



# Aircraft Checklist

## Cessna 172RG

This is an abbreviated checklist. Most explanatory items, notes cautions and warnings have been omitted for brevity. Procedures in red/bold text of this checklist should be committed to memory.

All performance speeds should be computed prior to flight using the Aircraft Owner's Manual. This checklist is for training purposes only; users must be familiar with and operate in accordance with the official Aircraft Owner's Manual.

# Cessna 172RG Preflight Checklist

## Cabin Preflight Inspection

### REMOVE GUST LOCKS & PITOT COVER IF INSTALLED

1. Fuel Quantity ..... CHECK
2. Inspections ..... CHECK DATES and TIMES
3. Documents ..... CHECK
4. Weight and CG ..... WITHIN LIMITS
5. Control Wheel Lock..... REMOVE
6. Cowl Flaps ..... OPEN
7. Ignition Switch..... OFF
8. Avionics Switch ..... OFF
9. Landing Gear Lever ..... DOWN
10. Master Switch ..... ON
11. Fuel Quantity Indicators ..... CHECK
12. Landing Gear Position Indicator Light ..... GREEN
13. Flaps ..... EXTEND
14. Interior and Exterior Lights ..... CHECK
15. Stall Warning Horn ..... CHECK
16. Pitot Heat ..... CHECK THEN OFF
17. Master Switch ..... OFF
18. Fuel Selector Valve..... BOTH
19. Fire Extinguisher..... CHECK CHARGE

## EXTERIOR PREFLIGHT INSPECTION

### Empennage

1. Antennas ..... CHECK
2. Baggage Door ..... LOCKED
3. Left Side of Fuselage ..... CHECK
4. Left Main Gear Wheel Well ..... CHECK
5. Control Surfaces..... CHECK
6. Tail Tie-down.....REMOVE
7. Beacon/Position Light..... CHECK
8. Right Side of Fuselage ..... CHECK
9. Right Main Gear Wheel Well ..... CHECK

### Right Wing

1. Flap and Aileron ..... CHECK
2. Position Light..... CHECK
3. Strobe ..... CHECK
4. Wing..... CHECK
5. Wing Tie-down .....REMOVE
6. Wing Root Vents..... CHECK
7. Wheel Assembly ..... CHECK
8. Fuel Tank Sumps ..... (1) DRAIN and CHECK
9. Fuel Quantity ..... CHECK/ CAP SECURE

**Nose**

1. Static Port..... CHECK
2. Oil Quantity ..... (5-8 quarts) CHECK
3. Cowling, Propeller and Spinner..... CHECK
4. Air Inlets ..... CLEAR
5. Nose Wheel Assembly..... CHECK
6. Static Port..... CHECK
7. Fuel Sumps..... (2) DRAIN and CHECK
8. Windshield ..... CLEAN and CHECK

**Left Wing**

1. Fuel Tank Sump..... (1) DRAIN and CHECK
2. Fuel Quantity ..... CHECK / CAP SECURE
3. Wing Root Vents..... CHECK
4. Pitot Tube..... CHECK
5. Wing Tie-down ..... REMOVE
6. Fuel Tank Vent ..... CHECK for BLOCKAGE
7. Wing..... CHECK
8. Position Light..... CHECK
9. Strobe ..... CHECK
10. Flap and Aileron ..... CHECK
11. Wheel Assembly ..... CHECK

## Before Starting Engine

1. Preflight Inspection..... COMPLETE
2. Passenger Briefing ..... COMPLETE
3. Seat Belts/ Shoulder Harness ..... ADJUSTED/ SECURE
4. Fuel Selector Valve..... BOTH
5. Circuit Breakers ..... CHECK IN
6. Avionics Master Switch..... OFF
7. Autopilot ..... OFF
8. Landing Gear Leaver ..... CHECK – DOWN
9. Cowl Flaps ..... OPEN
10. Brakes ..... TEST and SET

## V Speeds

V <sub>so</sub> .....	42 KIAS
V <sub>s</sub> .....	50 KIAS
V <sub>r</sub> .....	55 KIAS
V <sub>x</sub> .....	Sea Level..... 67 KIAS
	10,000..... 68 KIAS
V <sub>y</sub> .....	Sea Level..... 84 KIAS
	10,000..... 77 KIAS
V <sub>fe</sub> .....	10° 130 KIAS
	Full 100 KIAS
V <sub>a</sub> .....	2650 Lbs..... 106 KIAS
	2250Lbs..... 98 KIAS
	1850Lbs..... 89 KIAS
V <sub>no</sub> .....	145 KIAS
V <sub>ne</sub> .....	164 KIAS

## Starting Engine

1. Mixture..... RICH
2. Propeller..... HIGH RPM
3. Throttle..... OPEN ¼ to ½ INCH
4. Carburetor Heat..... COLD/OFF
5. Beacon..... ON
6. Master Switch (Battery Only)..... ON
7. Prime..... AS REQUIRED\*
8. Propeller Area..... CLEAR
9. Ignition..... ENGAGE

***Do not crank more than 10 seconds/Allow 20 seconds to cool***

10. Throttle..... 1000 RPM
11. Oil Pressure..... INDICATING GREEN
12. Mixture..... LEAN for TAXI
13. Alternator..... ON
14. Ammeter..... POSITIVE CHARGE
15. Flaps..... RETRACT
16. Navigation Lights..... AS REQUIRED
17. Avionics Master Switch..... ON
18. Transponder..... STANDBY
19. Heading Indicator..... SET
20. ASOS/ATIS..... OBTAIN
21. Altimeter..... SET
22. Advisory/Departure & Taxi Clearance..... CONTACT

**\* If engine is hot, do not prime and turn aux fuel pump ON\***

## Taxi

1. Brakes/Steering..... CHECK
2. Instrument Cross-Check..... CHECK

## **Before Takeoff**

1. Nose Wheel.....STRAIGHT
2. Brakes .....SET and HOLD
3. Flight Controls .....FREE and CORRECT
4. Fuel Selector Valve.....BOTH
5. Primer..... IN AND LOCKED
6. Aux Fuel Pump ..... ON (Check for Fuel Pressure Rise) OFF
7. Mixture..... RICH
8. Throttle..... 1800 RPM
9. Mixture.....SET for DENSITY ALTITUDE
10. Magnetos..... (125 max drop, 50 diff.) CHECK
11. Carburetor heat.....(RPM Drop) CHECK
12. Propeller Governor..... (Cycle) CHECK
13. Engine Gauges and Ammeter ..... CHECK
14. Vacuum..... GREEN ARC
15. Throttle..... CHECK IDLE
16. Throttle..... 1000 RPM
17. Throttle Friction Lock.....ADJUST
18. Communication/Navigation Radios..... SET
19. Flight Instruments .....SET and CHECKED
20. Fuel Quantities .....CHECKED
21. Elevator/Rudder Trim .....SET for TAKEOFF
22. Auto Pilot..... OFF
23. Flaps.....SET for TAKEOFF
24. Cabin Doors & Windows.....CLOSED and LATCHED
25. Seats, Seatbelts, Shoulder Harnesses ..... ADJUSTED/  
LOCKED
26. Departure Briefing ..... CLEARANCE / EMERG. PLAN
27. Advisory/ Tower .....CONTACT

## Cleared For Takeoff

1. Lights ..... AS REQUIRED
2. Transponder ..... ALTITUDE
3. Brakes ..... RELEASE
4. Traffic ..... CHECK

## Normal Takeoff

1. Wing Flaps ..... 0°
2. Carburetor Heat..... COLD
3. Power ..... FULL THROTTLE and 2700 RPM
4. Elevator Control..... LIFT NOSE AT 55 KIAS
5. Climb Speed..... 70-80 KIAS
6. Brakes ..... APPLY MOMENTARILY
7. Landing Gear ..... RETRACT

## Short Field Takeoff

1. Wing Flaps ..... 0°
2. Carburetor Heat..... COLD
3. Brakes ..... HOLD
4. Power ..... FULL THROTTLE and 2700 RPM
5. Engine Gauges ..... GREEN
6. Brakes ..... RELEASE
7. Elevator Control..... SLIGHTLY TAIL LOW
8. Obstacle Clearance Speed..... 63 KIAS

### *After Clearing Obstacle:*

9. Landing Gear ..... RETRACT
10. Airspeed ..... ACCELERATE FOR NORMAL CLIMB





## **Soft Field Takeoff**

1. Wing Flaps ..... 10°
2. Elevator Control ..... FULL AFT
3. Throttle ..... FULL OPEN
4. Accelerate ..... WHILE IN GROUND EFFECT
5. Climb Speed ..... 65 KIAS
6. Landing Gear ..... RETRACT
7. Wing Flaps ..... RETRACT

## **En-route Climb**

1. Airspeed ..... 85-95 KIAS
2. Power ..... 25 INCHES Hg and 2500RPM
3. Mixture ..... AS REQUIRED
4. Cowl Flaps ..... AS REQUIRED FOR ENGINE TEMP

## **Cruise**

1. Power ..... SET for CRUISE
2. Trim ..... AS REQUIRED
3. Mixture ..... LEAN for CRUISE
4. Cowl Flaps ..... AS REQUIRED FOR ENGINE TEMP
5. Landing Light ..... AS REQUIRED
6. Heading Indicator ..... CROSS-CHECK

## Descent

1. ASOS/ATIS ..... OBTAIN
2. Altimeter ..... SET
3. Arrival/Passenger Briefing..... COMPLETE
4. Mixture..... ADJUST AS REQUIRED
5. Power ..... AS REQUIRED
6. Carburetor Heat..... ON/AS REQUIRED
7. Cowl Flaps ..... CLOSED
8. Fuel Selector Valve..... BOTH
9. Wing Flaps ..... AS REQUIRED
10. Landing Light..... ON

## Before Landing

1. Seats, Belts and Shoulder Harnesses .... ADJUST/LOCKED
1. Landing Gear .....(Below 140 KIAS) DOWN/CHECKED
2. Mixture..... AS REQUIRED
3. Propeller..... HIGH RPM
4. Carburetor Heat..... ON
5. Seats, Seatbelts and Shoulder Harnesses .....ADJUST/  
LOCKED
6. Autopilot ..... OFF

## Normal Landing

1. Power ..... AS REQUIRED
2. Airspeed ..... (Flaps 0°) 65-75 KIAS
3. Wing Flaps ..... AS REQUIRED
4. Airspeed ..... (Flaps 30°) 60-70 KIAS
5. Trim ..... ADJUST
6. Touchdown ..... MAIN WHEELS FIRST
7. Landing Roll ..... LOWER NOSE WHEEL GENTLY
8. Brakes ..... APPLY AS NECESSARY

## Short Field Landing

1. Power ..... AS REQUIRED
2. Wing Flaps ..... 30°
3. Airspeed ..... MAINTAIN 63 KIAS
4. Trim ..... ADJUST
5. Touchdown ..... MAIN WHEELS FIRST
6. Wing Flaps ..... RETRACT
7. Brakes ..... APPLY AS NECESSARY

## Soft Field Landing

1. Power ..... AS REQUIRED
2. Wing Flaps ..... 30°
3. Airspeed ..... 65 KIAS
4. Touchdown ..... MAIN WHEELS FIRST
5. Landing Roll ..... TAIL LOW

**Go Around (Balked Landing)**

1. Power .....FULL THROTTLE and 2700 RPM
2. Carburetor Heat.....COLD
3. Wing Flaps ..... RETRACT TO 20°
4. Climb Speed..... 55 KIAS
5. Landing Gear .....(POSITIVE RATE OF CLIMB) UP
6. Airspeed ..... ACCELERATE for NORMAL CLIMB
7. Wing Flaps ..... 10° AFTER REACHING 65 KIAS
8. Wing Flaps .....(after clearing obstacles) RETRACT

**After Landing / Clear Of Runway**

1. Flaps ..... UP
2. Cowl Flaps ..... OPEN
3. Mixture.....LEAN for TAXI
4. Carburetor Heat..... OFF
5. Landing Light..... OFF
6. Strobes..... OFF
7. Transponder .....STANDBY
8. Taxi Clearance / Advisory .....CONTACT

## Securing Airplane

1. Avionics Master Switch..... OFF
2. Throttle..... IDLE
3. Magnetos.....CHECK GROUNDING
4. Throttle..... 1000 RPM
5. Mixture..... IDLE CUT-OFF
6. Ignition..... OFF
7. Master Switch ..... OFF
8. Beacon..... OFF
9. Cowl Flaps ..... CLOSED
10. Fuel Selector .....LEFT/ RIGHT
11. Control Lock .....INSTALL
12. Flight Information..... RECORD
13. Pitot Tube Cover .....INSTALL
14. Wheel Chocks & Tie Downs ..... SECURE
15. Post Flight Walk-Around..... COMPLETE
16. Doors..... LOCKED

## ABNORMAL PROCEDURES

### **Flooded Start**

1. Mixture..... IDLE CUT-OFF
2. Propeller..... HIGH RPM
3. Throttle..... FULL OPEN

**Proceed with item 4 of “Starting Engine” checklist on page 6**

### **Ammeter Shows Excessive Rate Of Charge**

1. Alternator ..... OFF
2. Alternator Circuit Breaker .....PULL
3. Nonessential Electrical Equipment..... OFF
4. Flight..... LAND AS SOON AS PRACTICAL

### **Low Voltage Annunciator (Volts) Illuminates In Flight**

1. Avionics Master Switch..... OFF
2. Alternator Circuit Breaker .....CHECK IN
3. Alternator Switch.....OFF then ON
4. Low Voltage Light.....CHECK OFF
5. Avionics Master Switch..... ON

#### ***If Low Voltage Annunciator Illuminates Again:***

6. Alternator ..... OFF
7. Nonessential Electrical Equipment..... OFF
8. Flight..... TERMINATE

## Landing Gear Fails To Retract

1. Master Switch ..... CHECK ON
2. Landing Gear Lever ..... (Full Up) CHECK
3. Landing Gear and Gear Pump Circuit Breakers ..... IN
4. Landing Gear Lever ..... RECYCLE
5. Gear Motor ..... CHECK OPS(AMMETER and Noise)

## Landing Gear Fails To Extend

1. Master Switch ..... ON
  2. Landing Gear Lever ..... (Full Down) CHECK
  3. Landing Gear and Gear Pump Circuit Breakers ..... IN
  4. Emergency Hand Pump ..... EXTEND HANDLE and  
PUMP\*
  5. Gear Locked Lights ..... ON
  6. Gear Unsafe Light ..... OFF
  7. Pump Handle ..... STOW
- \*Pump perpendicular to handle until resistance becomes heavy,  
Approximately 35 Cycles\*

## **Gear Unsafe Light Illuminates**

### ***Gear Up Selected***

1. Gear Motor.....CHECK-AUDIBLE
2. Main Gear ..... CHECK NOT VISIBLE
3. Gear Pump Circuit Breaker..... PULL  
(if Gear appears to be retracted but gear motor continues to operate and flight is to be continued to a maintenance facility)

### ***Gear Down Selected***

4. Gear Locked Light ..... CHECK  
(If the gear locked light is on but the gear motor continues to run, PULL the gear pump circuit breaker until just prior to landing, then RESET it. This will prevent over heating the gear motor. If the Gear Locked light is not illuminated proceed to the “Landing Without Positive Indication of Gear Locking” Check List.

## **Gear Up Landing**

1. Landing Gear Lever ..... UP
2. Landing Gear and Gear Pump Circuit Breakers ..... IN
3. Runway ..... SELECT  
(Longest hard Surface or Smooth Sod runway Available)
4. Wing Flaps ..... 30°
5. Airspeed ..... 65 KIAS
6. Doors..... UNLATCH
7. Avionics Power and Master Switch ..... OFF
8. Touchdown ..... SLIGHTLY TAIL LOW
9. Mixture..... IDLE CUT OFF
10. Ignition Switch..... OFF
11. Fuel Selector Valve..... OFF
12. Airplane ..... EVACUATE



## Landing With A Flat Main Tire

1. Flaps ..... AS REQUIRED
2. Approach ..... NORMAL
3. Touchdown ..... GOOD TIRE FIRST
4. Directional Control ..... MAINTAIN  
(Using brake on good tire)

## Landing With A Defective Nose Gear (Or Flat Nose Tire)

1. Moveable Load ..... TRANSFER TO BAGGAGE AREA
2. Passenger ..... MOVE TO REAR SEAT
3. Before Landing Checklist ..... COMPLETE
4. Runway ..... HARD SURFACE or SMOOTH SOD
5. Wing Flaps ..... 30°
6. Doors ..... UNLATCH
7. Avionics Power and Master Switch ..... OFF
8. Touchdown ..... SLIGHTLY TAIL LOW
9. Mixture ..... IDLE CUT OFF
10. Ignition Switch ..... OFF
11. Fuel Selector Valve ..... OFF
12. Elevator Control ..... HOLD NOSE OFF GROUND
13. Airplane ..... EVACUATE

## EMERGENCY CHECKLIST

This is an operational checklist. Procedures in red/bold text in this section should be committed to memory. The official aircraft AFM contains additional procedures and expanded procedures not listed in this checklist. Users should be familiar with all procedures

### Airspeeds For Emergency Operation

#### **Maximum Glide**

2650 Lbs.....	73 KIAS
2250 Lbs.....	67 KIAS
1850 Lbs.....	61 KIAS

#### **Maneuvering Speed**

2650 Lbs.....	106 KIAS
2250 Lbs.....	98 KIAS
1850 Lbs.....	89 KIAS

#### **Engine Failure After Takeoff**

Wing Flaps Up .....	70 KIAS
Wing Flaps Down .....	65 KIAS

#### **Landing Without Engine Power:**

Flaps up .....	75 KIAS
Flaps Down .....	65 KIAS

## Engine Failure Immediately After Takeoff

1. Airspeed .....(Flaps Up) .....70 KIAS  
(Flaps Down).....65 KIAS
2. Mixture..... IDLE CUT-OFF
3. Fuel Selector Valve .....OFF
4. Ignition Switch .....OFF
5. Flaps .....AS REQUIRED
6. Master Switch.....OFF
7. Land .....STRAIGHT AHEAD

## Engine Failure / Power Loss During Flight

1. Airspeed .....73 KIAS
2. Carburetor Heat.....ON
3. Fuel Selector Valve .....BOTH
4. Mixture..... RICH
5. Throttle ..... OPEN
6. Aux Fuel Pump.....ON
7. Magnetos..... CHECK BOTH
8. Primer ..... IN AND LOCKED

### *If Power Is Restored*

9. Aux Fuel Pump ..... OFF
10. Fuel Flow .....MONITOR



## Fire During Engine Start

**1. Cranking..... CONTINUE**

### *If Engine Starts:*

2. Power ..... 1700 RPM

3. Engine .....SHUTDOWN

### *If Engine Fails to Start:*

**1. Cranking..... CONTINUE**

**2. Throttle.....FULL OPEN**

**3. Mixture..... IDLE CUT-OFF**

**4. Master Switch.....OFF**

**5. Ignition Switch.....OFF**

**6. Fuel Shutoff Valve.....OFF**

**7. Fire Extinguisher .....OBTAIN/USE**

## Engine Fire In Flight

**1. Mixture..... IDLE CUT-OFF**

**2. Fuel Selector Valve .....OFF**

**3. Aux Fuel Pump.....OFF**

**4. Master Switch.....OFF**

**5. Cabin Heat and Air..... CLOSED**

6. Airspeed ..... 100+ KIAS

7. Forced Landing ..... EXECUTE

8. Wing Root Vents..... OPEN

## Electrical Fire In Flight

1. Master Switch.....OFF
2. Vents, Cabin Heat and Air ..... CLOSED
3. Fire Extinguisher ..... ACTIVATE
4. Avionics Master Switch ..... OFF
5. All Electrical Switches (except ignition) ..... OFF

### *If Fire Appears Out:*

6. Master Switch ..... ON
7. Circuit Breakers .....CHECK (do not reset)
8. Avionics Master Switch. .... ON
9. Radio and Electrical Switches .....(one at a time) ON
10. Vents, Cabin Heat and Air ..... OPEN

## Cabin Fire

1. Master Switch.....OFF
2. Vents, Cabin Heat and Air ..... CLOSED
3. Fire Extinguisher (if available)..... ACTIVATE
4. Flight ..... TERMINATE

Refer to “Emergency Landing Without Engine Power” checklist if time permits

## Wing Fire

1. Landing/Taxi Light Switches .....OFF
2. Navigation Light Switch .....OFF
3. Strobes.....OFF
4. Pitot Heat Switch.....OFF

**Perform A Side Slip To Keep The Flames Away From The Fuel Tank And Cabin, And Land As Soon As Possible With Flaps Retracted.**

Should any mechanical difficulty, accident, incident or delay occur, please contact a Leading Edge Aviation representative before continuing any flight. **DO NOT FLY** any aircraft that may have been damaged, until it has been inspected and certified airworthy by a certified mechanic. Call Leading Edge Aviation 435-752-5955

## Passenger/Crew Briefing Checklist

### Before Engine Start:

1. Normal and emergency exit procedures
2. Seatbelt operations
3. Fire extinguisher location & operations
4. Identify PIC for the flight
5. Positive exchange of flight controls process

### Before Take-Off:

1. Verify runway in use
2. Type of take-off
3. Direction of departure (VFR)
4. Departure clearance (IFR)
5. Emergency plan
  - a. Emergency on runway
  - b. Emergency after liftoff
  - c. Emergency at altitude
  - d. Flying/non-flying pilot roles during emergency operations

### Approach:

1. Verify runway in use
2. Type of landing
3. Expected crosswind direction/intensity
4. Traffic pattern (VFR)
5. Instrument approach briefing (IFR)

### Emergency Transponder Codes:

Air Piracy: ..... 7500  
Lost Communication: ..... 7600  
General Emergency: ..... 7700

### Emergency 2-Way Communication Frequency:

Guard Frequency: ..... 121.5