Doors – CLOSED and LATCHED

3. Fuel Selector Value - FULLER TANK or BOTH (If Equal)
4. Flaps – SET FOR TAKEOFF (MAX 24 Degrees/2nd Notch)
5. Trim Controls – SET FOR TAKEOFF
6. Flight Controls – CHECK FREE and CORRECT
7. Mixture Control – FULL RICH
8. Propeller Control – HIGH RPM
9. Alt Air Control – IN & LOCKED
10. Engine Instruments – CHECK
11. Radios and NAV Equipment – AS DESIRED
12. Altimeter – SET
13. Attitude Indicator – CHECK ERECT
14. Directional Gyro – CHECK and SET
15. Crew Briefing – COMPLETE
16. Pulse Lights – As Required
17. Transponder - ALT
18. Parking Brake – OFF

Rotate	Climb	Glide
50 MPH	90 MPH	83 MPH

CAUTION

For takeoff or landing under gusty crosswind conditions, flap setting of 0° (one notch) is recommended. -7° permissible.

CAUTION

High engine RPM and low manifold pressure operations and/or use rapid throttle movements could cause severe damage to the engine counterweights, roller and bushings.

AFTER TAKEOFF/CLIMB

1. Airspeed – 90 –100 MPH
2. Power – SET
 - a. Throttle – 29 IN MP
 - b. Prop Control – 2400 RPM
3. Mixture – FULL RICH OR AS NEEDED FOR BEST POWER

CAUTION

Climb under 90 mph only when necessary & check cylinder head temperature frequently.

LEVEL OFF/CRUISE

1. Fuel Quantity – CHECK

2. Engine Instruments – CHECK
3. Power – SET
 - a. Throttle – 14.5 to 29 IN Manifold Pressure
 - b. Propeller – 2050 to 2400 RPM
4. Mixture – LEAN
5. Flaps – SET (Fully Retracted/ -7° or 1st Notch/0°)
6. Rudder & Elevator Trim – ADJUST
7. Flight Plan – OPEN
8. Pulse Lights – As Required
9. CO Detector – CHECK

DESCENT

1. Crew Briefing – COMPLETE
2. Flight Instruments – SET
3. Seat Belt and Shoulder Harness – Adjusted
4. Power – AS Desired
5. Mixture – LEAN for Smoothness
6. Flaps – AS DESIRED
7. CO Detector – CHECK
8. Pulse Lights – As Desired

BEFORE LANDING

1. Seat Belts and Shoulder Harnesses – FASTENED
2. Fuel Selector Value – FULLER TANK or BOTH (If Equal)
3. Mixture – FULL RICH
4. Propeller – HIGH RPM
5. Flaps – AS REQUIRED
6. Alternate Air Control – IN and LOCKED

GO AROUND/BALKED LANDING

1. Throttle – SET
2. Trim - SET
3. Flaps – RETRACT TO 24°
4. Airspeed – 90 MPH
5. Flaps – RETRACT

AFTER LANDING

1. Flaps – UP
2. Pitot Heat – OFF
3. Transponder – Standby
4. Landing and Taxi Lights – AS REQUIRED
5. Pulse Lights - OFF
6. Mixture – ADJUST

ENGINE SHUTDOWN

1. Parking Brake – As Required
2. Avionics Power Switch – OFF
3. Electrical Equipment – OFF
4. Magneto Grounding – CHECK (Perform below 1000 RPM)
5. Mixture – IDLE/CUTOFF
6. Ignition Switch – OFF
7. Anti-collision (Strobe) Light – OFF
8. Battery and Alternator Switch – OFF

BEFORE LEAVING AIRCRAFT

1. Control Locks – INSTALL
2. Tach/Hobbs Meter – RECORD
1. Wheel Chocks – INSTALL
2. Parking Brake – OFF
3. Tie Downs – INSTALL
4. Pitot Cover – INSTALL
5. Gust Locks – INSTALL
6. Flight Plan – CLOSED

Aircraft Information

- Gross Weight Capacity – 2500 (Takeoff and Landing)
- Engine – Lycoming IO-540-W1A5D
- Max Power – 235 BHP
- Max/Cont Engine Speed –2400 RPM
- Fuel Type – 100LL (Blue)
- Fuel Capacity (Tank Configuration C) – 43 Gal Main & 30 Gal Aux Usable
- Oil Type – Exxon Elite 20W-50
- Oil Capacity – 8 Qts (Minimum 6)
- Electrical – 24 - 28 Volt / 63 Amp
- Tire Pressure – ALL 25-26PSI

This checklist is a guide to coordinate Pilot Operating Handbook and STC data applicable to this particular aircraft only. The applicable Pilot Operating Handbook and STC installations remain the official documentation for this aircraft.

The pilot in command is responsible for complying with all items in the Pilot Operating Handbook and applicable STCs.

Reviewed by:

Wing Director of Maintenance _____ Date _____

EMERGENCY PROCEDURES

Maule MT-7-235 – N136CP

Emergency Basic Rules

1. Maintain aircraft control.
2. Analyze the situation and take proper action.
3. Land as soon as conditions permit.

Engine Emergency Shutdown

1. Mixture Full Lean.
2. Fuel Selector..... Off.
3. Ignition Switch..... Off.

Engine Fire During Start

1. Mixture Full Lean.
2. Throttle Open.
3. Continue cranking for several revolutions. Attempt to draw fire inside engine.
4. Accomplish ENGINE EMERGENCY SHUTDOWN if fire continues.

Engine Fire After Start

1. Accomplish ENGINE EMERGENCY SHUTDOWN.
2. Master Switch Off.

Emergency Exit On The Ground

1. Accomplish ENGINE EMERGENCY SHUTDOWN.
2. Master Switch Off.
..... Off
3. Leave aircraft by either door or kick out side window panels or baggage door.

Takeoff Abort

1. Throttle Closed.
2. Brakes As Required

Engine Failure After Takeoff or Forced Landing

1. Glide Establish 83 mph IAS with flaps at 0°.
2. Switch Fuel Selector to fullest tank.
3. Electric Fuel Pump On.
4. Mixture rich, Ignition On.
5. Engine Alternate Air Pull On.
6. If engine does not restart, accomplish EMERGENCY SHUT-DOWN.
7. Wing Flaps As Required.
8. Master Switch Off.

Partial Power Failure During Flight or After Takeoff

1. Mixture Rich.
2. Alternate Air Pull On.
3. Airspeed Glide at 83 mph IAS if unable to maintain level flight.
4. Fuel Selector Both.
5. Electric Fuel Pump On.
6. Ignition Switch Both.
7. Master Switch On.

Complete Power Failure During Flight

1. Glide Establish at 83 mph.
2. Attempt engine air start if warranted.

Engine Air Start

1. Fuel Selector Off.
2. Electric Fuel Pump On.
3. Mixture Rich.
4. Ignition Switch Both (start if propeller is not turning).
5. Auxiliary Fuel Tank pump switch ... on for tank feeding engine if Auxiliary tank has fuel.

6. If engine does not start, try flooded engine clearing procedure with throttle wide open and mixture full lean.
7. If no start, make forced landing.

NOTE
PROPELLER WILL NOT WINDMILL
BELOW 70 MPH.

NOTE
AT ALTITUDES OVER 8000 FEET, A
LEANER MIXTURE MAY BE
REQUIRED.

Electrical Fire

1. Master Switch Off.

Engine Fire During Flight

1. Accomplish ENGINE EMERGENCY SHUTDOWN.
2. Make forced landing.

Smoke and Fume Elimination

1. Cabin Heat Knob In.
2. Cabin Air Knob In.
3. Upper Air Vents Open.
4. Pilot's Window Open.
(below 120 mph).

Structural Damage

1. On Takeoff Abort.
2. In flight, maintain controllable airspeed.
3. Climb to safe stall recovery altitude.
4. Notify appropriate controlling agency, if appropriate.
5. Determine control difficulty airspeed by slowing down while flying straight ahead. Do not allow the aircraft to stall.

6. Make a full stop landing using 5-10 mph above difficulty airspeed or above normal approach speed, whichever is higher.

Recovery From Inadvertent Spins

Intentional spins are prohibited. If the aircraft inadvertently enters a spin, simultaneously apply full rudder opposite the direction of rotation, and full nose down elevator with ailerons neutral and reduce power to idle. When the rotation stops, neutralize the rudder and elevator, and ease back on the control wheel as required to smoothly regain level flight. Wing flaps should be retracted to avoid exceeding the maximum flap speeds during recovery.

Alternator Failure

Alternator output should be monitored by reference to the ammeter located on the right side of the engine instrument cluster. Should the ammeter indicate a minus deflection when engine RPM is above 900 and /or red "Alternator Off Warning" light is illuminated, push ALT switch OFF then ON. Repeat two times as necessary to reset. If system will not reset, reduce the electrical load as much as possible, land as soon as practical and investigate the electrical system malfunction before further flight.

CAUTION

CHECK WEIGHT AND BALANCE CAREFULLY, ESPECIALLY WHEN USING THE 5TH SEAT OR WHEN CARGO OR BAGGAGE IS CARRIED IN THE REAR CABIN AREA. ALSO, FLIGHT PLANNING SHOULD INCLUDE ALLOWANCE FOR FORWARD C.G. SHIFT WITH FUEL BURN.

CAUTION

AEROBATICS AND INTENTIONAL SPINS PROHIBITED.

CAUTION

FUEL REMAINING IN TANK WHEN INDICATOR READS EMPTY CANNOT BE USED SAFELY IN FLIGHT.

CAUTION

THE STALL WARNING LIGHT IN INOPERATIVE WHEN THE BATTERY SWITCH IS OFF.

WARNING

ANTI-COLLISION LIGHT MAY CAUSE ADVERSE EFFECT ON PILOT WHEN FLYING IN VISIBLE MOISTURE, OVERCAST OR HAZE. IT IS RECOMMENDED THAT IT BE TURNED OFF UNDER THESE CONDITIONS.

Airspeeds for Emergency Operations

Engine Failure After Takeoff:

83 MPH

Maneuvering Speed:

2500 Lbs. MGW - 125 MPH

Maximum Glide: – 83 MPH
Flaps at 0°

This checklist is a guide to coordinate Pilot Operating Handbook and STC data applicable to this particular aircraft only. The applicable Pilot Operating Handbook and STC installations remain the official documentation for this aircraft.

The pilot in command is responsible for complying with all items in the Pilot Operating Handbook and applicable STCs.

Reviewed by:

Wing Director of Maintenance Date