

**PILOT'S
FLIGHT CREW CHECKLIST**

C-172 P

Manufacture date 1981

N 6601K

USAF ACADEMY AERO CLUB

P.O. BOX 77

AIR FORCE ACADEMY, CO 80840

719-333-4423

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B

**C-172 P / N6601K
KTS**

ROTATION	55
NORMAL CLIMB	70
BEST GLIDE	65
V_x	56
V_y (SL-10,000 MSL)	76-71
V_s	44
V_{so}	33
V_{fe}	110 / 85
V_a weight	99/92/82 2400/2000/1600
DOWNWIND	85
BASE	75
FINAL	65
SHORT FINAL FLAPS UP	65
SHORT FINAL FLAPS DOWN	60
USABLE FUEL Gals all flt conditions	50
MAX WEIGHT (lbs)	2550

INTERIOR INSPECTION

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

EXTERIOR INSPECTION

LEFT SIDE

- 1. Fuel Tank Sump ----- DRAIN
- 2. Baggage Door ----- CLOSED & LOCKED
- 3. ELT Antenna ----- CONDITION
- 4. Left 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. Lights ----- CHECK
- 5. VOR & ADF Antenna ----- CONDITION
- 6. Rudder ----- CONDITION
 - Movement & Stops ----- CHECK
 - Security (cable & hinges) ----- CHECK
- 7. Tie Down ----- DISCONNECT

RIGHT SIDE

- 8. Elevator ----- CONDITION
 - Movement & Stops ----- CHECK
 - Security (cable & hinge) ----- CHECK
 - Trim Tab (alignment) ----- CHECK
- 9. Vertical Stabilizer ----- CONDITION
- 10. Horizontal Stabilizer ----- CONDITION
- 11. 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 & Roller----- CONDITION
 - Control Rod ----- SECURE
3. Aileron ----- CONDITION & MOVEMENT
 - Hinges & Control Rod ----- SECURE
4. Left Wing Tip & Lights ----- CONDITION
5. Leading Edge ----- CONDITION
6. Under Surface of Wing & Strut ----- CONDITION
7. Tie Down ----- DISCONNECT
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 & CLEAR
2. Cowling Fasteners ----- SECURE
3. Oil Quantity ----- CHECK
4. Oil Dip Stick ----- SECURE
5. Fuel Strainer Knob ----- PULL 4 SECONDS
6. Oil Access Door ----- SECURE
7. Spinner & Propeller ----- CONDITION
8. Engine Cooling Air Inlets ----- CLEAR
9. Alternator Belt ----- CHECK
10. Landing Light ----- CONDITION
11. Carburetor Air Filter ----- CONDITION
12. Nose Gear Strut -----EXTENTION 3"
 - Steering Rods ----- SECURE
 - Shimmy Dampener ----- CONDITION
13. Tire Inflation & Condition ----- CHECK
14. Tie Down ----- DISCONNECT
15. Static Port ----- CLEAR
16. 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 ----- DISCONNECT
9. Under Surface of Wing & Strut ----- CONDITION
10. Wing Leading Edge ----- CONDITION
11. Wing Tip ----- CONDITION
13. Aileron ----- CONDITION & MOVEMENT
 - hinges & control rod ----- SECURE
14. Flap ----- CONDITION & SECURE
 - track & roller ----- 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 Belt & 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

BEFORE STARTING ENGINE

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

NORMAL START

1. Mixture ----- RICH
2. Throttle ----- PUMP ONCE, THEN 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. PFD Master ----- ON
2. Avionics Master Switch ----- ON
3. Nav Lights (Night) ----- ON
4. Flaps ----- UP (check visually)
5. Mixture ----- LEAN 1" (above 3000' MSL)
6. GPS / Radios ----- SET
7. Transponder ----- ALTITUDE
8. ATIS / ASOS ----- WEATHER/RUNWAY INFO

TAXI

1. Obtain Taxi Clearance or announce on CTAF
2. Toe Brakes ----- CHECK
3. Control Surfaces ----- (according to wind) POSITION
4. Flight Instruments ----- CHECK

RUN UP

1. Brakes ----- HOLD
2. Throttle ----- 1700 RPM
3. Mixture ----- LEAN FOR MAX POWER
Above 3000' MSL
4. Suction / Engine Instrument ----- 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-e operation
 - idle rpm
 - oil pressure

- 9. Mixture ----- ENRICHEN 1 FULL TURN
- 10. Flight Instruments ----- CHECK & SET
- 11. GPS / Nav Instruments ----- SET COURSE
- 12. Departure Procedure ----- REVIEW
- 13. Emergency Procedures ----- REVIEW
- 14. Doors & Windows ----- CLOSED & LOCKED

BEFORE TAKEOFF

- 1. Landing & Strobe Lights ----- ON
- 2. Obtain takeoff clearance or announce on CTAF

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 ----- 10
- 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 ----- 56KTS
 - until obstacles are cleared, then climb at Vy-70
- 9. Flaps ----- RETRACT INCREMENTALLY

SOFT FIELD TAKEOFF

- 1. Wing Flaps ----- 10
- 2. Carburetor Heat ----- COLD
- 3. Brakes ----- DO NOT APPLY
- 4. Throttle 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 and accelerate
 - using ground effect, climb at Vx-56 until obstacles are cleared, then climb at Vy-70
- 10. Flaps ----- RETRACT INCREMENTALLY

ENROUTE

CLIMB

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

CRUISE

- 1. Throttle -----2100-2700RPM
 - No more than 75% power refer to POH
- 2. Mixture ----- 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. Carburetor Heat ----- AS REQUIRED
- 3. Throttle ----- AS DESIRED
- 4. Mixture ----- RICH AS REQUIRED

LANDING

BEFORE LANDING

- 1. Landing Light ----- ON
- 2. Carburetor Heat ----- ON
- 3. Throttle ----- AS REQUIRED
- 4. Mixture ----- RICH AS NECESSARY
- 5. Fuel Selector ----- BOTH
- 6. Rudder Trim ----- NEUTRAL
- 7. Seat Belt & Shoulder Harness ----- FASTEN

NORMAL LANDING

- 1. Airspeed ----- 65KTS (flaps up)
----- 60KTS (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 Retract ----- 20
- 4. Establish Climb Attitude ----- Vy-70
- 5. Flaps ----- RETRACT INCREMENTALLY

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)
----- 60KTS (flaps down)
- 2. Throttle ----- REDUCE TO IDLE
- 3. Touchdown ----- MAIN WHEELS FIRST
- 4. Flaps ----- RETRACT
- 5. Brakes ----- APPLY HEAVILY

SOFT FIELD LANDING

- 1. Airspeed ----- 65KTS (flaps up)
-----60KTS (flaps down)
- 2. Throttle ----- AS REQUIRED
 - To 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

AFTER LANDING

- 1. Landing Light & Strobe ----- OFF
- 2. Carburetor Heat ----- OFF
- 3. Flaps ----- UP
- 4. Obtain Taxi Clearance or Announce of CTAF

POST FLIGHT

SHUTDOWN

1. PDF Off Button ----- HOLD
2. PDF Master Switch ----- OFF
3. Avionics Master Switch ----- OFF
4. Nav Lights (if used) ----- OFF
5. Throttle ----- IDLE
6. Magneto Grounding ----- CHECK
7. Throttle ----- 1000 RPM
8. Mixture ----- IDLE CUTOFF
9. Throttle ----- CLOSED
10. Ignition Switch ----- OFF, KEY REMOVED
11. Master Switch ----- OFF
12. 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