PREFLIGHT- CABIN

1. Cover ..... REMOVE
   (if wet store on clean surface in BEFA hangar)
2. Pitot Tube Cover ..... REMOVE
3. Control Wheel Lock ..... REMOVE
4. Parking Brake ..... SET
5. POH/AFM ..... AVAILABLE IN AIRPLANE
6. Aspen EFIS Master Switch ..... OFF
7. Avionics Power Switches ..... PRIM & STBY OFF
8. Ignition Switch ..... OFF
9. Landing Gear Lever ..... DOWN
10. Master Switch ..... ON
11. Flaps ..... FULL DOWN
12. Low Voltage & Alternate Out Lights ..... ON
13. Vacuum Warn Buttons... ... CHECK EXTENDED
14. Landing Gear Lights/Horn ..... PRESS TO TEST
15. Fuel Quantity Indicators .....CHECK QUANTITY
16. Fuel On-Off Valve ..... ON
17. Fuel Selector Valve ..... BOTH
18. STBY Av Switch .....ON, CHECK powered, OFF
19. Digital Clock ..... VERIFY/SET
20. Ice Detector Light..... CHECK OPERATION
21. Pitot Heat ..... ON 30 seconds, then OFF
22. Beacon,Strobe,Position,Lndg,Taxi Lights..... ON
23. Pitot Tube..... CLEAR and VERY WARM
24. Stall Warning Sensor.....PERCEPTIBLY WARM
25. Stall Warning Vane..... CHECK for horn
26. Beacon,Strobe,Position,Lndg,Taxi Lights .... CHECK
27. Strobe, Position, Landing, Taxi Lights ..... OFF
28. Windshield Anti-Ice .. ON, CHECK panel warm, OFF
29. Master Switch ..... OFF
30. Static Pressure Alternate Source ..... OFF
31. Trim Controls ..... NEUTRAL
32. Oxygen Pressure & Masks (as rqd)..... CHECK
33. Hydraulic Fluid Reservoir ..... CHECK
34. VOR Log..... CHECK
35. FLASHLIGHT..... AVAILABLE if night flight

PREFLIGHT- EMPENNAGE

1. Static Source Openings (2)..... CHECK
2. Baggage Door..... CHECK
3. Aspen EFIS RSM ..... CONDITION, SECURITY
4. Aspen EFIS RSM Vent Hole ..... CLEAR
5. RSM Lightning Tape ..... CONDITION/SECURITY
6. Rudder Gust Lock ..... REMOVE
7. Tail Tie-Down ..... REMOVE
8. Control Surfaces..... CHECK

PREFLIGHT- RIGHT WING

1. Main Wheel Tire ..... CHECK (55 PSI)
2. Main Wheel and Wheel Well..... CHECK
3. Flaps, track, linkage..... CHECK
4. Aileron..... CHECK
5. Aileron Gap Seal..... CHECK
6. Fuel Tank Vent ..... CHECK
7. Wing Tie Down..... DISCONNECT
8. De-ice Boots..... CHECK (tears,abrasion,clean)
9. Fuel Tank Sump Quick-Drain Valve..... DRAIN
10. Fuel Quantity .....CHECK VISUALLY
11. Fuel Filler Cap ..... SECURE

PREFLIGHT- NOSE

1. Prop & Spinner..... CHECK
2. Prop Anti-Ice Heater Boots..... CHECK
3. Air Inlets (3) ..... CHECK
4. Nose Gear Doors..... CHECK
5. Nose Wheel Tire .....CHECK (88 PSI)
6. Nose Strut & Wheel Well..... CHECK
7. Engine Oil Filler Cap ..... CHECK SECURE
8. Engine Oil Dipstick ..... CHECK(7-10qt), SECURE
9. Fuel Strainer Quick-Drain .....DRAIN (#1)
10. Fuel Reservoir Quick-Drain.....DRAIN (#2)
11. Vapor Return Line.....DRAIN (#3)

PREFLIGHT- LEFT WING

1. De-ice Boots.....CHECK (tears,abrasion,clean)
2. Fuel Tank Sump Quick-Drain Valve..... DRAIN
3. Fuel Quantity .....CHECK VISUALLY
4. Fuel Filler Cap ..... SECURE
5. Wing Tie-Down ..... DISCONNECT
6. Fuel Tank Vent ..... CHECK
7. Aileron ..... CHECK
8. Aileron Gap Seal ..... CHECK
9. Flaps, track, linkage ..... CHECK
10. Main Wheel Tire .....CHECK (55 PSI)
11. Main Wheel and Wheel Well..... CHECK
12. Parking Brake ..... RELEASE

POSTFLIGHT- SECURING AIRPLANE

1. Parking Brake ..... SET
2. Throttle ..... 1000 RPM
3. Turbo Cool Down ..... 5 minutes including taxi
4. Electrical Equipment (Except Beacon)..... OFF
5. Aspen EFIS Master Switch ..... OFF
6. Avionics PRIM/STBY Switches..... OFF
7. Throttle ..... IDLE
8. Magneto ..... MOMENTARY OFF CHECK
9. Mixture ..... IDLE CUT OFF
10. Magneto Switch ..... OFF
11. Master Switch ..... OFF
12. Fuel Selector Valve .....LEFT or RIGHT
    (select downhill wing if stopped on slope)
13. Control Lock ..... INSTALL
14. Cabin Heat/Air Vents ..... CLOSED
15. Hobbs and Tach Time .....RECORDED
16. Parking .....ENSURE WINGS LEVEL
    (use leveling board and wheel chocks in baggage area as needed, gas tug available in BEFA hanger)
17. Wheel Chocks ..... INSTALLED
18. Tiedowns (3) ..... SECURED
19. Pitot Cover ..... INSTALLED
20. Doors..... LOCKED
21. Aircraft..... INSPECTED FOR DAMAGE
22. Aircraft Cover..... INSTALL

BEFORE STARTING ENGINE

1. Hobbs and Tach Time ..... RECORDED
2. Preflight Inspection ..... COMPLETE
3. Passenger Briefing ..... COMPLETE
4. Seats, Belts, Harnesses ..... ADJUST & LOCK
5. Brakes ..... TEST & SET
6. Aspen EFIS Master Switch ..... OFF
7. Avionics PRIM and STBY Switches ..... OFF
8. Circuit Breakers ..... CHECK IN
9. Electrical Equipment ..... OFF
10. Landing Gear Lever ..... DOWN
11. Autopilot ..... OFF
12. Cowl Flaps ..... OPEN
13. Manual Primer ..... IN and LOCKED

STARTING ENGINE

1. Beacon Switch ..... ON
2. Position Lights ..... ON as required (if night)
3. Throttle ..... CLOSED
4. Propeller ..... HIGH RPM
5. Mixture ..... RICH
6. Propeller Area ..... CLEAR
7. Battery Master Switch ..... ON
8. Auxiliary Fuel Pump Switch ..... ON
9. Throttle ..... ADVANCE for 50-60 PPH then IDLE
10. Auxiliary Fuel Pump Switch ..... OFF
11. Ignition Switch ..... START
12. Throttle ..... ADVANCE slowly
13. Ignition Switch ..... RELEASE as engine starts
14. Throttle ..... 1000 RPM
15. Oil Pressure ..... CHECK
16. Flaps ..... UP
17. Mixture ..... LEANED (to just rich of rpm drop)
18. Dual Alternator Functional Check
    a) ALT1 & ALT2 switches ..... OFF
    CHECK LOW VOLTAGE & ALT lights ..... ILUMINATED
    b) ALT1 switch ..... ON
    CHECK LOW VOLTAGE & ALT 1 light EXTINGUISHED
    V/A switch SELECT ALT1, VERIFY charging
    c) ALT1 switch OFF, ALT2 switch ON
    CHECK LOW VOLTAGE & ALT 2 light EXTINGUISHED
    V/A switch SELECT ALT2, VERIFY charging
    d) ALT1 & ALT2 switches ..... ON
    V/A switch SELECT BAT, VERIFY charging
    V/A switch SELECT VOLT, VERIFY 28v
19. Aspen EFIS Master Switch ..... ON
20. Avionics PRIM Switch ..... ON
21. Initial Fuel ..... SPECIFIED on JPI EDM830
22. Aspen EFIS ..... Alignment COMPLETE prior to taxi

RUNUP

1. Parking Brake ..... SET
2. Seats, Belts, Harnesses ..... CHECK SECURE
3. Cabin Doors ..... CLOSED & LOCKED
4. Flight Controls ..... FREE & CORRECT
5. Aspen EFIS ..... CHECK
   (BARO, HDG, ALT, CDI Source, GPSS)
6. Flight Instruments ..... CHECK & SET
7. Auxiliary Fuel Pump ..... OFF
8. Fuel On-Off Valve ..... RECHECK ON (full in)
9. Fuel Quantity ..... CHECK
10. Fuel Selector Valve ..... RECHECK BOTH ON
11. Radios & Avionics ..... SET
12. Autopilot Automatic Disconnect .... PERFORM
    a. PULL-TURN knob ..... CENTER and PULL OUT
    b. AP Lateral TRIM control ..... CENTER
    c. Control Wheel ..... HOLD to reduce motion
    d. AP ON-OFF Rocker Switch ..... ON
    e. AP "TEST EA FLT" button .... PUSH and HOLD
    VERIFY: AP On-Off Rocker Switch OFF,
    AP DISC WARN light YELLOW,
    AP Disengage Horn 1-2 sec tone
    f. AP DISENGAGE switch ..... PULL
    VERIFY: AP DISC WARN light out
    g. PULL-TURN knob ..... PUSH IN
13. Electric Trim
    a. Elect Trim Disengage Switch ..... DISENGAGE
    b. Electric Trim ..... VERIFY disabled
    c. Electric Trim Switch ..... ON
    d. Electric Trim ..... ACTUATE, SET for takeoff
14. Rudder Trim ..... SET for takeoff
15. Oil temp ..... MINIMUM 75°F
16. Throttle ..... 1700 RPM (MIXTURE Rich)
    a. Magnetos ..... CHECK (150/50)
    b. Propeller ..... CYCLE
    c. Suction Gage and Buttons ..... CHECK
    d. Engine Instruments & Ammeter ..... CHECK
IF ICE POSSIBLE
    e. De-Icing Press Switch ..... ON & release
    VERIFY: Tail, Outer Wing, Inner Wing INFLATE 6 sec each; Pressure Light ON in 3 sec, OFF after 18 sec; BOOTS check for COMPLETE DEFLATION
    f. Propeller Anti-Ice Switch ..... ON
    g. Prop Anti-Ice Ammeter ..... GREEN
    momentary change during cycling
    h. Windshield Anti-Ice Switch ..... ON
    observe ammeter or compass flicker
    i. Windshield Anti-Ice Switch ..... OFF
    j. Prop Anti-Ice Switch ..... OFF after 1 minute
17. Throttle ..... IDLE CHECK
18. Throttle ..... 1000 RPM (MIXTURE Re-lean)
19. Throttle Friction Lock ..... ADJUST
20. Wing Flaps ..... 0-20° (10° typical, 20° soft field)
21. CHTs ..... MINIMUM 160°F
22. Cowl Flaps ..... OPEN
23. Parking Brake ..... RELEASE

BEFORE TAKEOFF (crossing hold short line)

1. Mixture ..... FULL RICH
2. Landing & Taxi Light ..... ON
3. Strobe Lights ..... AS DESIRED
4. Transponder ..... VERIFY squawk
5. Pitot Heat ..... AS REQUIRED
6. Prop Anti-Ice Switch ..... AS REQUIRED
7. Windshield Anti-Ice Switch ..... AS REQUIRED
8. Autopilot ..... VERIFY OFF and Turn Knob IN

TAKEOFF – NORMAL

1. Mixture.....FULL RICH
2. Cowl Flaps .....OPEN
3. Wing Flaps.....0-20° (10° typical, 20° soft field)
4. Brakes..... APPLY (rolling takeoff as desired)
5. Throttle ..... ADVANCE to 25”MP or 50% HP
6. Brakes..... RELEASE
7. Throttle .....ADVANCE over 5-10 sec
8. Power ..... 34"and 2700 RPM (5 min limit)
9. Elevator Control ..... LIFT NOSE at 65-**70 kts**
10. Initial Climb Speed .....80-**90 kts**
11. Brakes.....APPLY momentarily when airborne
12. Landing Gear ..... RETRACT at positive climb
13. Wing Flaps.....RETRACT after obstacles & 85kt
14. Mixture.....ADJUST to redline flow 186 PPH
15. Climb Speed ..... **120 kts** (Vy 100)

TAKEOFF - SHORT

1. Mixture.....FULL RICH
2. Cowl Flaps .....OPEN
3. Wing Flaps.....10°
4. Brakes..... APPLY (avoid loose gravel)
5. Throttle .....ADVANCE over 5-10 sec
6. Power ..... 34"and 2700 RPM (5 min limit)
7. Mixture.....ADJUST to redline flow 186 PPH
8. Brakes..... RELEASE
9. Elevator Control ..... LIFT NOSE at 65 kts
10. Initial Climb Speed .....78 KIAS
11. Brakes.....APPLY momentarily when airborne
12. Landing Gear .....RETRACT after obstacles
13. Wing Flaps..... RETRACT after 85 kts
14. Climb Speed ..... **120 kts** (Vy 100)

ENROUTE CLIMB

1. Airspeed .....105-**120 kts** (120 kts for cooling)
2. Power .....30" and 2500 RPM
3. Mixture... LEAN to 145 PPH (~25.3 GPH on JPI)
   richer mixture if needed for better cooling
4. Cowl Flaps .....OPEN

MAXIMUM PERFORMANCE CLIMB

1. Airspeed ..100 KIAS (120 kts for better cooling)
2. Power .....32" and 2600 RPM to 10,000'
3. Mixture ... LEAN to 153 PPH (~26.7 GPH on JPI)
   richer mixture if needed for better cooling
4. Fuel Selector Valve.....BOTH
5. Cowl Flaps .....OPEN

CRUISE

1. Power .... 2300-2500RPM, 15-30"MP, ≤75% HP
2. Elevator and Rudder Trim .....ADJUST
3. Mixture..... LEAN to 100F Rich of Peak using JPI
   (110 PPH or 19.1 GPH on JPI at 75% HP typical)
   richer mixture if needed for better cooling
4. Cowl Flaps .....AS REQUIRED for CHT≤380°F
   (half-open typical)

DESCENT

1. Auxiliary Fuel pump .....OFF
2. Power..... AS DESIRED (monitor **JPI cooling CLD<50°/min**, gradual 3”MP/min reduction typ)
3. Cowl Flaps..... CLOSED (re-open as needed during descent and after level off for CHT and oil temps)

BEFORE LANDING

1. Seats, Belts, Harnesses .....SECURE
2. Auxiliary Fuel Pump ..... OFF
3. Cowl Flaps.....CLOSED
4. Fuel Selector Valve ..... BOTH ON
5. Landing Gear..... EXTEND (below 165 KIAS)
6. Landing Gear.....CHECK
7. Mixture . NO CHANGE under normal conditions
8. Propeller ..... HIGH RPM after final pwr reduction
9. Autopilot ..... OFF (before landing)

NORMAL LANDING

1. Airspeed..... 85 to 95 KIAS (flaps UP)
2. Wing Flaps .....AS DESIRED
3. Airspeed.....70 to 80 KIAS (flaps DOWN)
4. Elevator Trim .....ADJUST as desired
5. Touchdown ..... MAIN WHEELS FIRST
6. Landing Roll .....LOWER NOSE WHEEL GENTLY
7. Braking..... MINIMUM REQUIRED

SHORT FIELD LANDING

1. Wing Flaps .....FULL DOWN
2. Airspeed..... 74 KIAS
3. Elevator Trim .....ADJUST
4. Power..... REDUCE idle after clearing obstacle
5. Touchdown ..... MAIN WHEELS FIRST
6. Braking.....APPLY HEAVILY
7. Wing Flaps ..... RETRACT for maximum braking

BALKED LANDING / MISSED APPROACH

1. Autopilot DISENGAGE Toggle .....BACK/OFF
2. Mixture… FULL RICH, Propeller… FULL RPM
3. Power..... 34" and 2700 RPM (5 min limitation)
4. Wing Flaps .....RETRACT to 20° (immediately)
5. Initial Climb Speed ..... 70 KIAS
6. Landing Gear..... RETRACT at positive climb
7. Wing Flaps ..... RETRACT slowly after 75 KIAS
8. Cowl Flaps..... OPEN
9. Mixture .....ADJUST to redline flow 186 PPH

AFTER LANDING

1. Turbocharger .....5 min cool down
2. Pitot, Propeller, Windshield Heat..... OFF
3. Cowl Flaps…OPEN, Wing Flaps…RETRACT
4. Mixture LEAN if needed (just rich of rpm drop)
5. Landing, Taxi, Strobe Lights..... AS REQUIRED

ICING ENCOUNTERS

Before Visible Moisture Encountered below 40°F:

1. Prop Anti-Ice Switch ..... ON
2. Prop Anti-Ice Ammeter..... MONITOR
3. Windshield Anti-Ice Switch..... ON
4. Pitot Heat Switch ..... ON

During Icing Encounters:

5. Ice-Detector Light .....ON as required
6. Ice Build-up .....MONITOR until 1/4 to 1/2"
7. De-Icing Switch ..... ON and RELEASE
8. Power..... INCREASE as required
9. Airspeed..... MAINTAIN BETWEEN 90-165 KIAS with 1/2" or more of ice accumulation
10. Cowl Flaps.....AS REQUIRED, CHT≤380°F

(use CLIMB Power/Mixture settings as required

HIGH ALTITUDE CRUISE (Follow Normal CRUISE Checklist)

1. **Observe AFMS MP Limitations**
2. Use the higher RPM range settings to reduce bootstrapping and smoother engine operation

HIGH ALTITUDE DESCENT (Follow Normal DESCENT Checklist)

1. Plan descent using 65%-75% CRUISE POWER range settings to keep engine warm
2. Use the higher RPM range settings to reduce bootstrapping
3. Lower landing gear if additional drag is needed to increase descent rate (observe landing gear limits 165 IAS operate, 203 IAS down)

AFMS Maximum Manifold Pressure Limitations

Take-off 5 min	S.L.-10K ft MSL	12K-16K ft MSL	18K ft MSL	20K ft MSL	22K ft MSL	24K ft MSL	26K ft MSL
34 " MP	32" MP	31" MP	29" MP	27" MP	25" MP	23" MP	21" MP

Example Power Settings from AFMS

Pressure Altitude	%HP	MP	RPM	TAS	%HP	MP	RPM	TAS	%HP	MP	RPM	TAS
4000'	-13C				7C				27C			
32" MP max	75	27	2300	153	75	29	2300	156	75	30	2400	162
	71	26	2300	150	72	28	2300	154	71	28	2400	157
	65	24	2300	144	67	26	2300	150	66	26	2400	151
8000'	-21C				-1C				19C			
32" MP max	75	27	2300	163	75	2	2300	167	75	29	2400	171
	72	26	2300	161	68	26	2300	160	72	28	2400	167
	64	24	2300	155	63	24	2300	154	67	26	2400	161
12000'	-29C				-9C				11C			
31" MP max	75	26	2300	174	75	27	2300	177	75	28	2400	180
	71	24	2300	170	72	26	2300	174	70	26	2400	174
	65	22	2300	163	66	24	2300	168	64	24	2400	167
16000'	-37C				-17C				3C			
31" MP max	75	24	2400	178	75	26	2400	182	75	28	2400	184
	68	22	2400	169	70	24	2400	175	70	26	2400	178
	63	20	2400	163	64	22	2400	166	65	24	2400	172
20000'	-45C				-25C				-5C			
27" MP max	75	24	2400	183	75	26	2400	187	75	27	2400	191
	71	22	2400	179	72	24	2400	183	72	26	2400	187
	66	20	2400	172	67	22	2400	177	67	24	2400	180
24000'	-53C				-33C				-13C			
23" MP max	75	21	2500	186	75	23	2500	190	(not available)			
	71	20	2500	181	72	22	2500	186	71	23	2500	186
	65	18	2500	172	67	20	2500	178	68	22	2500	182

ENGINE FAILURE DURING TAKEOFF ROLL

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 ..... 85 KIAS
2. Mixture ..... IDLE CUT-OFF
3. Fuel On-Off Valve ..... OFF (pull out)
4. Wing Flaps ..... AS REQ'D (30° recommended)
5. Ignition Switch ..... OFF
6. Master Switch ..... OFF

ENGINE FAILURE DURING FLIGHT (RESTART)

1. Airspeed ..... 85 KIAS
2. Fuel Selector Valve ..... BOTH ON
3. Auxiliary Fuel Pump ..... ON
4. Throttle ..... HALF OPEN
5. Mixture ... Lean from full rich until restart occurs
6. Mixture ..... ADJUST
7. Throttle ..... ADJUST
8. Auxiliary Fuel Pump ..... OFF
9. Mixture ..... ADJUST
10. Fuel Selector Valve ..... AS DESIRED

EMERGENCY LANDING with NO ENGINE POWER

1. Airspeed ..... 90 KIAS (flaps UP), 80 KIAS (DOWN)
2. Mixture ..... IDLE CUT-OFF
3. Fuel On-Off Valve ..... OFF (pull out)
4. Ignition Switch ..... OFF
5. Landing Gear DOWN (UP if rough or soft terrain)
6. Wing Flaps ... AS REQUIRED (30° 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 w/ ENGINE POWER

1. Airspeed ..... 80 KIAS
2. Wing Flaps ..... 10°
3. Selected Field ..... FLY OVER
4. Electrical Switches ..... OFF
5. Landing Gear DOWN (UP if rough or soft terrain)
6. Wing Flaps ..... 30° (on final approach)
7. Airspeed ..... 75 KIAS
8. Doors ..... UNLATCH PRIOR TO TOUCHDOWN
9. Avionics Power & Master OFF when landing assured
10. Touchdown ..... SLIGHTLY TAIL LOW
11. Ignition Switch ..... OFF
12. Brakes ..... APPLY HEAVILY

ENGINE FIRE IN FLIGHT

1. Mixture ..... IDLE CUT-OFF
2. Fuel On-Off Valve ..... OFF (pull out)
3. Master Switch ..... OFF
4. Cabin Heat and Air ..... OFF
5. Airspeed ..... 120 KIAS
6. Forced Landing ..... EXECUTE

ENGINE FIRE DURING START ON GROUND

1. Ignition Switch ..... START (continue cranking)
2. Auxiliary Fuel Pump ..... OFF

If engine starts:

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

If engine fails to start:

5. Cranking ..... CONTINUE (ignition switch START)
6. Throttle ..... FULL OPEN
7. Mixture ..... IDLE CUT OFF
8. Fire Extinguisher ..... OBTAIN
9. Engine ..... SECURE
   a. Ignition Switch ..... OFF
   b. Master Switch ..... OFF
   c. Fuel On-Off Value ..... OFF (pull out)
10. Fire ..... EXTINGUISH using fire extinguisher
11. Fire Damage ..... INSPECT

ELECTRICAL FIRE IN FLIGHT

If Aspen PFD IS source of smoke or fire:

1. Aspen PFD on/off Switch ..... OFF

If Aspen PFD IS NOT source of smoke or fire:

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

If fire is out & electrical power is necessary:

5. Master Switch ..... ON
6. Circuit Breakers ..... CHECK (do not reset)
7. Radio Switches ..... OFF
8. Avionics Power Switch ..... ON
9. Radio/Electrical Switches ..... ON, 1 at a time
10. Vents/Cabin Air/Heat ..... OPEN when fire out

CABIN FIRE

1. Master Switch ..... OFF
2. Vents/Cabin Air/Heat ..... CLOSED
3. Fire Extinguisher ..... ACTIVATE
4. Land as soon as practical

WING FIRE

1. Navigation Light Switch ..... OFF
2. Strobe light Switch ..... OFF
3. Pitot Heat Switch ..... OFF

LANDING GEAR FAILS TO RETRACT

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

LANDING GEAR FAILS TO EXTEND

1. Landing Gear Lever ..... DOWN
2. Emergency Hand Pump ..... EXTEND & PUMP
3. Gear Down Light ..... ON
4. Pump Handle ..... STOW

GEAR UP LANDING

1. Landing Gear Lever ..... UP
2. Landing Gear & Gear Pump CBs ..... IN
3. RunwaySELECT longest hard surface/smooth sod
4. Wing Flaps ..... 30° (on final approach)
5. Airspeed ..... 75 KIAS
6. Doors ..... UNLATCH PRIOR TO TOUCHDOWN
7. Avionics Power & Master Switches ..... OFF
8. Touchdown ..... SLIGHTLY TAIL LOW
9. Mixture ..... IDLE CUT-OFF
10. Ignition Switch ..... OFF
11. Fuel On-Off Valve ..... OFF
12. Airplane ..... EVACUATE

LANDING WITHOUT POSITIVE GEAR DOWN

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

LANDING WITH A DEFECTIVE NOSE GEAR

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. Cabin Doors . UNLATCH PRIOR TO TOUCHDOWN
7. Avionics Power & Master Switches ..... OFF
8. Land ..... SLIGHTLY TAIL LOW
9. Mixture ..... IDLE CUT-OFF
10. Ignition Switch ..... OFF
11. Fuel On-Off Valve ..... OFF (pull out)
12. Elevator Control ..... HOLD NOSE OFF GROUND
13. Airplane ..... EVACUATE as soon as it stops

LANDING WITH A FLAT MAIN TIRE

14. Approach .....NORMAL (full flap)
15. Touchdown..... GOOD TIRE FIRST, hold off bad
16. Direction Control .. MAINTAIN CONTROL using brake on good wheel

DITCHING

1. Radio.....TRANSMIT MAYDAY, then 7700
2. Heavy Objects.....SECURE OR JETTISON
3. Landing Gear..... UP
4. Wing Flaps ..... 30°
5. Power .ESTABLISH 300 ft/min DESCENT at 75 KIAS
6. Approach: High Winds, Heavy Seas .. INTO WIND
   Light Winds, Heavy Swells PARALLEL TO SWELLS
7. Cabin Doors ..... UNLATCH
8. Touchdown .....LEVEL ATTITUDE @ 300 ft/min
9. Face....CUSHION at touchdown with folded coat
10. Airplane ..... EVACUATE
11. Life Vests and Raft .....INFLATE

EMERGENCY DESCENT

1. Seat Belts and Shoulder Harnesses ..... SECURE
2. Throttle.....IDLE
3. Propeller .....HIGH RPM
4. Mixture ..... FULL RICH
5. Landing Lear.....EXTENDED
6. Wing Flaps ..... UP

Airspeed SMOOTH AIR:

7. During landing gear extension.....165 KIAS
8. After landing gear is full extended .....203 KIAS

Airspeed ROUGH AIR

9. 4000 Lbs.....130 KIAS
10. 3350 Lbs.....119 KIAS
11. 2700 Lbs.....106 KIAS

EXCESSIVE FUEL VAPOR

1. Auxiliary Fuel Pump .....ON
2. Mixture .....RESET as required
3. Fuel Selector Valve .....BOTH ON
   (if vapor symptoms)
4. Auxiliary Fuel Pump ..... OFF (after stabilization)
5. Mixture .....RESET as required
6. Fuel Selector Valve .....AS DESIRED

AUTOPILOT MALFUNCTION

1. Control Wheel. OPERATE to override autopilot
2. AUTOPILOT DISENGAGE switch .....PULL OFF

ELECTRIC TRIM RUNAWAY

1. Elevator Trim Disengage Switch .....DISENGAGE
2. Elevator Trim Circuit Breaker ..... PULL-OFF
3. Manual Trim .....AS REQUIRED

LOSS OF AVIONICS POWER

1. PRIM avionics power switch.....OFF
2. STBY avionics power switch.....ON

ONE ALT OFF LIGHT ILLUMINATED

1. V/A SELECT affected alternator and MONITOR
2. Affected alternator switch CYCLE OFF/ON
3. ***If ALT OFF light is still illuminated and output is normal relative to electric loads*:** DISREGARD ALT OUT and have system checked prior to next flight
4. ***If ALT OFF light is still illuminated and output is abnormal*:** Affected alternator switch OFF, reduce electric load to extinguish LOW VOLTAGE.
5. ***If affected alternator ALT REG breaker is tripped*:** RESET breaker, alternator CYCLE OFF/ON. *If ALT REG trips again,* TURN OFF alternator and continue or terminate flight with reduced loads.
6. ***If affected alternator ALT breaker is tripped:*** TURN ON affected alternator. ***a) If significant output indicated*:** TURN OFF alternator and continue or terminate flight with reduced loads, ***b) If no output indicated*:** TURN OFF alternator, RESET ALT breaker, TURN ON alternator. *If ALT breaker trips again or output is excessive,* TURN OFF alternator and continue or terminate flight with reduced loads.

LOSS OR SUDDEN REDUCTION ALL ELECTRICAL POWER

1. If ALT circuit breakers are tripped ..... RESET
2. Both Alt sections of master ...CYCLE OFF and ON

If electrical power is restored:

3. Continue flight, check system prior to next flight

If electrical power is not restored:

4. BAT section of master switch .....OFF
5. PRI avionics power switch & equipment.....OFF
6. If ALT circuit breakers are tripped ..... RESET
7. Both Alt sections of master ...CYCLE OFF and ON
8. ALT RESTART..... DEPRESS and RELEASE

If electrical power is restored:

9. Check LOW VOLTAGE, ALT 1,ALT2 light extinguished
10. PRI avionics power switch & equipment.....ON
11. Continue flight with BAT master switch OFF

If electrical power is not restored:

12. Pull both ALT CBs OFF and turn OFF the alternator sections of the master switch
13. Set V/A selector to BAT and observe as the BAT section of master is turned ON. If V/A shows a full-scale discharge, turn BAT section of the master switch OFF and TERMINATE flight without electrical power
14. With normal battery discharge, use essential electrical equip as required, land as soon as practical

ICING -- STATIC SOURCE BLOCKAGE

1. Alternate Static.....PULL ON
2. Airspeed..... Climb +5 KIAS; Approach +7 KIAS
3. Altitude .....Cruise +160 ft; Approach +70 ft

PROPELLER ANTI-ICE SYSTEM MALFUNCTION

1. Propeller ..... EXERCISE to MAX RPM
2. Propeller Anti-Ice Ammeter ..... CHECK periodic fluctuations within the green arc
3. ***If reading is below the green arc*:** Prop Anti-Ice OFF
4. Icing Conditions ..... EXIT

EXIT FROM SEVERE ICING (AD 98-05-14 R1)

1. Request priority handling from ATC
2. Avoid abrupt and excessive maneuvering
3. Do not engage the autopilot
4. If autopilot is engaged, hold the control wheel firmly and disengage
5. If an unusual roll response or uncommanded roll control movement is observed, reduce angle-of-attack
6. Do not extend flaps when holding in icing
7. If flaps are extended, do not retract them until airframe is clear of ice
8. Report these weather conditions to ATC

WING & STABILIZER DE-ICE SYSTEM FAILURE

If wing/stabilizer de-ice boots fail to inflate sufficiently during any or all of the three sequences of one cycle:

1. Right vacuum pump operation.....VERIFY
2. De-ice circuit breaker ..... VERIFY pushed full in
3. Pressure light operation ..... PRESS TO TEST
4. Another cycle..... ATTEMPT

If system is still deficient:

5. AVOID icing conditions
6. If unshed ice exists during an approach, EXECUTE Inadvertent Icing Encounters emergency checklist

INADVERTENT ICING ENCOUNTERS

1. Pitot Heat .....ON
2. Propeller Anti-ice.....ON
3. Windshield Anti-Ice .....ON
4. Maneuver ..... TURN BACK or CHANGE ALTITUDE
5. Cabin Heat & Defrost..... FULL ON
6. Engine Speed .. INCREASE (If excessive vibration, reduce to 2200 then rapidly FULL FORWARD)
7. Induction Air Filter..... MONITOR signs of ice
8. Nearest airport or off-field if necessary ..... LAND
9. Power, Approach speed, Stall Speed, Landing Roll ..... plan higher for all with 1/4" or more ice
10. Windshield..... SCRAPE as required
11. Flaps (up to 1" ice).....10° to 20°
12. Flaps (greater than 1" ice).....0°
13. Approach speed: Flap 20°.....85-95 KTS
    Flap 0°..... 105 KTS
14. Landing .....MAINS first, avoid slow/high flare
15. Missed approach ..... AVOID
    (max power, 95 KIAS, retract flaps slowly)