

**PILOT'S
FLIGHT CREW CHECKLIST**

C-172 K

Manufacture date 1969

N 78512

USAF ACADEMY AERO CLUB

P.O. BOX 77

AIR FORCE ACADEMY, CO 80840

719-333-4423

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B

**C-172 K / N78512
MPH**

ROTATION	60
NORMAL CLIMB	85
BEST GLIDE	80
V_x (SL-10,000 MSL)	68-74
V_y (SL-10,000 MSL)	82-79
V_s	57
V_{so}	49
V_{fe}	100
V_a (2400)	122
DOWNWIND	95
BASE	85
FINAL	75
SHORT FINAL FLAPS UP	70
SHORT FINAL FLAPS DOWN	65
USABLE FUEL Gals all flt conditions	38
MAX WEIGHT (LBS)	2500

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. Fuel Quantity ----- **CHECK**
13. Flaps ----- **DOWN 30 DEGREES**
14. Taxi / Landing Light ----- **CHECK, THEN OFF**
15. Pitot Heat ----- **CHECK, THEN OFF**
16. Nav / Beacon ----- **CHECK, THEN OFF**
17. Battery ----- **OFF**
18. Beacon Light Switch ----- **ON**
19. Elevator Trim ----- **SET FOR TAKE OFF**
20. 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

1. Vertical Stabilizer ----- **CONDITION**
2. Horizontal Stabilizer ----- **CONDITION**
3. Elevator ----- **CONDITION**
 - Movement & Stops ----- **CHECK**
 - Security (cable & hinges) ----- **CHECK**
4. VOR & ADF 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. Horizontal Stabilizer ----- **CONDITION**
9. Vertical 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 ----- 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 ----- 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 & 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. 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. Radio cooling Vent ----- CLEAR
- 17. 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. Landing/Taxi Light ----- CONDITION
- 10. Under Surface of Wing & Strut ----- CONDITION
- 11. Wing Leading Edge ----- CONDITION
- 12. Wing Tip ----- CONDITION
- 13. Aileron ----- CONDITION & MOVEMENT
 - hinges & control rod ----- SECURE
- 14. Flap ----- CONDITION & SECURE
 - tracks ----- 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. Seat & Seat Belts -----ADJUST & SECURE
2. Flight Controls ----- FREE & CORRECT
3. Key ----- IN IGNITION

NORMAL START

1. Mixture ----- (push/pull only) RICH
2. Throttle ----- PUMP ONCE THEN OPEN 1/8 INCH
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 ----- START

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8. Throttle ----- 1000 RPM
 9. Oil Pressure / Suction ----- CHECK
 10. Ammeter ----- CHECK

AFTER ENGINE START

1. Avionics Master ----- ON
2. Nav. Lights (Night) ----- ON
3. Flaps ----- UP (check visually)
4. Mixture --- (push/pull only) LEAN 1" above 3000' MSL
5. Radios / Transponder ----- SET FREQUENCIES
6. 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, during taxi ----- CHECK

RUN UP

1. Brakes ----- HOLD
2. Throttle ----- 1700 RPM
3. Mixture --- above 5000'MSL LEAN FOR MAX POWER
4. Suction/Engine Instruments ----- CHECK
5. Alternator ----- CHECK
 - Alternator OFF
 - Check ammeter discharge
 - Alternator ON
 - Check ammeter charge
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 Instrument ----- SET COURSE

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

BEFORE TAKEOFF

- 1. Landing Light ----- 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 2260 minimum / Oil Pressure / Airspeed - CHECK
- 5. Rotate ----- 60MPH
- 6. Normal Climb Speed ----- 85MPH

SHORT FIELD TAKEOFF

- 1. Wing Flaps ----- UP
- 2. Carburetor Heat ----- COLD
- 3. Brakes ----- APPLY
- 4. Throttle ----- FULL OPEN
- 5. RPM 2260 / Oil Pressure ----- CHECK
- 6. Brakes ----- RELEASE
- 7. Elevator Control----- SLIGHTY TAIL LOW
- 8. Climb Speed ----- 70MPH
 - until obstacles are cleared, then climb at Vy-80

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 2260 / oil pressure / airspeed ----- CHECK

- 9. When Airborne Level off immediately, accelerate using ground effect, climb at Vx-70 until obstacles are cleared, then, climb at Vy-80

- 10. Flaps ----- RETRACT INCREMENTLY

ENROUTE

CLIMB

- 1. Normal Climb Speed ----- 85MPH
- 2. Throttle ----- FULL OPEN
- 3. RPM / Oil Pressure / Temp ----- CHECK
- 4. Flaps ----- UP
- 5. Landing Light ----- OFF

CRUISE

- 1. Power -----2100-2700RPM
 - 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. Power ----- AS DESIRED

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 ----- 70MPH flaps up
----- 65MPH flaps down
2. Flaps ----- AS REQUIRED
3. Touchdown ----- ON MAIN WHEELS FIRST
4. Landing Roll ----- LOWER NOSE WHEEL GENTLY
5. Braking ----- MINIMUM REQUIRED

GO-AROUND

1. Throttle ----- FULL OPEN
2. Carburetor Heat ----- COLD
3. Flaps ----- 20
4. Establish Climb Attitude ----- V_X-70 or V-80
5. Flaps ----- RETRACT INCREMENTALLY

TOUCH AND GO

1. Flaps ----- UP
2. Throttle ----- FULL OPEN
3. Carburetor Heat ----- COLD
4. Rotate ----- 60MPH
5. Normal Climb Airspeed ----- 80MPH

SHORT FIELD LANDING

1. Airspeed ----- 70MPH flaps up
----- 65MPH flaps down
2. Power ----- REDUCE TO IDLE
3. Touchdown ----- MAIN WHEELS FIRST
4. Flaps ----- RETRACT
5. Brakes ----- APPLY HEAVILY

SOFT FIELD LANDING

1. Airspeed ----- 70MPH flaps up
----- 65MPH 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
to keep A/C rolling until clear of runway

AFTER LANDING

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

POST FLIGHT

SHUTDOWN

1. Avionics Master ----- OFF
2. Nav Lights (if used) ----- OFF
3. Throttle ----- IDLE
4. Magneto Grounding ----- CHECK
5. Throttle ----- 1000 RPM
6. Mixture ----- IDLE CUTOFF
7. Throttle ----- CLOSED
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 & Heat Knobs ----- CLOSED**
- 4. CO Detector Color ----- CHECK**
- 5. Hobbs & Engine Tach Readings / Key ----- RECORD**
- 6. Sun Screen (summer) ----- INSTALL**
- 7. Seat Belt / Shoulder Harness ----- STOW**
- 8. Fuel Selector ----- LEFT or RIGHT**
- 9. Remove Personal Belongings, including trash**
- 10. Inspect Tires ----- FOR TREAD CORD**
- 11. Chocks ----- INSTALL**
- 12. Oil Access Door (summer only) ----- OPEN**
- 13. Windshield ----- CLEAN**
- 14. Tie Downs ----- INSTALL**
- 15. Master Switch ----- RE-CHECK OFF**
- 16. Doors & Windows ----- CLOSE & LOCK**
 - Do not lock airplane in hanger**
 - Leave windows open (summer only)**
- 17. Checklist ----- STOW BETWEEN PILOT SEATS**