

CESSNA 182 CHECKLIST

PRE-FLIGHT INSPECTION

CABIN

1. Pilot's Operating Handbook –AVAILABLE IN THE AIRPLANE (A.R.R.O.W.E)
2. Landing Gear Lever – DOWN
3. Control Wheel Lock – REMOVE
4. Ignition Switch – OFF
5. Avionics Power Switch – OFF
6. Master Switch – ON
7. Fuel Quantity Indicators – CHECK QUANTITY
8. Landing Gear Position Indicator Light (green) – ILLUMINATED
9. Master Switch – OFF
10. Fuel Selector Valve – BOTH
11. Static Pressure Alternate Source Valve (if installed) – OFF
12. Bagged Door – CHECK for security, lock with key if child's seat is to be occupied

EMPENNAGE

1. Rudder Gust Lock – REMOVE
2. Tail Tie Down – DISCONNECT
3. Control Surfaces – CHECK freedom of movement and security

RIGHT WING Trailing Edge

1. Aileron – CHECK freedom of movement and security

RIGHT WING

1. Wing Tie-Down – DISCONNECT
2. Fuel Tank Vent Opening – CHECK for stoppage
3. Main Wheel Tire – CHECK for proper inflation
4. Fuel Quick Drain – SAMPLE
5. Fuel Quantity – CHECK VISUALLY
6. Fuel Filler Cap – SECURE and vent unobstructed

NOSE

1. Static Source Openings (both sides of fuselage) – CHECK for stoppage
2. Propeller and Spinner – CHECK for nicks, security and oil leaks
3. Landing Lights – CHECK for condition and cleanliness
4. Carburetor Air Inlet – CHECK for restrictions
5. Nose Wheel Strut and Tire – CHECK for proper inflation
6. Nose Tie-Down – DISCONNECT
7. Engine Oil Level – CHECK Do not operate with less than six quarts. Fill to 8 qts for extended flight
8. Before first flight of the day and after each refueling, pull out strainer drain knob for about four seconds to clear fuel strainer of possible water and sediment. Check strainer drain closed. If water is observed, the fuel system may contain additional water, and further draining of the system at the strainer, fuel tank sumps, and fuel selector valve drain plug will be necessary.

LEFT WING

1. Main Wheel Tire – CHECK for proper inflation
2. Before first flight of day and after each refueling, use sampler cup and drain small quantity of fuel from fuel tank sump quick-drain valve to check for water, sediment and proper fuel grade.
3. Fuel Quantity – CHECK VISUALLY for desired level
4. Fuel Filler Cap – SECURE and vent unobstructed

LEFT WING Leading Edge

1. Pilot Tube Cover – REMOVE and check opening for stoppage
2. Fuel Tank Vent Opening – CHECK for stoppage
3. Stall Warning Vane – CHECK for freedom of movement while master switch is momentarily turned ON (horn should sound when vane is pushed upward)
4. Wing Tie Down – DISCONNECT

LEFT WING Trailing Edge

1. Aileron – CHECK freedom of movement and security

BEFORE STARTING ENGINE

1. Preflight Inspection – COMPLETE
2. Seats, Belts, Shoulder Harnesses – ADJUST and LOCK
3. Fuel Selector Valve – BOTH
4. Avionics Power Switch, Autopilot (if installed), Electrical Equipment – OFF
CAUTION -- The avionics power switch must be OFF during engine start to prevent possible damage to avionics
5. Brakes – TEST and SET
6. Cowl Flaps – OPEN (move lever out of locking hole to reposition)
7. Landing Gear Lever – DOWN
8. Circuit Breakers – CHECK IN

STARTING ENGINE

1. Mixture – RICH
2. Propeller – HIGH RPM
3. Carburetor Heat – COLD
4. Prime as required
5. Master Switch – ON
6. (Flashing Beacon) Navigation Lights – ON as required
7. Propeller Area – CLEAR
8. Ignition Switch – START (release when engine starts).
9. Oil Pressure – CHECK
10. Avionics Power Switch – ON
11. Radios – ON
12. Transponder on Standby

BEFORE TAKEOFF

1. Cabin Doors and Windows – CLOSED and LOCKED
2. Parking Brake – SET
3. Flight Controls – FREE and CORRECT
4. Flight Instruments – SET
5. Fuel Selector Valve – BOTH
6. Mixture – RICH
7. Auxiliary Fuel Pump – ON (check for rise in fuel pressure), then OFF
NOTE: In flight, gravity feed will normally supply satisfactory fuel flow if the engine driven fuel pump should fail. However, if a fuel pump failure in flight causes the fuel pressure to drop below 0.5 PSI, use the auxiliary fuel pump to assure proper engine operation.
8. Elevator and Rudder Trim – TAKEOFF
9. Throttle – 1700 RPM
 - a. Magnetos – CHECK RPM (RPM drop should not exceed 175 RPM on either magneto or 50 RPM differential between magnetos).
 - b. Propeller – CYCLE from high to low RPM; return to high RPM (full in) (3 times)
 - c. Carburetor Heat – CHECK (for RPM drop)
 - d. Engine Instruments and Ammeter – CHECK
 - e. Suction Gage – CHECK

10. Throttle – 800-1000 RPM
11. Radios – SET
12. Autopilot (if installed) – OFF
13. Strobe Lights (if installed) – ON as desired
14. Throttle Friction Lock – ADJUST
15. Parking Brake – RELEASE
16. Transponder – ALT

TAKEOFF

NORMAL TAKEOFF

1. Wing Flaps -- 0° - 20°
2. Carburetor Heat – COLD
3. Power – FULL THROTTLE and 2400 RPM
4. Elevator Control – LIFT NOSE WHEEL at 50 KIAS
NOTE: When nose wheel is lifted, the gear motor may run 1-2 seconds to restore hydraulic pressure.
5. Climb Speed – 70 KIAS (flaps 20°)
80 KIAS (flaps UP)
6. Brakes – APPLY momentarily when airborne
7. Landing Gear – RETRACT in climb out
8. Wing Flaps – RETRACT
9. For better cooling cruise-climb at 90-100 KIAS

SHORT FIELD TAKEOFF

1. Wing Flaps -- 20°
2. Carburetor Heat – COLD
3. Brakes – APPLY
4. Power – FULL THROTTLE and 2400 RPM
5. Brakes – RELEASE
6. Elevator Control – MAINTAIN SLIGHTLY TAIL-LOW ATTITUDE
7. Climb Speed – 59 KIAS until all obstacles are cleared
8. Landing Gear – RETRACT after obstacles are cleared
9. Wing Flaps – RETRACT slowly after reaching 70 KIAS

ENROUTE CLIMB

NORMAL CLIMB

1. Airspeed – 90-100 KIAS
2. Power – 23 INCHES Hg and 2400 RPM
3. Fuel Selector Valve – BOTH
4. Mixture – FULL RICH (mixture may be leaned above 3000 feet)
5. Cowl Flaps – OPEN as required

MAXIMUM PERFORMANCE CLIMB

1. Airspeed – 88 KIAS at sea level to 75 KIAS at 10,000 feet
2. Power – FULL THROTTLE and 2400 RPM
3. Fuel Selector Valve – BOTH
4. Mixture – FULL RICH (mixture may be leaned above 3000 feet)
5. Cowl Flaps – FULL OPEN

CRUISE

1. Power – 15-23 INCHES Hg 2100-2400 RPM (no more than 75% power)
2. Elevator and Rudder Trim – ADJUST
3. Mixture – LEAN
4. Cowl Flaps – CLOSED

DESCENT

1. Fuel Selector Valve -- BOTH
 2. Power – AS DESIRED
 3. Carburetor Heat – AS REQUIRED to prevent carburetor icing.
 4. Mixture – ENRICHEN as required
 5. Cowl Flaps – CLOSED
 6. Wing Flaps – AS DESIRED (0°-10° below 110 KIAS, 10°-40° below 95 KIAS)
- NOTE: The landing gear may be used below 110 KIAS to increase the rate of descent

BEFORE LANDING

1. Seats, Belts, Shoulder Harnesses – ADJUST and LOCK
2. Fuel Selector Valve – BOTH
3. Landing Gear – DOWN (below 140 KIAS)
4. **Landing Gear – CHECK** (observe main gear down and green indicator light illuminated)
Note: Please use Max Gear Extension Speed of 110 Kts.
5. Mixture – RICH
6. Carburetor Heat – ON (apply full heat before closing throttle)
7. Propeller – HIGH RPM
8. Autopilot (if installed) – OFF

LANDING

NORMAL LANDING

1. Airspeed – 70-80 KIAS (flaps UP)
2. Wing Flaps – AS DESIRED (0°-10° below 110 KIAS, 10°-40° below 95 KIAS)
3. Airspeed – 65-75 KIAS (Flaps DOWN)
4. Trim – ADJUST
5. Touchdown – MAIN WHEELS FIRST
6. Landing Roll – LOWER NOSE WHEEL GENTLY
7. Braking – MINIMUM REQUIRED

SHORT FIELD LANDING

1. Airspeed – 70-80 KIAS (flaps UP)
2. Wing Flaps -- 40° (below 95 KIAS)
3. Airspeed – MAINTAIN 64 KIAS
4. Trim – ADJUST
5. Power – REDUCE to idle as obstacle is cleared
6. Touchdown – MAIN WHEELS FIRST
7. Brakes – APPLY HEAVILY
8. Wing Flaps – RETRACT for maximum brake effectiveness

BALKED LANDING

1. Power – FULL THROTTLE and 2400 RPM
2. Carburetor Heat – COLD
3. Wing Flaps – RETRACT to 20°
4. Climb Speed – 75 KIAS
5. Landing Gear -- UP
6. Wing Flaps – RETRACT slowly
7. Cowl Flaps – OPEN

AFTER LANDING

1. Wing Flaps -- UP
2. Carburetor Heat – COLD
3. Cowl Flaps – OPEN
4. Transponder – STBY
5. Lights – AS REQUIRED

SECURING AIRPLANE

1. Parking Brake -- SET
 2. Run Up – Mixture 1 inch lean. 1800 RPM for 15 seconds
 3. Throttle – IDLE
 4. Avionics Power Switch, Electrical Equipment – OFF
 5. Mixture – IDLE CUT-OFF (pulled full out)
 6. Ignition Switch – OFF
 7. Master Switch – OFF
 8. Control Lock – INSTALL
- * If parked on a slope, Fuel Selector Valve – RIGHT

EMERGENCY PROCEDURES

ENGINE FAILURE DURING TAKEOFF RUN

1. Throttle – IDLE
2. Brakes – APPLY
3. Wing Flaps – RETRACT
4. Mixture – IDLE CUT-OFF
5. Ignition Switch – OFF
6. Master Switch – OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed – 70 KIAS (flaps UP)
65 KIAS (flaps DOWN)
2. Mixture – IDLE CUT-OFF
3. Fuel Selector Valve – BOTH
4. Ignition Switch – OFF
5. Wing Flaps – AS REQUIRED
(40° recommended)
6. Master Switch – OFF

ENGINE FAILURE DURING FLIGHT

1. Airspeed – 80 KIAS
2. Carburetor Heat – ON
3. Mixture – RICH
4. Fuel Selector Valve – BOTH (or
START if propeller is stopped)
5. Primer – IN and LOCKED

FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed – 70 KIAS (flaps UP)
65 KIAS (flaps DOWN)
2. Mixture – IDLE CUT-OFF
3. Fuel Selector Valve – OFF
4. Ignition Switch – OFF
5. Landing Gear – DOWN (UP if terrain is rough or soft)
6. Wing Flaps – AS REQUIRED (40° recommended)
7. Doors – UNLATCH PRIOR TO TOUCHDOWN
8. Master Switch – OFF when landing is assured
9. Touchdown – SLIGHTLY TAIL LOW
10. Brakes – APPLY HEAVILY

PRECAUTIONARY LANDING WITH ENGINE POWER

AIRSPEEDS FOR EMERGENCY OPERATION	
Engine Failure After Takeoff:	
Wing Flaps Up	70 KIAS
Wing Flaps Down	65 KIAS
Maneuvering Speed:	
3100 Lbs	112 KIAS
2550 Lbs.	101 KIAS
2000 Lbs.	89 KIAS
Maximum Glide:	
3100 Lbs.	80 KIAS
2550 Lbs.	72 KIAS
2000 Lbs.	64 KIAS
Precautionary Landing	
With Engine Power . . .	65 KIAS
Landing Without Engine Power:	
Wing Flaps Up	70 KIAS
Wing Flaps Down	65 KIAS

1. Airspeed – 65 KIAS
2. Wing Flaps – 20°
3. Selected field – FLY OVER noting terrain and obstructions. Then retract flaps upon reaching a safe altitude and airspeed
4. Electrical Switches – OFF
5. Landing Gear – DOWN (UP if terrain is rough or soft)
6. Wing Flaps – 40° (on final approach)
7. Airspeed – 65 KIAS
8. Doors – UNLATCH PRIOR TO TOUCHDOWN
9. Avionics Power and Master Switches – OFF
10. Touchdown – SLIGHTLY TAIL LOW
11. Ignition Switch – OFF
12. Brakes – APPLY HEAVILY

DITCHING

1. RADIO – transmit mayday on 121.5MHz, giving location and intentions and SQUAWK 7700 if transponder is installed
2. Heavy Objects (in baggage area) – SECURE OR JETTISON.
3. Landing Gear – UP
4. Flaps – 20° – 40°
5. Power – ESTABLISH 300 FT/MIN DESCENT at 60 KIAS
6. Approach – High Winds, Heavy Seas – INTO THE WIND

NOTE

If no power is available, approach at 70 KIAS with flaps up or at 65 KIAS with 10° flaps

7. Cabin Doors – UNLATCH
8. Touchdown – LEVEL ATTITUDE AT ESTABLISHED DESCENT
9. Face – CUSHION at touchdown with folded coat
10. Airplane – EVACUATE through cabin doors, if necessary open windows and flood cabin to equalize pressure so doors can be opened
11. Life Vests and Raft – INFLATE

FIRES

DURING START ON GROUND

1. Cranking – CONTINUE to get a start which would suck the flames and accumulated fuel through the carburetor and into the engine

If Engine starts:

2. Power – 1700 RPM for a few minutes
3. Engine – SHUTDOWN and inspect for damage

If Engine fails to start:

4. Throttle – FULL OPEN
5. Mixture – IDLE CUT-OFF
6. Cranking – CONTINUE
7. Fire Extinguisher—OBTAIN- (have ground attendants obtain if not installed)
8. Engine – SECURE
 - a. Master switch – OFF
 - b. Ignition Switch – OFF
 - c. Fuel Selector Valve – OFF
9. Fire – EXTINGUISH using fire extinguisher, wool blanket, or dirt.
10. Fire Damage—INSPECT, repair damage or replace damaged components or wiring before conducting another flight

ENGINE FIRE IN FLIGHT

1. MIXTURE – idle cut-off
2. Fuel Selector Valve – OFF
3. Master Switch – OFF
4. Cabin Heat and Air – OFF (except overhead vents)
5. Airspeed – 100 KIAS (If fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture)
6. Forced Landing – EXECUTE (as described in Emergency Landing Without Engine Power)

ELECTRICAL FIRE IN FLIGHT

1. MASTER Switch – OFF
2. Avionics Power Switch – OFF
3. All Other Switches (except ignition switch) – OFF
4. Vents/Cabin Air/Heat -- CLOSED
5. Fire Extinguisher – ACTIVATE (if available)

WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin

If fire appears out and electrical power is necessary for continuance of flight:

6. Master Switch – ON
7. Circuit Breakers – CHECK for faulty circuit do not reset
8. Radio Switches – OFF
9. Avionics Power Switch – ON
10. Radio/Electrical Switches – ON one at a time, with delay after each until short circuit is localized
11. Vents/Cabin Air/ Heat – OPEN when it is ascertained that fire is completely extinguished

CABIN FIRE

1. Master Switch – OFF
2. Vents/Cabin Air/Heat – CLOSED (to avoid drafts)
3. Fire Extinguisher – ACTIVATE (if available)

WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin.

4. Land the airplane as soon as possible to inspect for damage

WING FIRE

1. Navigation Light Switch – OFF
2. Strobe Light Switch (if installed)—OFF
3. Pilot heat Switch (if installed) – OFF

NOTE

Perform a sideslip to keep the flames away from the fuel tank and cabin, and land as soon as possible using flaps only as required for final approach and touchdown.

ICING -- INADVERTENT ICING ENCOUNTER

1. Turn pitot heat switch ON (if installed)
2. Turn back or change altitude to obtain an outside air temperature that is less conducive to icing
3. Pull cabin heat control full out and rotate defroster control clockwise to obtain maximum defroster airflow
4. Increase engine speed to minimize ice build-up on propeller blades

5. Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexplained loss in manifold pressure could be caused by carburetor ice or air intake filter ice. Lean the mixture if carburetor heat is used continuously.
6. Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable “off airport” landing site
7. With an ice accumulation of ¼ inch or more on the wing leading edges, be prepared for significantly higher stall speed
8. Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flap extension could result in a loss of elevator effectiveness]
9. Open the window and if practical scrape ice from a portion of the windshield for visibility in the landing approach
10. Perform a landing approach using a forward slip, if necessary for improved visibility
11. Approach at 85 to 95 KIAS, depending upon the amount of ice accumulation
12. Perform a landing in level attitude

STATIC SOURCE BLOCKAGE

(Erroneous Instrument Reading Suspected)

1. Alternate Static Source Valve (if installed) – PULL ON
2. Airspeed – Consult appropriate table in Section 5
3. Altitude – Cruise 50 ft higher than normal

LANDING GEAR MALFUNCTION PROCEDURES

LANDING GEAR FAILS TO RETRACT

1. Master Switch – ON
2. Landing Gear Lever – CHECK (lever full up)
3. Landing Gear and Gear Pump Circuit Breakers – IN
4. Gear Up Light – CHECK
5. Landing Gear Lever – RECYCLE
6. Gear Motor – CHECK operation(ammeter and noise)

LANDING GEAR FAILS TO EXTEND

1. Landing Gear Lever – DOWN
2. Emergency Hand Pump – EXTEND HANDLE and PUMP (perpendicular to handle until resistance becomes heavy – about 20 cycles)
3. Gear Down Light – ON
4. Pump Handle – STOW

GEAR UP LANDING

1. LANDING Gear Lever – UP
2. Landing Gear and Gear Pump Circuit Breaker – IN
3. Runway – SELECT longest hard surface or smooth sod runway available
4. Wing Flaps -- 40° (on final approach)
5. Airspeed – 65 KIAS
6. Doors – UNLATCH PRIOR TO TOUCHDOWN
7. Avionics Power and Master Switches – OFF when landing is assured
8. Touchdown – SLIGHTLY TAIL LOW
9. Mixture – IDLE CUT-OFF
10. Ignition Switch – OFF
11. Fuel Selector Valve – OFF
12. Airplane – EVACUATE

LANDING WITHOUT POSITIVE INDICATION OF GEAR LOCKING

1. Movable 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 -- 40°
6. Cabin Doors – UNLATCH PRIOR TO TOUCHDOWN
7. Avionics Power and Master Switches – OFF when landing is assured
8. Land – SLIGHTLY TAIL LOW
9. Mixture IDLE CUT-OFF
10. Ignition Switch – OFF
11. Fuel Selector Valve – OFF
12. Elevator Control – HOLD NOSE OFF GROUND as long as possible
13. Airplane – EVACUATE as soon as it stops

LANDING WITH A FLAT MAIN TIRE

1. Approach – NORMAL (full flap)
2. Touchdown – GOOD TRE FIRST hold airplane off flat tire as long as possible with aileron control
3. Directional Control – MAINTAIN using brake on good wheel as required

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

AMMETER SHOWS EXCESSIVE RATE OF CHARGE

(Full Scale Deflection)

1. Alternator – OFF
2. Alternator Circuit Breaker – PULL
3. Nonessential Electrical Equipment – OFF
4. Flight – TERMINATE as soon as practical

LOW-VOLTAGE LIGHT ILLUMINATES DURING FLIGHT

(Ammeter Indicates Discharge)

NOTE

Illumination of the low-voltage light may occur during low RPM conditions with an electrical load on the system such as during a low RPM taxi. Under these conditions, the light will go out at higher RPM. The master switch need not be recycled since an over-voltage condition has not occurred to de-activate the alternator system.

1. Avionics Power Switch – OFF
2. Alternator Circuit Breaker – CHECK IN
3. Master Switch – OFF (both sides)
4. Master Switch – ON
5. Low-voltage Light – CHECK OFF
6. Avionics Power Switch – ON

If low-voltage light illuminates again:

7. Alternator – OFF
8. Nonessential Radio and Electrical Equipment – OFF
9. Flight – TERMINATE as soon as practical