

**PILOT'S
FLIGHT CREW CHECKLIST**

C-172 M

Manufacture date 1976

N1370U

USAF ACADEMY AERO CLUB

P.O. BOX 77

AIR FORCE ACADEMY, CO 80840

719-333-4423

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B

**C-172 M / N1370U
KTS**

ROTATION	55
NORMAL CLIMB	70
BEST GLIDE	65
V_x (SL-10,000 MSL)	59
V_y (SL-10,000 MSL)	78-68
V_s	47
V_{so}	41
V_{fe}	85
V_a (2400/2000/1600 lbs.)	97/89/80
DOWNWIND	85
BASE	75
FINAL	65
SHORT FINAL FLAPS UP	60
SHORT FINAL FLAPS DOWN	55
USABLE FUEL Gals all flt conditions	38
MAX WEIGHT (LBS)	2550

PREFLIGHT

INTERIOR INSPECTION

1. Hobbs & Engine Tach readings ----- **VERIFY**
2. Required Documents ----- **ON BOARD**
3. CO Detector Exp Date & Color ----- **CHECK**
4. Avionics Master ----- **OFF**
5. Mixture ----- (push/pull only) **IDLE CUT OFF**
6. Electrical Switches ----- **OFF**
7. Circuit Breakers ----- **IN**
8. Control Wheel Lock ----- **REMOVE**
9. Ignition Switch ----- **OFF**
10. Primer ----- **IN & LOCKED**
11. Battery ----- **ON**
12. Voltage Light ----- **ON**
13. Fuel Quantity ----- **CHECK**
14. Flaps ----- **DOWN 30 DEGREES**
15. Landing Light ----- **CHECK, THEN OFF**
16. Pitot Heat ----- **CHECK, THEN OFF**
17. Nav / Beacon / Strobe Lights ----- **CHECK, THEN OFF**
18. Battery ----- **OFF**
19. Beacon Light Switch ----- **ON**
20. Alternate Static Air ----- **CHECK, THEN OFF**
21. Elevator Trim ----- **SET FOR TAKE-OFF**
22. Fuel Selector ----- **BOTH**

EXTERIOR INSPECTION

LEFT SIDE

1. Fuel Tank Sump ----- **DRAIN**
2. Baggage Door ----- **CLOSED & LOCKED**
3. ELT Antenna ----- **CONDITION**
4. Side of Fuselage & Bottom ----- **CONDITION**

EMPENNAGE

LEFT SIDE

1. Vertical Stabilizer ----- **CONDITION**
2. Horizontal Stabilizer ----- **CONDITION**
3. Elevator ----- **CONDITION**
 - Movement & Stops ----- **CHECK**
 - Security (cable & hinges) ----- **CHECK**
4. VOR Antenna ----- **CONDITION**
5. Rudder ----- **CONDITION**
 - Movement & Stops ----- **CHECK**
 - Security (cable & hinges) ----- **CHECK**
6. Tie Down ----- **DISCONNECT**

RIGHT SIDE

7. Elevator ----- **CONDITION**
 - Movement & Stops ----- **CHECK**
 - Security (cable & hinge) ----- **CHECK**
 - Trim Tab (alignment) ----- **CHECK**
8. Vertical Stabilizer ----- **CONDITION**
9. Horizontal Stabilizer ----- **CONDITION**
10. Fuselage ----- **CONDITION**

RIGHT MAIN LANDING GEAR

1. Main Gear Strut ----- **CHECK**
2. Brake Assembly ----- **CHECK**
3. Tire Condition & Inflation ----- **CHECK**
4. Wheel Hub Nut & Pin ----- **CHECK**
5. Chock ----- **REMOVE**

RIGHT WING

1. Fuel Tank Sump ----- DRAIN
2. Flap ----- CONDITION & MOVEMENT
 - tracks & rollers ----- CONDITION
 - control rod ----- SECURE
3. Aileron ----- CONDITION & MOVEMENT
 - hinges & Control Rod ----- SECURE
4. Wing Tip ----- CONDITION
5. Leading Edge ----- CONDITION
6. Under Surface of Wing & Strut ----- CONDITION
7. Tie Down ----- REMOVE
8. Fuel Quantity ----- CHECK VISUALLY
9. Fuel Filler Cap ----- SECURE
10. Top of Wing & Antennas ----- CONDITION
11. Air Vents Inlets ----- CLEAR

NOSE

1. Windshield ----- CONDITION & CLEAN
2. Radio Cooling Vent ----- CLEAR
3. Cowling Fasteners ----- SECURE
4. Oil Quantity ----- CHECK
5. Oil Dip Stick ----- SECURE
6. Fuel Strainer Knob ----- PULL 4 SECONDS
7. Oil Access Door ----- SECURE
8. Spinner & Propeller ----- CONDITION
9. Engine Cooling Air Inlets ----- CLEAR
10. Alternator Belt ----- CHECK
11. Landing Light ----- CONDITION
12. Carburetor Air Filter ----- CONDITION
13. Nose Gear Strut ----- EXTENTION 3"
 - steering Rods ----- SECURE
 - shimmy Dampener ----- CONDITION
14. Tire Inflation & Condition ----- CHECK
15. Tie Down ----- REMOVE
16. Static Port ----- CLEAR
17. Radio Cooling Vent ----- CLEAR
18. Cowling Fasteners ----- SECURE

LEFT WING

1. Fuel Quantity ----- CHECK VISUALLY
2. Fuel Filler Cap ----- SECURE
3. Top of Wing & Antennas ----- CONDITION
4. Air Vent Inlets ----- CLEAR
5. Pitot Tube ----- CHECK
6. Fuel Vent ----- CHECK
7. Stall Warning Horn Vent ----- CLEAR
8. Tie Down ----- REMOVE
9. Under Surface of Wing & Strut ----- CONDITION
10. Wing Leading Edge ----- CONDITION
11. Wing Tip ----- CONDITION
12. Aileron ----- CONDITION & MOVEMENT
 - hinges & control rod ----- SECURE
13. Flap ----- CONDITION & SECURE
 - Tracks & Rollers ----- CONDITION
 - Control Rod ----- SECURE

LEFT MAIN LANDING GEAR

1. Main Gear Strut ----- CHECK
2. Brake Assembly ----- CHECK
3. Tire Inflation & Condition ----- CHECK
4. Wheel Hub Nut & Pin ----- CHECK
5. Chock ----- REMOVE
6. Aircraft ----- ROLL FORWARD 1 FOOT
7. All Tires ----- CHECK AGAIN

PASSENGER BRIEFING

1. Use of Seat Belts & Shoulder Harness
2. Operation of Fresh Air Vents
3. Latching of Doors & Windows
4. Location of Exits
5. Location of Survival Equipment
6. Emergency Procedures

STARTING ENGINE

1. Seats & Seat Belts ----- ADJUST & SECURE
2. Controls ----- FREE & CORRECT
3. Key ----- IN IGNITION

NORMAL START

1. Mixture -----(push/pull only) RICH
2. Throttle ----- Pump once, open 1/8"
3. Carburetor Heat ----- COLD
4. Primer ----- AS REQUIRED
5. Master Switch ----- ON
6. Propeller Area ----- CLEAR
7. Ignition Switch ----- START
 - release when engine starts
 - if engine fails to start within 10 blades, stop cranking and allow starter to cool for 2 minutes

HOT START =====

1. Mixture ----- RICH
2. Throttle ----- Pump Once, OPEN 1"
3. Carburetor Heat ----- COLD
4. Master Switch ----- ON
5. Propeller Area ----- CLEAR
6. Ignition Switch ----- START

- =====
8. Throttle ----- 1000 RPM
 9. Oil Pressure / Suction ----- CHECK
 10. Ammeter / Voltage Light ----- CHECK / OUT

AFTER ENGINE START

1. Avionics Master Switch ----- ON
2. Nav Lights (Night) ----- ON
3. Flaps ----- UP (check visually)
4. Mixture -- (push/pull only) LEAN 1" above 3000' MSL
5. Radios / Transponder ----- ON / SET FREQUENCIES
6. ATIS / ASOS ----- WEATHER / RUNWAY INFO

TAXI

1. Obtain Taxi Clearance or Announce on CTAF
2. Toe Brakes ----- CHECK
3. Control Surfaces during taxi set for the wind POSITION
4. Flight Instruments during taxi ----- CHECK

RUN UP

1. Brakes -----HOLD
2. Throttle ----- 1700 RPM
3. Mixture --- above 3000'MSL LEAN FOR MAX POWER
4. Suction/Engine ----- CHECK
5. Alternator ----- CHECK
 - Alternator OFF
 - Check ammeter discharge, Voltage Light ON
 - Alternator ON
 - Check ammeter charge, Voltage Light OUT
6. Carburetor Heat ----- CHECK
7. Magnetos ----- CHECK
 - check right first: 125 max drop / 50 max diff.
8. Throttle ----- IDLE CHECK, THEN 1000RPM
 - smooth engine operation
 - idle rpm
 - oil pressure
9. Mixture ----- (push/pull only) ENRICHEN 1/4 INCH
10. Flight Instruments ----- CHECK & SET
11. Nav Instruments ----- SET COURSE

- 12. Departure Procedure ----- REVIEW
- 13. Emergency Procedures ----- REVIEW
- 14. Doors & Windows ----- CLOSED & LOCKED

BEFORE TAKEOFF

- 1. Obtain T/O clearance or announce on CTAF
- 2. Landing & Strobe Lights ----- ON

NORMAL TAKEOFF

- 1. Wing Flaps ----- UP
- 2. Carburetor Heat ----- COLD
- 3. Throttle ----- FULL OPEN
- 4. RPM 2300 / Oil Pressure / Airspeed ----- CHECK
- 5. Rotate ----- 55KTS
- 6. Normal Climb Speed ----- 70KTS

SHORT FIELD TAKEOFF

- 1. Wing Flaps -----UP
- 2. Carburetor Heat ----- COLD
- 3. Brakes ----- APPLY
- 4. Throttle ----- FULL OPEN
- 5. RPM 2300 / Oil Pressure ----- CHECK
- 6. Brakes ----- RELEASE
- 7. Elevator Control ----- SLIGHTY TAIL LOW
- 8. Climb Speed ----- 59KTS
 - until obstacles are cleared, then climb at Vy-70

SOFT FIELD TAKEOFF

- 1. Wing Flaps ----- 10
- 2. Carburetor Heat ----- COLD
- 3. Brakes ----- DO NOT APPLY
- 4. Power as necessary to keep rolling
- 5. Elevator Control -----FULL BACK
- 6. Throttle ----- FULL OPEN
 - when aligned with the runway
- 7. Elevator Control ----- RELAX
 - after nose wheel is clear of the ground
- 8. RPM 2300 minimum / oil pressure / airspeed

- 9. When Airborne Level off immediately, accelerate using ground effect, climb at Vx-59 until obstacles are cleared, then climb at Vy-70

- 10. Flaps ----- RETRACT INCREMENTALLY

ENROUTE

CLIMB

- 1. Normal Climb Speed ----- 70KTS
- 2. Throttle ----- FULL OPEN
- 3. RPM / Oil Pressure / Temp ----- CHECK
- 4. Flaps ----- UP
- 5. Landing Light ----- OFF

CRUISE

- 1. Throttle ----- 2100-2700RP
 - No more than 75% power refer to POH
- 2. Mixture ----- (push/pull only) LEAN AS REQUIRED
 - WARNING: Improper leaning procedures will greatly reduce endurance.
- 3. Trim ----- ADJUST
- 4. Engine Instruments ----- CHECK
- 5. Flight Instruments ----- CHECK

DESCENT

- 1. Fuel Quantity ----- CHECK
- 2. Mixture ----- (push/pull only) RICH AS REQUIRED
- 3. Carburetor Heat ----- AS REQUIRED
- 4. Throttle ----- AS DESIRE

LANDING

BEFORE LANDING

- 1. Landing Light ----- ON
- 2. Carburetor Heat ----- ON
- 3. Throttle ----- AS REQUIRED

4. Mixture -----(push/pull only) RICH AS NECESSARY
5. Fuel Selector ----- BOTH
6. Seat Belt & Shoulder Harness ----- FASTEN

NORMAL LANDING

1. Airspeed ----- 70KTS flaps up
----- 55KTS flaps down
2. Touchdown ----- ON MAIN WHEELS FIRST
3. Landing Roll ----- LOWER NOSE WHEEL GENTLY
4. Braking ----- MINIMUM REQUIRED

GO-AROUND

1. Throttle ----- FULL OPEN
2. Carburetor Heat ----- COLD
3. Flaps ----- 20
4. Establish Climb Attitude ----- V_x-60 or V-70
5. Flaps ----- RETRACT INCREMENTLLY

TOUCH AND GO

1. Flaps ----- UP
2. Throttle ----- FULL OPEN
3. Carburetor Heat ----- COLD
4. Rotate ----- 55KTS
5. Normal Climb Airspeed -----70KTS

SHORT FIELD LANDING

1. Airspeed ----- 65KTS flaps up
----- 55KTS flaps down
2. Throttle ----- REDUCE TO IDLE
3. Touchdown ----- MAIN WHEELS FIRST
4. Flaps ----- RETRACT
5. Brakes ----- APPLY HEAVILY

SOFT FIELD LANDING

1. Airspeed ----- 60KTS flaps up
----- 55 KTS flaps down
2. Throttle ----- AS REQUIRED
 - touchdown on main wheel as softly as possible
3. Landing Roll ----- LOWER NOSE WHEEL GENTLY
 - as late as possible
4. Elevator Control ----- (speed permitting) FULL BACK
5. Brakes ----- DO NOT APPLY
6. Flaps ----- DO NOT RETRACT
7. Throttle ----- AS NECESSARY
 - keep A/C rolling until clear of runway

AFTER LANDING

1. Landing Light & Strobe ----- OFF
2. Carburetor Heat ----- OFF
3. Flaps ----- UP
4. Obtain Taxi clearance or announce on CTAF

POST FLIGHT

SHUT DOWN

1. Avionics Master Switch ----- OFF
2. Nav Lights (if used) ----- OFF
3. Throttle ----- IDLE
4. Magneto Grounding ----- CHECK
5. Throttle ----- 1000 RPM
6. Mixture ----- IDLE CUT OFF
7. Throttle ----- CLOSE
8. Ignition Switch ----- OFF & KEY REMOVED
9. Master Switch ----- OFF
10. FLIGHT PLAN ----- CLOSE

SECURING AIRCRAFT

- 1. Control Wheel Lock ----- (except in hanger) INSTALL**
- 2. Headsets ----- STOW**
- 3. Cabin Vents, Air & Heat Knobs ----- CLOSED**
- 4. CO Detector Color ----- CHECK**
- 5. Hobbs & Engine Tach Readings / Key ----- RECORD**
- 6. Sun Screen (summer) ----- INSTALL**
- 7. Seat Belts / Shoulder Harness----- STOW**
- 8. Fuel Selector ----- LEFT or RIGHT**
- 9. Remove Personal Belongings ----- INCLUDING TRASH**
- 10. Inspect Tires ----- CHECK FOR TREAD CORD**
- 11. Chocks ----- INSTALL**
- 12. Oil Access Door (summer only) ----- OPEN**
- 13. Windshield ----- CLEAN**
- 14. Tie Downs ----- INSTALL**
- 15. Master Switch ----- RECHECK OFF**
- 16. Doors & Windows ----- CLOSE & LOCK**
 - **Do not lock doors in hanger**
 - **Leave windows open; summer only**
- 17. Checklist ----- STOW BETWEEN PILOT SEATS**