

GROUND PROCEDURES

CABIN

1. Required Documents..... A.R.O.W.
2. Control Wheel LockREMOVE
3. Ignition Switch OFF / KEY ON DASH
4. Avionics Master SwitchOFF
5. Master SwitchON
6. Fuel Quantity Indicators CHECK
7. Avionics Master SwitchON
8. Avionics Cooling FanAUDIBLE
9. Avionics Master SwitchOFF
10. Flaps FULL DOWN
11. All Exterior LightsON
12. Pitot Cover REMOVED
13. Pitot HeatON
14. Check Operation of :
..... Nav/Strobe, Beacon, and Landing Light
15. Stall Warning CHECKED
16. Pitot Tube..... CLEAR / WARM
17. Exterior Lights All OFF, BEACON ON
18. Pitot HeatOFF
19. Master SwitchOFF
20. Fuel SelectorBOTH
21. Elevator Trim..... SET for takeoff

EMPENNAGE

1. Baggage Door CHECK
2. Rudder Gust LockREMOVE
3. Tail Tie-Down DISCONNECT
4. Elevator CHECK
5. Rudder..... CHECK
6. Trim Tab CHECK
7. Airplane Antennas CHECK

RIGHT WING

1. Flap and Aileron CHECK
2. Wing Tip CHECK
3. Leading Edge CHECK
4. Wing Tie-DownREMOVE
5. Main Wheel Tire / Brake CHECK
6. Fuel Quick Drain Valves..... CHECK
7. Fuel Quantity CHECK VISUALLY
8. Fuel Filler Cap....vent unobstructed SECURE

NOSE

1. Fuel Quick Drain Valves..... CHECK
2. Engine Oil/Filler Cap..... CHECK (5-8 qts)
3. Engine Cooling Air InletsCLEAR
4. Propeller and Spinner CHECK
5. Carburetor Air Filter CHECK
6. Nose Wheel Strut and Tire CHECK
7. Left Static Source Opening CHECK

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LEFT WING

1. Fuel Quantity CHECK VISUALLY
2. Fuel Filler Cap.....vent unobstructed SECURE
3. Fuel Quick Drain Valves..... CHECK
4. Main Wheel Tire / Brake CHECK
5. Leading Edge CHECK
6. Pitot Tube CoverREMOVE
7. Fuel Tank Vent Opening CHECK
8. Stall Warning Opening CHECK
9. Wing Tie-DownREMOVE
10. Landing Light..... CHECK
11. Wing Tip CHECK
12. Aileron and Flap CHECK



GROUND PROCEDURES

BEFORE STARTING ENGINE

1. Preflight Inspection.....COMPLETE
2. Passenger BriefingCOMPLETE
3. Seats/SeatBeltsADJUST, LOCK
4. Fuel selector valve BOTH
5. Av. Pwr Switch, Elect. Equip..... OFF
6. Brakes TEST; SET/HOLD
7. Circuit Breakers..... CHECK IN

STARTING ENGINE (With Battery)

1. Beacon ON
 2. Carb Heat COLD
 3. Throttle OPEN 1/8"
 4. Mixture FULL RICH
- NOTE: if engine is warm, omit priming**
5. Prime..... As Req'd
 6. Propeller area CLEAR
 7. Master switch ON
 8. Ignition switch..... START
 9. Oil pressure.....CHECK
 10. Throttle 1000 RPM or LESS
 11. Nav, strobe lights ON, as REQ'd
 12. Avionics power switch & radios ON
 13. Transponder..... ALT
 14. Flaps RETRACT
 15. GPS..... Initial fuel; Runway diagram
 16. Taxi Lights ON as REQ'd

RUNUP

1. Parking Brakes SET or HOLD
2. Seat & Seat Belts..... CHECK SECURE
3. Doors & Windows CLOSED/LOCKED
4. Flight controls FREE and CORRECT
5. Flight Instruments CHECK & SET
(Heading & Altimeter)
6. Fuel QuantityCHECK
7. Fuel Selector Valve..... BOTH
8. MixtureRICH
9. Throttle1700 RPM
 - a. MagnetosCHECK BOTH (150/50)
 - b. Carburetor HeatCHECK then COLD
 - c. Engine instrumentsCHECK
 - d. Suction Gage.....CHECK
 - e. AmmeterCHECK
10. ThrottleCHECK IDLE
11. Throttle 1000 RPM or LESS
12. Throttle friction lockADJUST
13. Elevator TrimSET for takeoff
14. Radios and AvionicsSET
15. Navigation/GPS.....SET as REQ'd
16. Wing flapsas REQ'D
17. Lights.....as REQ'D

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BEFORE TAKEOFF

1. Doors & Windows.....CLOSED/LOCKED
2. Fuel Quantity CHECK
3. Fuel Selector Valve BOTH
4. Elevator TrimSET for takeoff
5. Mixture RICH (LEAN max RPM > 3000')
6. Wing flaps as REQ'D
7. Lights as REQ'D

INFLIGHT CHECKS CONTINUED ON SECOND CARD

SECURING AIRPLANE

1. Parking Brake..... SET or HOLD
2. Throttle 1500 RPM
3. Mixture LEANED, 20 seconds
4. Avionics.....CHECK 121.5
5. Throttle REDUCE as REQ'd
6. Parking Brake..... RELEASED
7. All lights As Req'd
8. Throttle..... IDLE
9. Avionics Power Switch, Elect. Equip OFF
10. Exterior, Interior & Panel Lights OFF
11. Beacon Light ON
12. Magneto GroundCHECK
13. Mixture IDLE CUT OFF
14. Ignition Switch OFF
15. Aircraft Keys..... ON DASH
16. Master Switch..... OFF
17. Fuel SelectorRIGHT TANK
18. Gust Lock INSTALLED
19. Pitot Cover INSTALLED
20. Wheel Chocks INSTALLED
21. Tie Downs INSTALLED
22. Tires and AircraftINSPECTED
23. Shade/Canopy Cover INSTALLED

FIRE DURING START

1. Cranking.....CONTINUE
- If engine starts:**
2. Power..... **1,700 RPM for a few minutes**
 3. Engine **SHUTDOWN**
- If engine fails to start:**
4. Throttle **FULL OPEN**
 5. Mixture **IDLE CUT OFF**
 6. Cranking..... **CONTINUE**
 7. Fuel Selector **OFF**
 8. Master Switch..... **OFF**
 9. Ignition Switch **OFF**
 10. Fire Extinguisher **ACTIVATE**
 11. Airplane **EVACUATE**

FLIGHT NORMAL PROCEDURES

NORMAL TAKEOFF

1. Doors & Windows..... CLOSED/LOCKED
2. Fuel Quantity..... CHECK
3. Fuel Selector Valve BOTH
4. Elevator Trim SET for takeoff
5. Lights..... as REQ'D
6. Wing Flaps..... 0°
7. Carburetor heat..... COLD
8. Throttle FULL OPEN
9. Mixture..... RICH (LEAN max RPM > 3000')
10. Rotate..... **55 KTS**
11. Climb Speed V_y = **70 KTS**
12. Wing Flaps..... RETRACT

SHORT FIELD TAKEOFF

1. Steps 1-5 of Normal Takeoff
2. Wing Flaps..... 0°
3. Carburetor Heat COLD
4. Brakes.....APPLY
5. Throttle FULL OPEN
6. Mixture..... RICH (LEAN max RPM > 3000')
7. Brakes..... RELEASE
8. Elevator Control SLIGHTLY TAIL LOW
9. Climb Speed **60 KTS** until over obstacles

ENROUTE CLIMB

1. Airspeed **70-85 KTS**
2. Throttle FULL OPEN
3. Mixture..... RICH (LEAN max RPM > 3000')

CRUISE

1. Power 2200-2700 RPM (75% max)
2. Elevator trimADJUST
3. Mixture..... LEAN as REQ'd

DESCENT

1. Power as REQ'd
2. Mixture..... ENRICHEN, as REQ'd
3. Carburetor Heat ON, as Req'd
4. ATIS/Altimeter..... SET
5. Fuel selector valve..... BOTH

BEFORE LANDING

1. Seats/SeatBelt..... UPRIGHT,ADJUST,LOCK
2. Fuel Selector Valve BOTH
3. Mixture..... RICH (or as REQ'd)
4. Carburetor Heat ON, as Req'd
5. Landing/Taxi Lights..... ON
6. Wing Flaps..... AS DESIRED

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NORMAL LANDING

1. Airspeed **65 - 75 KTS (flaps UP)**
2. Wing flapsas DESIRED (< 110/85 KTS)
3. Airspeed **60 - 70 KTS (flaps down)**
4. Touchdown MAIN WHEELS FIRST
5. Landing Roll..... LOWER NOSE WHEEL
6. Braking..... MINIMUM REQUIRED

SHORT-FIELD LANDING

1. Airspeed 65 - 75 KTS (flaps UP)
2. Wing Flaps..... FULL DOWN 40°
3. Airspeed **60 KTS**
4. Touchdown MAIN WHEELS FIRST
5. Brakes APPLY HEAVILY--don't lock brakes
6. Wing flapsRETRACT

BALKED LANDING

1. Throttle FULL OPEN
2. Carburetor Heat COLD
3. Wing Flaps..... RETRACT TO 20°
4. Climb speed..... **55 KTS**
5. Wing Flaps..... 10° (until over obstacles)
6. Wing Flaps..... **RETRACT after 60 KTS**

AFTER LANDING

1. Wing Flaps..... UP
2. Carburetor Heat COLD
3. Taxi & Landing Light..... ON as REQ'd
4. Transponder..... ALT

V-SPEEDS		INFO	
V _{so}	43	Oil (full/min)	8 / 6
V _{s1}	50	Fuel [use]	42 [38]
V _r	55	Weight TO	2300#
V _x	60	Weight Lnd	2300#
V _y	70	Demo Xwind	13
V _g	70	App FL DN	65
V _{fe}	87	App FL UP	70
V _a	106		
V _{no}	122		
V _{ne}	151		

FLIGHT EMERGENCY PROCEDURES

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ENGINE FAILURE DURING FLIGHT

1. Airspeed..... **70 KTS**
2. Carburetor Heat..... ON
3. Landing areaSELECT
4. Fuel Selector Valve..... BOTH
5. MixtureRICH
6. Ignition Switch BOTH or START
7. Primer IN and LOCKED
8. Transponder..... 7700; Mayday call

ENGINE FIRE IN FLIGHT

1. MixtureIDLE CUT OFF
2. Fuel Selector OFF
3. Ignition Switch OFF
4. Cabin Heat/Air OFF (except overhead vents)
5. Airspeed..... 100 kts (to extinguish fire)
6. Master SwitchOFF (after flaps set)
7. Forced Landing..... EXECUTE

EMERGENCY LANDING NO POWER

1. Passenger Seat Backs MOST UPRIGHT
2. Seats and Seat Belts SECURE
3. Airspeed..... 70 KTS (flaps UP)
.....65 KTS (flaps DOWN)
4. MixtureIDLE CUT OFF
5. Fuel Selector OFF
6. Ignition Switch OFF
7. Wing Flaps.....AS REQ'D (40° recommended)
8. Doors UNLATCH prior to touchdown
9. Master Switch OFF (landing assured)
10. TouchdownSLIGHTLY TAIL LOW
11. BrakesAPPLY HEAVILY

ELECTRICAL FIRE IN FLIGHT

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

If Fire is CONFIRMED OUTVentilate Cabin
6. Vents/Cabin Air/Heat..... OPEN (if Fire is out)

If fire is out & elec. power is necessary:

7. Master Switch ON
8. Circuit Breakers..... CHECK (Don't reset)
9. Radio Switches OFF
10. Avionics Master Switch..... ON
11. Radio/Electrical Switches.... ON (1 at time)

DITCHING

1. Radio..... TRANSMIT MAYDAY (location)
2. TransponderSQUAWK 7700
3. ELTACTIVATE
4. Heavy objectsSECURE or JETTISON
5. Passenger Seat Backs..... MOST UPRIGHT
6. Seats and Seat Belts..... SECURE
7. Wing Flaps 20°-40°
8. Power.....300 fpm descent @ 65 KTS
Without power 70 KTS flaps up OR
..... 65 KTS flaps 10°
9. Approach:
High winds, heavy seasINTO THE WIND
Light winds, heavy swells...PARALLEL TO SWELLS
10. Cabin doors..... UNLATCH
11. Touchdown LEVEL ATTITUDE
12. Face CUSHION at touchdown
13. AirplaneEvacuate by door
(open window 1st)
14. Life Vests/Raft CLEAR of A/C INFLATE

CABIN FIRE

1. Master Switch OFF
 2. Vents/Cabin Air/HeatCLOSED(avoid draft)
 3. Fire ExtinguisherACTIVATE
- If Fire is CONFIRMED OUT Ventilate Cabin
4. Vents/Cabin Air/Heat OPEN (if fire is out)
 5. Land the airplane as soon as possible

WING FIRE

1. Navigation Light Switch OFF
2. Pitot Heat Switch OFF
3. Sideslip..... NOSE TO SIDE WITH FIRE

EXCESSIVE DISCHARGE

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

OVER VOLTAGE LIGHT ON

1. Avionics Power Switch OFF
 2. Master Switch OFF (both sides)
 3. Master Switch ON
- If over-voltage light off:
4. Avionics Power Switch OM
- If over-voltage light illuminates again:
5. Flight LAND AS SOON AS PRACTICAL