

Carenado

X-Plane

C152II Checklist



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CARENADO C152 II PROCEDURES

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Pre Flight Inspection

NORMAL PROCEDURES

BEFORE STARTING ENGINE

1. Preflight Inspection -- COMPLETE
2. Seats, Belts, Shoulder Harnesses -- ADJUST and LOCK
3. Fuel Shutoff Valve -- ON
4. Radios, Electrical Equipment -- OFF
5. Brakes -- TEST and SET
6. Circuit Breakers -- CHECK IN

STARTING ENGINE

1. Mixture -- RICH
2. Carburetor Heat -- COLD
3. Prime -- AS REQUIRED (up to 3 strokes)
4. Throttle -- OPEN ½ INCH
5. Propeller Area -- CLEAR
6. Master Switch -- ON
7. Ignition Switch -- START (release when engine starts)
8. Throttle -- ADJUST for 1000 RPM or less
9. Oil Pressure -- CHECK

BEFORE TAKEOFF

1. Parking Brake -- SET
2. Cabin Doors -- CLOSED and LATCHED
3. Flight Controls -- FREE and CORRECT
4. Flight Instruments -- SET
5. Fuel Shutoff Valve -- ON
6. Mixture -- RICH (below 3000 feet)
7. Elevator Trim -- TAKEOFF
8. Throttle -- 1700 RPM
- a. Magnetos -- CHECK (RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos)
- b. Carburetor Heat -- CHECK (for RPM drop)
- c. Engine Instruments and Ammeter -- CHECK
- d. Suction Gauge -- CHECK
9. Radios -- SET
10. Flashing Beacon, Navigation Lights and/or Strobe Lights -- ON as required
11. Throttle Friction Lock -- ADJUST
12. Brakes -- RELEASE

TAKEOFF

Normal Takeoff

1. Wing Flaps -- 0° - 10°
2. Carburetor Heat -- COLD
3. Throttle -- FULL OPEN
4. Elevator Control -- LIFT NOSE WHEEL at 50 KIAS
5. Climb Speed -- 65-75 KIAS

Short Field Takeoff

1. Wing Flaps -- 10°
2. Carburetor Heat -- COLD
3. Brakes -- APPLY
4. Throttle -- FULL OPEN
5. Mixture -- RICH (above 300 feet, LEAN to obtain maximum RPM)
6. Brakes -- RELEASE
7. Elevator Control -- SLIGHTLY TAIL LOW
8. Climb Speed -- 54 KIAS (until all obstacles are cleared)
9. Wing Flaps -- RETRACT slowly after reaching 60 KIAS

ENROUTE CLIMB

1. Airspeed -- 70 – 80 KIAS
2. Throttle -- FULL OPEN
3. Mixture -- RICH below 3000 feet, LEAN for maximum RPM above 300 feet.

CRUISE

1. Power -- 1900-2550 RPM (no more than 75%)
2. Elevator Trim -- ADJUST
3. Mixture -- LEAN

BEFORE LANDING

1. Seats, Belts, Harnesses -- ADJUST and LOCK
2. Mixture -- RICH
3. Carburetor Heat -- ON (apply full heat before closing throttle)

LANDING

Normal Landing

1. Airspeed -- 60-70 KIAS (flaps UP)
2. Wing Flaps -- AS DESIRED (below 85 KIAS)
3. Airspeed -- 55-65 KIAS (flaps DOWN)
4. Touchdown -- MAIN WHEELS FIRST
5. Landing Roll -- LOWER NOSE WHEEL GENTLY
6. Braking -- MINIMUM REQUIRED

Short Field Landing

1. Airspeed -- 60-70 KIAS (flaps UP)
2. Wing Flaps -- 30° (below 85 KIAS)
3. Airspeed -- MAINTAIN 54 KIAS
4. Power -- REDUCE to idle as obstacle is cleared
5. Touchdown -- MAIN WHEELS FIRST
6. Brakes -- APPLY HEAVILY
7. Wing Flaps -- RETRACT

Balked Landing

1. Throttle -- FULL OPEN
2. Carburetor Heat -- COLD
3. Wing Flaps -- RETRACT TO 20°
4. Airspeed -- 55 KIAS
5. Wing Flaps -- RETRACT (slowly)

AFTER LANDING

1. Wing Flaps -- UP
2. Carburetor Heat -- COLD

SECURING AIRCRAFT

1. Parking Brake -- SET
2. Radios, Electrical Equipment -- OFF
3. Mixture -- IDLE CUT-OFF (pull full out)
4. Ignition Switch -- OFF
5. Master Switch -- OFF
6. Control Lock -- INSTALL

EMERGENCY PROCEDURES

ENGINE FAILURES

Engine Failure During Takeoff Run

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

Engine Failure Immediately After Takeoff

1. Airspeed -- 60 KIAS
2. Mixture -- IDLE/CUT-OFF
3. Fuel Shutoff Valve -- OFF
4. Ignition Switch -- OFF
5. Wing Flaps -- AS REQUIRED
6. Master Switch -- OFF

Engine Failure During Flight

1. Airspeed -- 60 KIAS
2. Carburetor Heat -- ON
3. Primer -- IN and LOCKED
4. Fuel Shutoff Valve -- ON
5. Mixture -- RICH
6. Ignition Switch -- BOTH (or START if propeller is stopped)

FORCED LANDING

Emergency Landing Without Engine Power

1. Airspeed -- 65 KIAS (Flaps Up) 60 KIAS (flaps DOWN)
2. Mixture -- IDLE/CUT-OFF
3. Fuel Shutoff Valve -- OFF
4. Ignition Switch -- OFF
5. Wing Flaps -- AS REQUIRED (30° recommended)
6. Master Switch -- OFF
7. Doors -- UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown -- SLIGHTLY TAIL LOW
9. Brakes -- APPLY HEAVILY

Precautionary Landing With Engine Power

1. Airspeed -- 60 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. Radio and Electrical Switches -- OFF
5. Wing Flaps -- 30° (on final approach)
6. Airspeed -- 55 KIAS
7. Master Switch -- OFF
8. Doors -- UNLATCH PRIOR TO TOUCHDOWN
9. Touchdown -- SLIGHTLY TAIL LOW
10. Ignition Switch -- OFF
11. Brakes -- APPLY HEAVILY

Ditching

1. Radio -- TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions
2. Heavy objects (in baggage area) -- SECURE OR JETTISON
3. Approach -- High Winds, Heavy Seas -- INTO THE WIND Light Winds, heavy Swells -- PARALLEL TO SWELLS
4. Wing flaps -- 30°
5. Power -- ESTABLISH 300 FT/MIN DESCENT AT 55 KIAS.
6. Cabin Doors -- UNLATCH
7. Touchdown -- LEVEL ATTITUDE AT 300 FT/MIN DESCENT
8. Face -- CUSHION at touchdown with folded coat
9. Airplane -- EVACUATE through cabin doors. If necessary, open windows and flood cabin to equalize pressure so doors can be opened.
10. 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. Cranking -- CONTINUE in an effort to obtain a start.
5. Fire extinguisher -- OBTAIN (have ground worker obtain if not installed)
6. Engine -- SECURE
 - a. Master Switch -- OFF
 - b. Ignition Switch -- OFF
 - c. Fuel Shutoff Valve -- OFF
7. Fire -- EXTINGUISH using fire extinguisher, wool blanket, or dirt.
8. 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 Shutoff Valve -- OFF
3. Master Switch -- OFF
4. Cabin Heat and Air -- OFF (except wing root vents)
5. Airspeed -- 85 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. All other switches (except ignition switch) -- OFF
3. Vents/Cabin Air/Heat -- CLOSED
4. Fire Extinguisher -- ACTIVATE (if available)
If fire appears out and electrical power is necessary for continuance of flight:
5. Master Switch -- ON
6. Circuit Breakers -- CHECK for faulty circuit, do not reset.
7. Radio/Electrical Switches -- ON one at a time, with delay after each until short circuit is localized.
8. 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)
4. Aircraft Cabin -- VENTILATE
5. 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. Pitot Heat Switch (if installed) -- OFF

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 to obtain maximum defroster air temperature. For greater air flow at reduced temperatures, adjust the cabin air control as required.
4. Open the throttle to increase engine speed and minimize ice buildup on propeller blades.
5. Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexpected loss in engine speed could be caused by carburetor ice or air intake filter ice. Lean the mixture for maximum RPM, 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 1/4 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 left 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 65 to 75 KIAS depending upon the amount of ice accumulation.
12. Perform a landing in level attitude.

LANDING WITH A FLAT MAIN TIRE

1. Wing Flaps -- AS DESIRED
2. Approach -- NORMAL
3. Touchdown -- GOOD TIRE FIRST, hold airplane off flat tire as long as possible with aileron control.

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

Over-Voltage Light Illuminates

1. Master Switch -- OFF (both sides)
2. Master Switch -- ON
3. Over-Voltage Light -- OFF

If over-voltage light illuminates again:

4. Flight -- TERMINATE as soon as practical

Ammeter Shows Discharge

1. Alternator -- OFF
2. Nonessential Electrical Equipment -- OFF
3. Flight -- TERMINATE as soon as practical

PRE FLIGHT INSPECTION

CABIN

1. Control Wheel Lock -- REMOVE
2. Ignition Switch -- OFF
3. Master Switch -- ON
4. Fuel Quantity Indicators -- CHECK QUANTITY
5. Master Switch -- OFF
6. Fuel Shutoff Valve -- ON

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. Main Wheel Tire -- CHECK for proper inflation
3. Before first flight of the 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.
4. Fuel Quantity -- CHECK VISUALLY for desired level
5. Fuel Filler Cap -- SECURE

NOSE

1. Engine Oil Level -- CHECK, do not operate with less than four quarts. Fill to six quarts for extended flight.
2. 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 line drain plug will be necessary.
3. Propeller and Spinner -- CHECK for nicks and security
4. Carburetor Air Filter -- CHECK for restrictions by dust or other foreign matter.
5. Landing Light (s) -- CHECK for condition and cleanliness
6. Nose Wheel Strut and Tire -- CHECK for proper inflation
7. Nose Tie-Down -- DISCONNECT
8. Static Source Opening (left side of fuselage) -- CHECK for stoppage.

LEFT WING

1. Main Wheel Tire -- CHECK for proper inflation
2. Before first flight of the 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

LEFT WING Leading Edge

1. Pitot Tube Cover -- REMOVE and check opening for stoppage
2. Stall Warning Opening -- CHECK for stoppage. To check the system, place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation.
3. Fuel Tank Vent Opening -- CHECK for stoppage
4. Wing Tie-Down -- DISCONNECT

LEFT WING Trailing Edge

1. Aileron -- CHECK freedom of movement and security

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