



FLIGHT SCHOOL

C172M-180HP N8050E

See Supplement Airplane Flight Manual STC SA2196CE

PREFLIGHT INSPECTION

① CABIN

- 1. Pitot Tube Cover.....REMOVE
- 2. AROW Documents/Maintenance Log..... CHECK
- 3. Emergency Equipment..... CHECK
- 4. Control Wheel Lock..... REMOVE
- 5. Ignition Switch.....OFF
- 6. Master Switch.....ON
- 7. Fuel Quantity.....()CHECKED
- 8. Pitot Heat.....CHECK
- 9. Lights.....Check Operation
- 10. Avionics Master Switch.....ON/OFF
- 11. Master Switch.....OFF
- 12. Static Selector.....OFF
- 13. Fuel Selector Valve.....ON
- 14. Elevator Trim.....SET

② EMPENAGE

- 15. Baggage Door..... CHECK
- 16. Tie-Down..... DISCONNECT
- 17. Control Surfaces.....CHECK
- 18. Trim Tab.....CHECK
- 19. Antennas.....CHECK

③ RIGHT WING

- 20. Flap..... CHECK
- 21. Aileron.....CHECK
- 22. Tie-Down.....DISCONNECT
- 23. Main Wheel Tire..... CHECK
- 24. Fuel Tank Sumps (1).....DRAIN
- 25. Fuel Quantity/Caps.....CHECK/SECURE

③ NOSE

- 26. Fuel Sumps (1)DRAIN
- 27. Engine Oil (6-7 Qts.).....CHECK
- 28. Engine Cooling Inlets.....CHECK/CLEAR
- 29. Propeller and Spinner.....CHECK
- 30. Air Filter.....CHECK
- 31. Nose Wheel Strut and Tire..... CHECK
- 32. Left Static Source.....CHECK

④ LEFT WING

- 33. Fuel Quantity/Caps.....CHECK/SECURE
- 34. Fuel Tank Sumps(1).....DRAIN
- 35. Pitot Tube.....CHECK
- 36. Fuel Tank Vent.....CHECK
- 37. Tie-Down.....DISCONNECT
- 38. Main Wheel Tire.....CHECK
- 39. Stall Warning.....CHECK
- 40. Landing/Taxi Lights.....CHECK
- 41. Aileron.....CHECK
- 42. Flap.....CHECK

BEFORE ENGINE START

- 1. Preflight Inspection.....COMPLETE
- 2. Passenger Briefing.....COMPLETE
- 3. Seats and Seat Belts.....SET
- 4. Brakes.....TEST
- 5. Circuit Breakers.....CHECK IN
- 6. Electrical Equipment..... OFF
- 7. Avionics Master.....OFF
- 8. Fuel Selector Valve.....BOTH
- 9. *Prime.....AS REQUIRED
- 10. Throttle.....OPEN ¼ INCH
- 11. Mixture.....RICH
- 12. Master Switch.....ON
- 13. Beacon.....ON
- 14. Propeller Area.....CLEAR
- 15. Ignition.....START



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AFTER START

- 1. Oil Pressure/Engine Instruments.....CHECK
- 2. Mixture.....LEAN
- 3. Flaps.....CHECK/UP
- 4. Avionics Master.....ON
- 5. Radios.....SET/RECORD ATIS/ASOS
- 6. Brakes.....TEST

BEFORE TAKE OFF

- 1. Flight Controls.....FREE/CORRECT
- 2. Fuel Quantity.....CHECK
- 3. Flight InstrumentsCHECK/SET
- 4. Mixture.....RICH
- 5. Fuel Selector Valve.....BOTH
- 6. Runup.....(1700 RPM)
Magnetos (125 Max Drop/50 Differential)...CHECK
Oil Pressure/Engine Instruments.....CHECK
Carb. HeatCHECK
Vacuum.....CHECK
- 7. Idle.....CHECK
- 8. Power.....SET 1,000 RPM
- 9. Alternate Static.....CHECK
- 10. Autopilot.....CHECK (As Required)
- 11. Elevator Trim.....SET TO TAKEOFF
- 12. Flaps.....SET AS REQUIRED
- 13. Departure/Emergency Briefing.....COMPLETE

RUNWAY ITEMS

- 1. Heading Indicator.....SET
- 2. Altitude XPDR.....SET
- 3. Lights.....SET
- 4. Fuel.....MIX FULL RICH
- 5. Time.....RECORD

TAKEOFF

- 1. Airspeed.....Rotate 55(63)
- 2. Vy.....73(84)
- 3. Throttle.....FULL OPEN
- 4. FLAPS.....UP

CLIMB

- 1. Airspeed.....75-85(86-97)
- 2. Mixture.....LEAN
- 3. Instruments.....CHECK

CRUISE

- 1. Power (2100-2600) (<75%)SET
- 2. Normal Sea Level.....111-115(127-132)
- 3. Trim.....SET
- 4. MixtureLEAN
- 5. Engine Instruments.....CHECK
- 6. Heading.....SET TO COMPASS

DESCENT

- 1. ATIS/ASOS.....ACUIRE
- 2. POWER.....CRUISE DESCENT SET (2000RPM)
- 3. Carb Heat.....AS REQUIRED
- 4. Mixture.....SET
- 5. Altimeter.....SET
- 5. Fuel Selector.....BOTH
- 6. Approach Briefing.....COMPLETE

BEFORE LANDING

- 1. Lights.....SET
- 2. Mixture.....RICH
- 3. Fuel Selector.....BOTH
- 4. Carb Heat.....ON
- 5. Autopilot.....OFF

AFTER LANDING

- 1. Lights.....SET
- 2. Carb Heat.....OFF
- 3. Flaps.....UP
- 4. Mixture.....LEAN

SHUTDOWN

- 1. Avionics MasterOFF
- 2. Lights OFFOFF
- 3. MixtureCUTOFF
- 4. Ignition.....OFF
- 5. Master SwitchOFF

SECURING

- 1. Control Lock.....INSTALL
- 2. Fuel Selector Valve.....LEFT OR RIGHT
- 3. Pitot Cover.....INSTALL
- 4. ChocksLEFT MAIN
- 5. Tie-Downs.....SET
- 6. Paperwork/Flight Plan.....COMPLETE/CLOSED

Climb out	75-85(86-97)
Vy	84-86 MPH
Vx	73(84)
Short Field Take off 10° Flaps	48(55)

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ENGINE FAILURE DURING TAKEOFF ROLL

- 1. Throttle.....IDLE
- 2. Brakes.....APPLY
- 3. Flaps.....RETRACT
- 4. Mixture.....CUTOFF
- 5. IgnitionOFF
- 6. Master Switch.....OFF

ENGINE FAILURE DURING CLIMB

- 1. Airspeed...65(74) (Flaps UP) 60(69) (Flaps Down)
- 2. Mixture.....CUTOFF
- 3. Fuel Selector Valve.....OFF
- 4. IgnitionOFF
- 5. Flaps.....AS REQUIRED
- 6. Master Switch.....OFF
- 7. Cabin Door.....UNLATCH
- 8. Land.....STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT

- 1. Airspeed.....65(74)
- 2. Carb. Heat.....ON
- 3. Fuel Selector Valve.....BOTH
- 4. Mixture.....RICH
- 5. IgnitionBOTH (or START if propeller is stopped)
- 6. Primer.....In and Locked

EMERGENCY LANDING WITHOUT ENGINE POWER

- 1. Passenger Seat Backs.....MOST UPRIGHT POSITION
- 2. Seats and Seat Belts.....SECURE
- 3. Airspeed.....65(74) (Flaps UP) 60(69) MPH (Flaps Down)
- 4. Mixture.....CUTOFF
- 5. Fuel Selector Valve.....OFF
- 6. IgnitionOFF
- 7. Flaps.....AS REQUIRED
- 8. Master Switch.....OFF
- 9. Cabin Door.....UNLATCH

ENGINE FIRE DURING START

1. Ignition Switch.....START, Continue Cranking

IF engine starts:

- 2. Power.....1700 RPM
- 3. Engine.....SHUTDOWN

IF Engine Fails to Start:

- 4. Throttle.....FULL OPEN
- 5. Mixture.....CUT OFF
- 6. Cranking.....CONTINUE
- 7. Fuel Selector Valve.....OFF (Pointed Aft)

- 8. Engine.....SECURE
 - a. Master Switch.....OFF
 - b. Ignition Switch.....OFF
- 10. Airplane.....EVACUATE
- 11. Fire.....EXTINGUISH

ENGINE FIRE IN FLIGHT

- 1. Mixture.....CUT OFF
- 2. Fuel Selector Valve.....OFF
- 3. Master Switch.....OFF

- 4. Cabin Heat and Air.....OFF
- 5. Airspeed.....100(115)
- 6. Forced Landing.....EXCECUTE

ELECTRICAL FIRE IN FLIGHT

- 1. Master Switch.....OFF
- 2. Vents, Cabin Air, Heat.....CLOSED
- 3. Fire Extinguisher.....ACTIVATE

- 4. Avionics.....OFF
- 5. All other switches (except ignition switch).....OFF

CABIN FIRE

- 1. Master Switch.....OFF
- 2. Vents, Cabin Air, Heat.....CLOSED
- 3. Fire Extinguisher.....ACTIVATE

After discharging an extinguisher within a closed cabin, ventilate the cabin.



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PRECAUTIONARY LANDING WITH ENGINE POWER

1. Passenger Seat Back.....**MOST UPRIGHT POSITION**
2. Seats and Seat Belts.....**SECURE**
3. Airspeed.....**60(69)**
4. Flaps.....**20°**
5. Selected Field.....**FLY OVER**
6. Avionics and Electrical Equipment.....**OFF**
7. Flaps.....**30°(On Final Approach)**
8. Airspeed.....**70 MPH**
9. Master Switch.....**OFF**
10. Doors.....**UNLATCH**
11. Touchdown.....**SLIGHTLY TAIL LOW**
12. Ignition Switch.....**OFF**

DITCHING

1. Radio.....**TRANSMIT MAYDAY** on 121.5 MHz, giving location and intentions and **SQUAWK 7700**
2. Heavy Objects(baggage area)....**SECURE/JETTISON**
3. Passenger Seat Backs....**MOST UPRIGHT POSITION**
4. Seats and Seat Belts.....**SECURE**
5. Flaps.....**20° to 30°**
6. Power.....**ESTABLISH 300 FT/MIN DESCENT AT 55(63)**
If no power is available, approach at 65(74) with flaps up or at 60(69) with 10° flaps
7. Cabin Doors.....**UNLATCH**
8. Touchdown.....**LEVEL ATTITUDE**
9. Face.....**CUSHION**
10. ELT.....**ACTIVATE**
11. Airplane.....**EVACUATE**
If necessary open window to flood cabin to equalize pressure so doors can be opened.
13. Life Vests and Raft.....**INFLATE**

WHEN CLEAR OF AIRPLANE

LANDING WITH A FLAT MAIN TIRE

1. Approach.....**NORMAL**
2. Flaps.....**30°**
3. Touch Down.....**GOOD MAIN TIRE FIRST**
Hold airplane off of the flat tire as long as possible using aileron control.
4. Directional Control.....**MAINTAIN**

LANDING WITH A FLAT NOSE TIRE

1. Approach.....**NORMAL**
2. Flaps.....**30°**
3. Touch Down.....**ON MAIN GEAR**
Hold nose wheel off the ground as long as possible, when nose wheel touches the ground maintain full up elevator.
4. Directional Control.....**MAINTAIN**

AMMETER – EXCESSIVE RATE OF CHARGE

1. Alternator.....**OFF**

LOW VOLTAGE (VOLTS) DURING FLIGHT

May occur during low RPM, Annunciator will go out at higher RPM.

1. Avionics Master..... **OFF**
2. Alternator Circuit Breaker (ALT FLD)..... **CHECK IN**
3. Master Switch..... **OFF (both sides)**
4. Master Switch..... **ON**
5. Low Voltage Annunciator (VOLTS).....**CHECK OFF**
6. Avionics Master..... **ON**
If low voltage annunciator (VOLTS) illuminates again:
7. Alternator.....**OFF**
8. Nonessential Radio and Electrical Equipment.....**OFF**
9. Flight.....**TERMINATE** as soon as practical

VACCUM SYSTEM FAILURE (VAC)

1. Vacuum Gauge.....**CHECK**
If vacuum is not within normal limits partial panel procedures maybe required.