FLIGHT SCHOOL

C177RG N2195Q

PREFLIGHT INSPECTIOIN

1 CABIN

1. Gear Handle "DWN" Position……..CHECK
2. Pitot Tube Cover……REMOVE
3. AROW Documents/Maintenance Log……CHECK
4. Emergency Equipment……CHECK
5. Control Wheel Lock……REMOVE
6. Ignition Switch……OFF
7. Master Switch……ON
8. Fuel Quantity……( )CHECKED/LIGHTS OUT
9. Avionics Master Switch……ON/OFF
10. Alt. Static Selector……OFF
11. Annunciators……CHECK
12. Fuel Shutoff Valve……ON
13. Pitot Heat……CHECK
14. Master Switch……OFF
15. Elevator Trim……SET
16. Cowl Flaps……OPEN

2 EMPENAGE

17. Baggage Door……CHECK
18. Tie-Down……DISCONECT
19. Control Surfaces……CHECK
20. Trim Tab……CHECK
21. Antennas……CHECK

3 RIGHT WING

22. Flap……CHECK
23. Aileron……CHECK
24. Fuel Bay Vent Opening……CHECK
25. Tie-Down……DISCONNECT
26. Main Wheel Tire……CHECK
27. Fuel Tank Sumps(1)……DRAIN
28. Fuel Quantity/Caps……CHECK/SECURE

4 NOSE

29. Fuel Sumps(1) ……DRAIN
30. Engine Oil (6-7 Qts)……CHECK
31. Engine Cooling Inlets……CHECK/CLEAR
32. Propeller and Spinner……CHECK
33. Air Filter……CHECK
34. Landing/Taxi Lights……CHECK
35. Nose Wheel Strut and Tire……CHECK
36. Left Static Source……CHECK

5 LEFT WING

37. Fuel Quantity/Caps……CHECK/SECURE
38. Fuel Tank Sumps(1)……DRAIN
39. Main Wheel Tire……CHECK
40. Pitot Tube……CHECK
41. Tie-Down……DISCONNECT
42. Stall Warning……CHECK
43. Bay Vent Opening……CHECK
44. Aileron……CHECK
45. Flap……CHECK

BEFORE ENGINE START

1. Preflight Inspection……COMPLETE
2. Passenger Briefing……COMPLETE
3. Seats and Seat Belts……SET
4. Fuel Selector Valve……BOTH
5. Brakes……TEST
6. Circuit Breakers……CHECK IN
7. Electrical Equipment……OFF
8. All Avionics (Check Each one Individually……OFF
9. Gear Handle "DWN" Position……CHECK
10. Throttle……OPEN ¼ INCH
11. Propeller……High RPM
12. Mixture……CUTOFF
13. Master Switch……ON
14. Beacon……ON
15. Aux. Fuel Pump……ON
16. *Prime……AS REQUIRED
17. Propeller Area……CLEAR

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AFTER START

1. Oil Pressure/Engine Instruments.....CHECK
2. Aux. Fuel Pump.....OFF
3. Mixture.....LEAN
4. Flaps.....CHECK/UP
5. Avionics Master.....ON

BEFORE TAKE OFF

1. Cabin Doors.....Closed and Locked
2. Flight Controls.....FREE/CORRECT
3. Fuel Quantity.....( )CHECK
4. Flight Instruments.....CHECK/SET
5. Stabilator/Rudder Trim.....SET
6. Mixture.....RICH
7. Fuel Selector Valve.....CHECK/BOTH
8. Run-up (1800 RPM)
   - Magnetos (150 Max Drop/50Differencial).....CHECK
   - Engine Instruments and Amp meter.....CHECK
   - Propeller.....CHECK
   - IDLE.....CHECK
   - Suction Gauge .....Check
9. Throttle Friction Lock .....Adjusted
10. Flaps.....SET 0-10
11. Departure/Emerg. Briefing.....COMPLETE

RUNWAY ITEMS

1. Heading Indicator.....SET
2. Altitude XPDR.....SET
3. Lights.....SET
4. Fuel.....MIX FULL RICH
5. Time.....RECORD

CLIMB

1. Gear.....UP
2. Flaps.....UP
3. Airspeed.....100-120 Mph
4. Power.....25”/2500 RPM
5. Mixture.....LEAN (13GPH)
6. Cowl Flaps.....OPEN (as required)

CRUISE

1. Power (<75%) (15-25”) (2100-2500 RPM).....SET
2. Trim.....SET
3. Mixture (Peak-75°).....LEAN
4. Cowl Flaps.....CLOSED
5. Engine Instruments.....CHECK

DESCENT

1. ATIS/ASOS.....ACUIRE
2. Altimeter.....( ) SET
3. POWER.....CRUISE DESCENT SET
4. Mixture.....SET
5. Cowl Flaps.....CLOSED
7. Fuel Selector.....BOTH
8. Approach Briefing.....COMPLETE

BEFORE LANDING

1. Seats and Belts.....Adjusted and Locked
2. Fuel Selector.....Both
3. Landing Gear Down.....Below 140 Mph
4. Mixture.....Rich
5. Propeller.....HIGH RPM
6. Lights.....SET
7. Flaps.....10° SET

AFTER LANDING

1. Lights.....SET
2. Flaps.....UP
3. Cowl Flaps.....OPEN
4. Transponder.....STBY
5. Mixture.....LEAN

SHUTDOWN

1. Avionics Master.....OFF
2. Lights OFF.....OFF
3. Mixture.....CUTOFF
4. Ignition.....OFF
5. Master Switch.....OFF

SECURING

1. Control Lock.....INSTALL
2. Fuel Selector Valve.....OFF
3. Pitot Cover.....INSTALL
4. Cabin Cover.....Installed
5. Chocks.....BOTH MAIN Tires
6. Tie-Downs.....SET
7. Paperwork/Flight Plan.....COMPLETE/CLOSED

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ENGINE FAILURE DURING TAKEOFF ROLL

1. **Trottle.....IDLE**
2. **Brakes.....APPLY**
3. Flaps.....RETRACT
4. Mixture.....CUTOFF
5. Ignition .....OFF
6. Master Switch.....OFF

ENGINE FAILURE DURING CLIMB

1. **Airspeed.....80Mph**
2. Mixture.....CUTOFF
3. Fuel Selector Valve.....OFF
4. Ignition .....OFF
5. Flaps.....AS REQUIRED
6. Master Switch.....OFF
7. Cabin Door.....UNLATCH
8. Land.....STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT

1. **Airspeed.....85Mph**
2. **Fuel Selector Valve.....BOTH**
3. **Mixture.....RICH**
4. **Auxiliary Fuel Pump.....ON**
5. Ignition .....BOTH (or START if propeller is stopped)

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Seats and Seat Belts.....SECURE
2. Airspeed.....85Mph
3. Mixture.....CUTOFF
4. Fuel Selector Valve.....OFF
5. Ignition .....OFF
6. Landing Gear.....DOWN
   (UP if terrain is rough or soft).
7. Flaps.....AS REQUIRED
8. Cabin Doors.....UNLATCH
9. **TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQWAK 7700**
10. Master Switch.....OFF

ENGINE FIRE DURING START

1. **Ignition Switch .....START, Continue Cranking**

If engine starts:

2. Power.....1800 RPM
3. Engine.....SHUTDOWN

If engine fails to start

4. **Throttle.....FULL OPEN**
5. **MIXTURE.....CUT OFF**
6. **Cranking.....CONTINUE**
7. **Fuel Selector Valve.....OFF**
8. **Auxiliary Fuel Pump.....OFF**
9. Engine.....SECURE
   a. Master Switch.....OFF
   b. Ignition Switch.....OFF
11. Airplane.....EVACUATE
12. Fire.....EXTINGUISH

ENGINE FIRE IN FLIGHT

1. **Mixture.....CUT OFF**
2. **Fuel Selector Valve.....OFF**
3. **Auxiliary Fuel Pump.....OFF**
4. **Master Switch.....OFF**
5. Cabin Heat and Air.....OFF
6. Airspeed.....100-120 Mph increase glide speed if needed to extinguish fire
7. Forced Landing.....EXCECUTE

ELECTRICAL FIRE IN FLIGHT

1. **Master Switch.....OFF**
2. **Vents, Cabin Air, Heat.....CLOSED**
3. **Fire Extinguisher.....ACTIVATE**
4. Avionics.....OFF
5. All other switches (**except ignition switch**).....OFF

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Seats and Seat Belts.....SECURE
2. Airspeed..... Flap UP-85 Mph--Flaps Down ....75 MPH
3. Flaps.....20°
4. Selected Field.....FLY OVER
5. Avionics Master Switch and Electrical Switches.....OFF
6. Landing Gear.....DOWN (UP if terrain is rough or soft)
7. Flaps.....30° (on final approach)
8. Airspeed.....75 MPH
9. Master Switch.....OFF
10. Doors.....UNLATCH
11. Touchdown.....SLIGHTLY TAIL LOW
12. **TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQWAK 7700**
13. Ignition Switch.....OFF

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DITCHING

1. **Radio.....TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQWAK 7700**
2. Heavy Objects (in baggage area).....SECURE OR JETTISON
3. Seats and Seat Belts.....SECURE
4. Flaps.....20° to 30°
5. Power.....ESTABLISH 300 FT/MIN DESSCENT AT 75 Mph
   If no power is available, approach at 85 Mph with flaps up or at 75 Mph with 10° flaps
6. Cabin Doors.....UNLATCH
7. Touchdown.....LEVEL ATTITUDE
8. Face.....CUSHION
9. ELT.....ACTIVATE
10. Airplane.....EVACUATE
    If necessary open window to flood cabin to equalize pressure so doors can be opened.
13. Life Vests and Raft.....INFLATE WHEN CLEAR OF AIRPLANE

LANDING GEAR FAILS TO RETRACT
(Green Gear Locked And/Or Red Gear Unsafe Light Remains On)

1. Master Switch.....ON
2. Landing Gear Lever.....CHECK (Lever full up)
3. Landing Gear and Gear Pump Circuit Breakers.....IN
4. Landing Gear Lever.....RECYCLE
5. Landing Gear Lights.....CHECK BOTH GREEN and RED LIGHTS are OFF
   If gear still fails to retract, proceed to repair station in accordance with Retraction Malfunction paragraph in the amplified emergency procedures.

LANDING GEAR FAILS TO EXEND
(Green Gear Locked Light Fails to Illuminate and Red Gear Unsafe Light Remains On)

1. Master Switch.....ON
2. Landing Gear Lever.....DOWN
3. Landing Gear and Gear Pump Circuit Breakers.....IN
4. Emergency Hand Pump.....EXTEND HANDLE And PUMP (until resistance becomes heavy – About 35 cycles)
5. Gear Locked Light.....ON
6. Gear Unsafe Light.....OFF
7. Pump Handle.....STOW

GEAR UNSAFE LIGHT ILLUMINATES

(GEAR UP selected)

1. Gear Motor.....CHECK audibly for operation.
2. Main Gear.....CHECK visually to see if they appear to be retracted.
3. Gear Pump Circuit Breaker – PULL if gear appears to be retracted but motor continues to run and flight is to be continued to a maintenance facility.

(GEAR DOWN selected)

1. 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 overheating the gear motor. If the gear locked light is not illuminated, proceed to the Landing Without Positive Indication of Gear Locking checklist.)

NOTE: If the landing gear remains retracted or is only partially extended, and all efforts to fully extend it (including manual extension) have failed, plan a wheels up landing. In preparation for landing, reposition the landing gear lever to GEAR UP and push the LDG GEAR and GEAR PUMP circuit breakers in to allow the landing gear to swing into the gear wells at touchdown. Then proceed according with the checklist.

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. Flaps.....30° (on final approach)
5. Airspeed.....85MPH
6. Doors.....UNLATCH
7. Avionics Power and Master Switches.....OFF when landing is assured.
8. Touchdown.....SLIGHTLY TAIL LOW
9. Mixture.....CUT-OFF
10. **Ignition Switch.....OFF**
11. **Fuel Selector Valve.....OFF**
12. **Airplane.....EVACUATE**

LANDING WITHOUT POSITIVE INDICATION OF GEAR LOCKING

1. Before Landing Check.....COMPLETE
2. Approach.....NORMAL (full flap)
3. Landing Gear and Gear Pump Circuit Breakers.....IN
4. Landing.....TAIL LOW as smoothly as possible
5. Braking.....MINIMUM necessary
6. Taxi.....SLOWLY
7. Engine.....SHUTDOWN before inspecting the gear

LANDING WITH A DEFECTIVE NOSE GEAR or FLAT NOSE TIRE

1. Approach.....NORMAL
2. Flaps.....30°
3. Cabin Doors.....UNLATCH PRIOR TO TOUCH DOWN
4. Master Switch.....OFF
5. Touch Down.....ON MAINS, hold nose wheel off the ground as long as possible, when nose wheel touches the ground maintain full up elevator.
6. Directional Control.....MAINTAIN
7. **Ignition Switch.....OFF**
8. **Fuel Selector Valve.....OFF**
9. **Elevator Control.....HOLD NOSE OFFGROUND as long as possible.**
10. **Airplane.....EVACUATE**

LANDING WITH A FLAT MAIN TIRE

1. Approach.....NORMAL
2. Flaps.....30°
3. Touch Down.....GOOD MAIN TIRE FIRST, hold airplane off flat tire as long as possible with aileron control.
4. Directional Control.....MAINTAIN, using brake on wheel as required.

AMMETER – EXCESSIVE RATE OF CHARGE

1. Alternator.....OFF
2. Alternator Circuit Breaker.....PULL
3. Non-Essential Electrical equipment.....OFF
4. Flight.....TERMINATE as soon as practical.

LOW VOLTAGE ANNUNCIATOR (VOLTS) DURING FLIGHT

May occur during low RPM, Annunciator will go out at higher RPM

1. Avionics Master.....OFF
2. Alternator Circuit Breaker (ALT FLD).....CHECK IN
3. Master Switch.....OFF (both sides)
4. Master Switch.....ON
5. Low Voltage Annunciator (VOLTS).....CHECK OFF
6. Avionics Master.....ON

If low voltage annunciator (VOLTS) illuminates again:

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

VACCUM SYSTEM FAILURE (L VAC) or (R VAC) Annunciator

1. Vacuum Gauge.....CHECK

If vacuum is not within normal limits partial panel procedures maybe required.