

**PILOT'S  
FLIGHT CREW CHECKLIST**

**T – 41 C**

Manufacture date 1968

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**7903 N**

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**RALLY 03**

**USAF ACADEMY AERO CLUB**

**P.O. BOX 77**

**AIR FORCE ACADEMY, CO 80840**

**719-333-4423**

**21 November 2020**

**T – 41C / 7903 N**

1968

**MPH**

<b>ROTATION</b>	<b>60</b>
<b>NORMAL CLIMB</b>	<b>95</b>
<b>BEST GLIDE</b>	<b>85</b>
<b>V<sub>x</sub></b>	<b>70</b>
<b>V<sub>y</sub></b>	<b>95</b>
<b>V<sub>s</sub></b>	<b>64</b>
<b>V<sub>so</sub></b>	<b>53</b>
<b>V<sub>fe</sub></b>	<b>100</b>
<b>V<sub>a</sub> (2500 LBS)</b>	<b>127</b>
<b>DOWNWIND</b>	<b>105</b>
<b>BASE</b>	<b>85</b>
<b>SHORT FINAL FLAPS UP</b>	<b>85</b>
<b>SHORT FINAL FLAPS 20</b>	<b>80</b>
<b>SHORT FINAL FLAPS 40</b>	<b>75</b>
<b>USABLE FUEL</b> Gals all flt conditions	<b>46</b>
<b>MAX WEIGHT</b> NORMAL	<b>2500</b>
<b>MAX WEIGHT</b> UTILITY	<b>2200</b>

## **PREFLIGHT**

### **INTERIOR INSPECTION**

1. Hobbs & Tach-Meter Reading -----**VERIFY**
2. Required Documents ----- **ON BOARD**
3. CO Detector Exp Date & Color ----- **CHECK**
4. Avionics Master Switch ----- **OFF**
5. Mixture ----- **IDLE CUT OFF**
6. Electrical Switches ----- **OFF**
7. Circuit Breakers ----- **IN**
8. Control Wheel Lock ----- **REMOVE**
9. Ignition Switch ----- **OFF**
10. Primer ----- **IN AND LOCKED**
11. Auxiliary Fuel Pump Switch ----- **OFF**
12. Fuel Shutoff Knob ----- **IN**
13. Master Switch ----- **ON**
14. Fuel Quantity ----- **CHECK**
15. Flaps ----- **DOWN 30 DEGREES**
16. Taxi / Landing Lights ----- **CHECK, THEN OFF**
17. Pitot Heat ----- **CHECK, THEN OFF**
18. Nav / Beacon / Strobe Lights ----- **CHECK, THEN OFF**
19. Master Switch ----- **OFF**
20. Elevator Trim ----- **SET FOR TAKE OFF**
21. Fuel Selector ----- **BOTH**

### **EXTERIOR INSPECTION**

#### **LEFT SIDE**

1. Fuel Tank Sump ----- **DRAIN**
2. Baggage Door ----- **LOCKED**
2. E.L.T. Antenna ----- **CONDITION**
4. Static Port ----- **CLEAR**
3. Fuselage & Bottom ----- **CONDITION**
4. Battery Drain ----- **CHECK FOR LEAKAGE**

## **EMPENAGE**

### **LEFT SIDE**

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

### **RIGHT SIDE**

1. Elevator ----- **CONDITION**
  - Movement and Stops ----- **CHECK**
  - Security (Cable & Hinges) ----- **CHECK**
  - Trim Tab (Alignment) ----- **CHECK**
2. Horizontal Stabilizer ----- **CONDITION**
3. Vertical Stabilizer ----- **CONDITION**
4. Fuselage ----- **CONDITION**
5. Static Port ----- **CLEAR**

### **RIGHT MAIN LANDING GEAR**

1. Main Gear Strut ----- **CHECK**
2. Brake Assembly ----- **CHECK**
3. Tire ----- **INFLATION & CONDITION**
4. Wheel Hub & Pin ----- **CHECK**

## RIGHT WING

1. Fuel Tank Sump ----- DRAIN
2. Flap ----- CONDITION & SECURE
  - Tracks & Roller ----- 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  
do not step on strut
9. Fuel Filler Cap ----- SECURE
10. Top of Wing and Antennas ----- CONDITION
11. Air Vent Inlets ----- CLEAR

## NOSE

1. Windshield ----- CONDITION & CLEAN
2. Cowling Fasteners ----- SECURE
3. Fuel Sump Drain (Belly)----- DRAIN
4. Propeller ----- CONDITION
5. Engine Cooling Air Inlets ----- CLEAR
6. Nose Gear Strut ----- EXTENSION 3"
  - Steering Rods ----- SECURE
  - Shimmy Dampener ----- CONDITION
7. Tire ----- INFLATION & CONDITION
8. Cowling Fasteners ----- SECURE
9. Fuel Strainer Knob (cockpit) ----- PULL OUT 4 SEC

## LEFT WING

10. Oil Quantity ----- CHECK10
11. Oil Dipstick ----- SECURE
12. Oil Access Door ----- SECURE
13. Fuel Quantity ----- CHECK VISUALLY  
Do not step on strut
14. Fuel Filler Cap -----SECURE
15. Top of Wing and Antennas ----- CONDITION
16. Air Vents Inlets ----- CLEAR
17. Pitot Tube -----CHECK
18. Fuel Vent ----- CHECK
17. Stall Warning Horn Vent ----- CLEAR
18. Tie Down ----- REMOVE
19. Under Surface of Wing & Strut ----- CONDITION
20. Wing Leading Edge ----- CONDITION
21. Wing Tip ----- CONDITION
22. Aileron ----- CONDITION & MOVEMENT
  - Hinges and Control Rod ----- SECURE
23. 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
4. Wheel & Hub Nut & Pin ----- CHECK
5. Chock ----- REMOVE
6. Aircraft ----- ROLL FORWARD 1 FOOT
7. All Tires ----- CHECK

## PASSENGER BRIEFING

1. USE OF SEAT BELT AND SHOULDER HARNESS
2. OPERATION OF FRESH AIR VENTS (OVERHEAD)
3. LATCHING DOORS AND 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

## STARTING ENGINE

1. Mixture ----- RICH
2. Master Switch ----- ON
3. Throttle ----- FULL OPEN
4. Auxiliary Fuel Pump Switch ----- (8 to 10 GPH) HIGH
5. Auxiliary Fuel Pump Switch ----- OFF
6. Throttle ----- CLOSED then open 1/4 to 1/2 inch
7. Propeller Area ----- CLEAR
8. Ignition Switch ----- START
  - release when engine starts
  - If engine fails to start within 10 blades, stop
  - cranking and allow starter to cool for two minute

**HOT START NEXT PAGE  
(VAPOR LOCK)**

## **HOT START (vapor lock) =====**

1. Mixture ----- FULL LEAN
2. Throttle ----- IDLE
3. Master Switch ----- ON
4. Auxiliary fuel boost pump ----- HIGH  
for 5-10 seconds
5. Auxiliary fuel pump ----- OFF
6. Mixture ----- RICH
- XX Throttle ----- 1/4 to 1/2 " OPEN XX
7. Prop area ----- CLEAR
8. Ignition Switch ----- START
  - release after engine starts
  - if engine fail to start after 10 blades  
stop cranking and cool starter for 2 mins.

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

## AFTER ENGINE START

1. Avionics Master Switch ----- ON
2. Nav Lights (Night) ----- ON
3. Flaps ----- UP
4. Radios / Transponder ----- SET
5. ATIS/ASOS ----- WEATHER / RUNWAY INFO

## TAXI

1. Obtain Taxi Clearance or announce on CTAF
2. Toe Brakes ----- CHECK
3. Control Surfaces ----- according to the wind SET
4. Flight Instruments during taxi ----- CHECK

## **RUNUP**

1. Brakes ----- **HOLD**
2. Mixture ----- **RICH**
3. Throttle ----- **1800 RPM**
4. Suction / Engine Instruments ----- **CHECK**
5. Ammeter ----- **CHECK**
  - ammeter normal 0 to +2 needle widths
  - ammeter max for takeoff more than +2 needle widths
6. Magnetos ----- **CHECK**
  - check right first, 150 max drop / 50 max diff
7. Throttle ----- **IDLE CHECK, THEN 1000 RPM**
  - smooth engine operation
  - idle RPM check (650 rpm min)
  - oil pressure
8. Mixture ----- **LEAN 1"**
9. Flight Instruments ----- **SET**
10. Nav Instruments ----- **SET COURSE**
11. Radios ----- **SET FREQUENCIES**
12. Transponder ----- **ALT**
13. Departure Procedure ----- **REVIEW**
14. Emergency Procedures ----- **REVIEW**
15. Doors & Windows ----- **CLOSED & LOCKED**

## **BEFORE TAKEOFF**

1. Obtain takeoff clearance or announce on CTAF
2. Landing Light / Strobe ----- **ON**

## **NORMAL TAKE-OFF**

1. Flaps ----- **UP**
2. Throttle (smoothly) ----- **FULL OPEN**
3. RPM (2270 min) ----- **CHECK**
4. Oil Pressure / Airspeed Indicator ----- **CHECK**
5. Rotate ----- **60MPH**
6. Normal Climb Speed ----- **90MPH**

## **SHORT FIELD TAKE-OFF**

1. Flaps ----- **10°**
2. Brakes ----- **APPLY**
3. Throttle (smoothly) ----- **FULL OPEN**
4. RPM (2270 min.) / Oil Pressure ----- **CHECK**
5. Brakes ----- **RELEASE**
6. Elevator Control ----- **SLIGHTLY TAIL LOW**
7. Climb Speed ----- **70 MPH**
  - until all obstacles are cleared, then climb at Vy-95
8. Flaps ----- **RETRACT INCREMENTALLY**

## **SOFT FIELD TAKE-OFF**

1. Flaps ----- **10°**
2. Brakes ----- **DO NOT APPLY**
3. Power as necessary to keep rolling.
4. Elevator Control ----- **FULL BACK**
5. Throttle (smoothly) ----- **FULL OPEN**
  - when aligned with the runway
6. Elevator Control ----- **RELAX**
  - after nose wheel is clear off the ground
7. RPM (2300 min) ----- **CHECK**
8. Oil Pressure / Airspeed indicator ----- **CHECK**
9. When airborne level off immediately, accelerate using ground effect, climb at Vx-75 until obstacles are cleared, then climb at Vy-95
10. Flaps ----- **RETRACT INCREMENTALLY**

## ENROUTE

### CLIMB

1. Throttle ----- FULL POWER
2. Normal Climb Speed ----- 90 MPH
3. Engine Instruments ----- CHECK
4. Flaps ----- UP
5. Landing Light ----- OFF

### CRUISE

1. Cruise Power ----- SET
2. Fuel Flow ----- SET TO 10 GPH  
Use the POH Cruise Performance Charts page A-8
3. Engine Instruments ----- CHECK
4. Flight Instruments ----- CHECK

### DESCENT

1. Throttle ----- AS REQUIRED
2. Mixture ----- AS NECESSARY
3. Fuel Quantity ----- CHECK

### LANDING

#### BEFORE LANDING

1. Landing Light ----- ON
2. Mixture ----- RICH
3. Fuel Selector ----- BOTH
4. Seat Belt ----- FASTEN

#### NORMAL LANDING

1. Airspeed ----- 85 MPH (flaps up)  
----- 80 MPH (flaps 20)  
----- 75 MPH (flaps 40)
2. Flaps ----- AS REQUIRED
3. Touchdown ----- MAIN WHEELS FIRST
4. Landing Roll ----- LOWER NOSE WHEEL GENTLY
5. Braking ----- MINIMUM REQUIRED

## GO-AROUND

1. Throttle (smoothly) ----- FULL OPEN
2. Flaps ----- FLAPS 20
3. Establish climb attitude for -----  $V_x-70$  OR  $V_y-95$
4. Flaps ----- RETRACT INCREMENTALLY

## TOUCH-AND-GO PROCEDURE

1. Flaps ----- UP
2. Throttle (smoothly) ----- FULL OPEN
3. Rotate ----- 60MPH
4. Normal Climb Speed ----- 85MPH

## SHORT FIELD LANDING

1. Airspeed ----- 75 MPH (flaps 40)
2. Throttle ----- REDUCE TO IDLE
3. Touchdown ----- MAIN WHEELS FIRST
4. Flaps ----- RETRACT
5. Brakes ----- APPLY HEAVILY

## SOFT FIELD LANDING

1. Airspeed ----- 75 (flaps 40)
2. Throttle ----- POWER AS NECESSARY  
To touch down on the main wheels as soft as possible
3. Landing Roll ----- LOWER NOSE WHEEL GENTLY
  - as late as possible
4. Elevator Control ----- FULL BACK (speed permitting)
5. Brakes ----- DO NOT APPLY
6. Flaps ----- DO NOT RETRACT
7. Throttle ----- AS NECESSARY
  - keep rolling until clear of runway

## AFTER LANDING

1. Landing Light / Strobes ----- OFF
2. Flaps ----- UP
3. 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 Check – (650 rpm min)----- IDLE**
- 4. Magneto Grounding ----- CHECK**
- 5. Throttle ----- 1000 – 1200 RPM**
- 7. Mixture ----- IDLE CUT OFF**
- 8. Throttle ----- CLOSE**
- 9. Ignition Switch ----- OFF & KEY REMOVED**
- 10. Master Switch ----- OFF**
- 11. 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 & Tach Readings / Key ----- RECORD**
- 6. Sun Screen (summer) ----- INSTALL**
- 7. Seat Belt / Shoulder Harness ----- SECURE**
- 8. Fuel Selector ----- LEFT OR RIGHT**
- 9. Personnel belongings and TRASH ----- REMOVE**
- 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 ----- RE-CHECK OFF**
- 16. Doors & Windows ----- CLOSE AND LOCK**
  - Do not lock doors in hangar**
  - Leave windows open (summer only)**
- 17. Pitot Tube Cover – (after each flight) ----- INSTALL**
- 18. Check List ----- STOW BETWEEN PILOT SEATS**