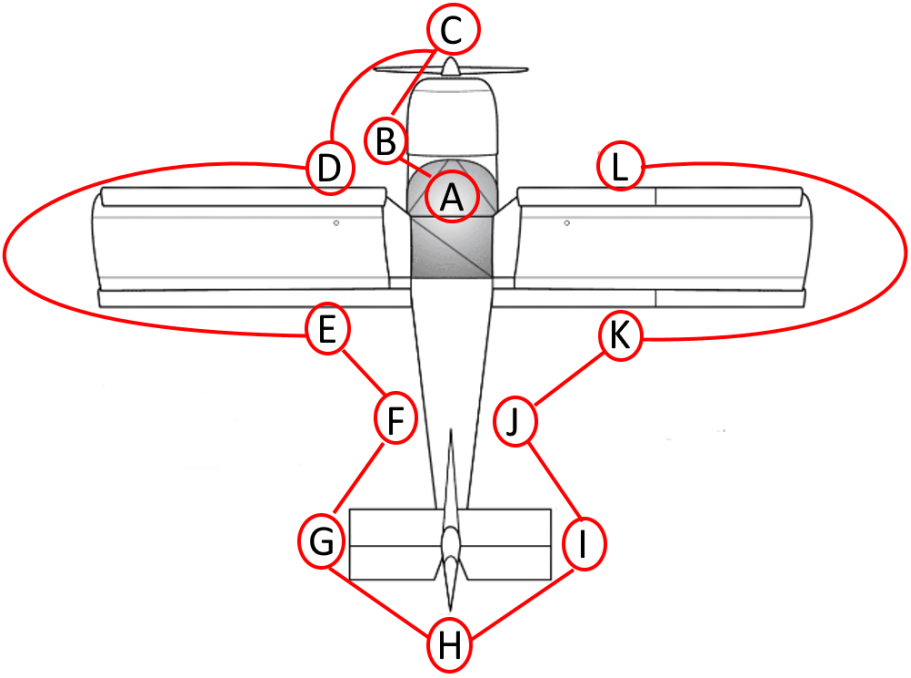
4.4 PREFLIGHT INSPECTION

Prior to any flight, inspect the exterior and interior of the aircraft for anything what looks suspicious or out of line. Use the following pre-flight walk-around checklist as a guide when inspecting the aircraft. Remedy any problems or defects before flight.



PREFLIGHT WALK AROUND

A Cabin:

1. Check Aircraft log paper
2. Remove any control lock
3. Check for fuel or hydraulic smell in the cockpit
4. Check brake cylinder for leaks
5. Check flight controls for proper and easy movement
6. Check circuit breakers
7. Check CO2 Detector
8. Ignition switch OFF
9. Master/Alternator OFF

PREFLIGHT INSPECTION (cntd)

B Oil Level, left side of cowling:

Note: Prior to oil check, turn the propeller by hand several times to pump oil from the engine into the oil tank until you hear a gurgle noise

1. Check for any leaks under engine
2. Check oil level (Difference between max. and min. mark = 0.75 liter)
3. Check coolant level
4. Check coolant level recovery bottle

C Cowling, propeller, spinner:

1. Check condition and security of cowling fasteners
2. Check all cowling intakes for any obstruction
3. Check radiator for any leakage
4. Check oil cooler for any leakage
5. Check propeller leading and trailing edge for nicks and cracks
6. Check spinner for structural integrity, cracks and security
7. Remove tow bar from nose gear
8. Check front gear and fork structural condition and secure attachment
9. Check front wheel tire condition and pressure

PREFLIGHT INSPECTION (cntd)

D Left wing leading edge, left main gear leg:

1. Check left door for general condition, proper operation and locking
2. Check gear leg for structural condition and secure attachment
3. Check wheel tire condition and pressure
4. Drain gascolator near left main gear leg
5. Drain wing tank
6. Check fuel level visually and memorize amount
7. Check fuel cap for security, undamaged seal and tight fit
8. Check front spar bolt for security
9. Check inspection covers for secure attachment
10. Check leading edge and slats for any damage
11. Check attachments bolts of slats for security
12. Check Pitot/AOA Probe for any obstruction and remove cover
13. Check wing for structural condition
14. Check both wing struts for damage/bending and secure connection
15. Check jury struts for damage/bending and secure connection
16. Check wing tip area for damage and wear
17. Check condition and security of nav/strobe lights

E Left wing trailing edge and control surfaces:

1. Check flaperon and hinges for structural condition and secure attachment
2. Check free movement of flaperon
3. Check rear spar bolt for security
4. Check flaperon push rod for security, integrity and freedom

F Rear fuselage right side:

1. Check rear fuselage skin for stress, cracks, dents and loose rivets
2. Check static port, must be free and unobstructed
3. Check COM and ELT Antenna

PREFLIGHT INSPECTION (cntd)

G Horizontal stabilizer and elevator left side:

1. Check horizontal stabilizer for secure condition, structural integrity and secure attachment
2. Check condition of elevator hinge and security splint
3. Check main elevator attachment bolt for security
4. Check free movement of elevator
5. Check upper and lower elevator control cable attachment for condition and security
6. Check trim tab for security
7. Check trim tab pushrod for security and integrity

H Rudder:

1. Check rudder for secure condition and structural integrity
2. Check rudder hinges for secure attachment and free movement
3. Check free movement of rudder
4. Check rudder control cable attachment for condition and security

I Horizontal stabilizer and elevator right side:

1. Check horizontal stabilizer for secure condition, structural integrity and secure attachment
2. Check condition of elevator hinge and security splint

J Rear fuselage left side:

1. Check rear fuselage skin for stress, cracks, dents and loose rivets
2. Check static port, must be free and unobstructed

K Right wing trailing edge and flaperon:

1. Check flaperon push rod for security, integrity and freedom
2. Check rear spar bolt for security
3. Check flaperon and hinges for structural condition and secure attachment
4. Check free movement of flaperon

PREFLIGHT INSPECTION (cntd)

L Right wing leading edge, right main gear leg:

5. Check condition and security of nav/strobe lights
6. Check wing tip area for damage and wear
7. Check both wing struts for damage/bending and secure connection
8. Check jury struts for damage/bending and secure connection
9. Check wing for structural condition
10. Check leading edge and slats for any damage
11. Check attachments bolts of slats for security
12. Check inspection covers for secure attachment
13. Check front spar bolt security
14. Drain wing tank
15. Check fuel level visually and memorize amount
16. Check fuel cap for security, undamaged seal and tight fit
17. Check wheel tire condition and pressure
18. Check gear leg for structural condition and secure attachment
19. Check right door for general condition, proper operation and locking

4.5 NORMAL PROCEDURES AND CHECKLIST

PRE-FLIGHT

1. Outside Check ..... COMPLETED
2. Tow Bar..... REMOVED
3. Control Locks / Tie Downs..... REMOVED
4. Baggage..... SECURED
5. Master / Alternator Switch ..... ON
6. EFIS ..... ON
7. Circuit Breakers ..... CHECKED
8. Flaps ..... UP
9. Seat Belts..... FASTENED
10. Passenger..... INSTRUCTED

BEFORE ENGINE START

1. Doors ..... CLOSED AND LATCHED
2. Parking Brake ..... SET
3. Fuel Quantity, Endurance ..... CHECKED
4. Fuel Shutoff Valve ..... ON

NORMAL PROCEDURES AND CHECKLIST (cntd)

START ENGINE

1. Fuel Pump ..... ON
2. Carburetor Heat ..... OFF
3. Throttle ..... IDLE
4. Choke ..... COLD ON, HOT OFF
5. Propeller Area ..... FREE
6. Ignition Switch ..... START
   ..... max 10 sec / cooling period 2min
7. Throttle ..... 2500 RPM
8. Oil pressure ..... CHECK RISE WITHIN 10 sec.
9. Alternator Light ..... OFF
10. Fuel Pump ..... OFF
11. Choke ..... OFF
12. Warming up period ..... 2000 RPM, OIL TEMP 50°C
13. Engine instruments ..... CHECKED
14. Avionics (VHF, XPDR) ..... ON AND SET
15. Nav. Lights ..... ON / AS REQUIRED
16. Flaps ..... UP
17. Altimeter ..... SET QNH
18. Alternator ..... ON, AMP, VOLT CHECKED

TAXI

1. Parking Brake ..... OFF
2. Brakes and Steering ..... CHECK

NORMAL PROCEDURES AND CHECKLIST (cntd)

RUN UP

1. Propeller and blast area..... CLEAR
2. Parking Brake .....SET
3. Engine Temp and Pressure .....WITHIN LIMITS
4. Throttle..... SET 4000 RPM
5. Magnetos (L-B-R-L-B) ..... MAX. 300 DROP / DIFF 120
6. Carburetor heat.....ON/OFF CHECK RPM DROP
7. Throttle..... SET IDLE / 2000 RPM

CHECK BEFORE DEPARTURE

1. Fuel quantity .....ENDURANCE?
2. Fuel Shutoff Valve ..... ON
3. Fuel Pump..... ON
4. Carburetor Heat .....AS REQUIRED
5. Flaps .....SET FOR DEPARTURE
6. Trims .....SET FOR DEPARTURE
7. Cabin and PAX .....SECURED
8. Controls.....FREE AND EASY
9. Flight instr. & avionics .....SET FOR DEPARTURE
10. Engine Instruments..... WITHIN LIMITS
11. Departure briefing ..... COMPLETED
    1. Surface wind
    2. Speeds (45 MPH IAS Rotate, Vx 55 MPH IAS, then Vy 60 MPH IAS)
    3. Routing, Altitude, Restrictions
    4. Emergency Procedures, Best Glide 67 MPH IAS

NORMAL PROCEDURES AND CHECKLIST (cntd)

LINE UP

1. Strobe Lights ..... ON
2. Landing Light ..... ON
3. Approach Sector and Runway ..... FREE
4. Runway HDG ..... CHECKED

TAKE OFF NORMAL

1. Flaps ..... UP – 1/2
2. Throttle ..... OPEN, ~ 5800 RPM (MAX. 5 MIN)
3. Main Wheel IAS ..... ROTATE AT 45 MPH
4. Climb Speed Vx IAS ..... 55 MPH

TAKE OFF SHORT FIELD

1. Flaps 1/2
2. Brakes ..... HOLD
3. Throttle ..... FULL OPEN (max 5800 RPM)
4. Brakes ..... RELEASE
5. Elevator Control ..... SLIGHT BACK PRESSURE UNTIL ..... AIRBORNE
6. Climb Speed Vx IAS ..... 55 MPH

CLIMB

1. Climb Power ..... REDUCE PWR TO MAX. 5500 RPM
2. Flaps ..... UP
3. Lights ..... AS REQUIRED

NORMAL PROCEDURES AND CHECKLIST (cntd)

CRUISE

1. Cruise Power .....RPM MAX. 5500 RPM
2. Fuel Pump.....AS REQUIRED
3. Fuel Quantity .....CHECKED

Avoid continuous operation with oil temperatures below the normal operating range of 90 - 110 °C. Reach at least once daily an oil temperature of 100°C to evaporate condensed water.

DESCENT

1. Approach Briefing .....COMPLETED
2. Avionics..... SET & CHECKED
3. Carburetor Heat .....AS REQUIRED
4. Cabin and PAX .....SECURED

APPROACH

1. Altimeter..... SET QNH
2. Fuel Pump.....ON
3. Fuel Quantity ..... CHECKED (ENDURANCE?)
4. Landing Light .....ON

NORMAL PROCEDURES AND CHECKLIST (cntd)

FINAL

1. Flaps ..... SET FOR LANDING
2. Carburetor Heat ..... OFF
3. Final Power ..... ABOVE IDLE
4. Speed IAS ..... 55 – 60 MPH

Full Flaps will lead to a very steep approach.
Avoid hard landings by using some Power

GO AROUND

1. Throttle ..... FULL OPEN
2. Speed IAS ..... 55 MPH
3. Flaps ..... GENTLE RETRACT TO DEPARTURE SETTING

AFTER LANDING

1. Fuel Pump ..... OFF
2. Strobe and Landing lights ..... OFF
3. Flaps ..... UP

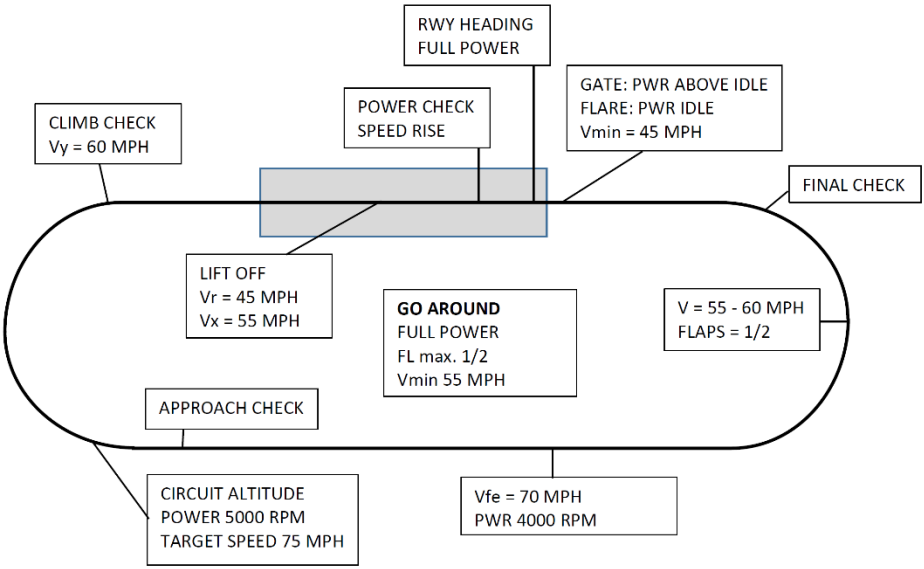
NORMAL PROCEDURES AND CHECKLIST (cntd)

ENGINE SHUTDOWN AND PARKING

1. Parking Brake .....SET
2. Flaps 1/2
3. ELT on 121.50 .....CHECK
4. Avionics..... OFF
5. Engine Instruments..... IN NORMAL OPERATION RANGE
6. Throttle.....~ 2000 RPM 2 MIN COOL DOWN
7. Ignition Key .....OFF / REMOVED
8. Fuel Selector..... OFF
9. All electrical consumers…… ..... OFF
10. Master / Alternator Switch..... OFF
11. Parking Brake .....SET AS CONVENIENT

NORMAL PROCEDURES AND CHECKLIST (cntd)

STANDARD CIRCUIT



Speed Summary in IAS

Normal Climb:	65 – 70 MPH
Best Angle of Climb Vx:	55 MPH
Best Rate of Climb Vy:	60 MPH
Approach Speed:	55 – 60 MPH
Touch Down Speed:	45 – 50 MPH