COCKPIT PREPARATION.....INTERIOR INSPECTION

Magneto Switch..... OFF (Key Removed)
Flight Controls..... Remove GUST Control, check FREE
Hobbs/Tach Time..... Recorded
Aircraft Documents ..... Current
VOR 30-Day..... Current
Compass Deviation Card..... Secure
Electrical Switches..... ALL OFF
Avionics Master Switch..... OFF
Circuit Breakers..... Normal (IN)
Cabin Heat/Defrost..... OFF
Auto Pilot..... OFF
Emergency Landing Gear Handle …….. DOWN (left side of center console)
Landing Gear Switch..... GEAR DOWN
COWL FLAPS…….. OPEN
Fuel Selector…….. BOTH
Master Switch..... ON
Flaps..... Extend, Verify Operation
Landing Gear Lights..... 3 Green ON
Fuel Gauges..... Check Quantity
Navigation Lights (IFR/night flight)..... ON
Landing Light..... ON
Beacon……..... ON
Strobes.....……. ON

ELECTRICAL WALK-AROUND

Beacon/Strobes..... ON
Landing Light..... ON
Stall Warning Horn..... Working (test switch in left wheel well)
Navigation Lights..... ON

RETURN TO COCKPIT.....ELECTRICAL SWITCHES OFF

Beacon/Nav/Strobes/Landing Lights.....OFF
Master Switch …… OFF

IFR AND NIGHT FLIGHT.....VERIFY

Navigation Lights.....…..……. Working
Panel Lights.....……... Working
Pitot Heat.....……..... Working (Warm to Touch)

EMPENNAGE LEFT SIDE

Tow Bar…….. Secured
Baggage Door…… LOCKED
Static Port…….. CHECK for obstructions
Empennage General Condition..... Undamaged
Antenna……. Undamaged/Secure
Stabilator..... Undamaged
Rudder..... No Damage (DO NOT PUSH)
Rear Tie Down..... Untied

EMPENNAGE RIGHT SIDE

Empennage General Condition.....Undamaged
Stabilator.....Undamaged
Rudder.....No Damage (DO NOT PUSH)
N.H. Registration…….. Sticker Current
Static Port……..…….CHECK for obstructions

RIGHT WING

Flap..... Extended (35 Degrees)
Flap Hinges..... Secure, Undamaged/Unrestricted
Aileron.....….... Proper Operation,Undamaged/Unrestricted
Aileron Cotter Pins..... Secure
Navigation Light..... Undamaged/Working
Wing Leading Edge..... Undamaged
Inspection Plates..... Secure
Wing Tie-Down..... Untied
Fuel Vent..... Clear/Undamaged
Fuel Tank Sump..... Drain Fuel
Observe: Water/Sediment/Color/Odor
Fuel Tank..... 100LL (Light Blue)/Quantity
Fuel Cap..... Secure/Tight
Cabin Air Inlet..... Clear/Unrestricted

RIGHT MAIN LANDING GEAR

Main Gear Strut..... Check for damage
Main Gear Tire..... Normal Pressure (29 psi)/Wear
Hydraulic Brake Line..... No Hydraulic Fluid Leaks
Brake Block and Disc..... No Excessive Wear
Wheel Wells.....…….Check for damage
Squat Switch.....Check for damage to gear **up**/**dwn** switch

EXTERIOR INSPECTION CONTINUES ON PAGE 3

FORWARD FUSELAGE AND ENGINE COMPARTMENT

Windshield..... Clean
Engine Compartment..... Clean, NO Leaks, Oil, Fuel, Exhaust
Oil Level…..... **DO NOT OVERFILL**..…..... Maximum.. 8 Qt.
Normal…. 7 Qt.
Minimum ...6 Qt.
Dip Stick..... Secure/Not TOO Tight
Fuel Sump Drain…… Pull up to drain
Cowling Latches..... Secure
Propeller and Spinner..... NO Cracks or Nicks
Propeller Governor..... No Leaks
Landing Light..... Checked
Air Inlet..... Clear

NOSE GEAR

Nose Gear Strut..... Proper Extension. Check for damage
Nose Wheel Tire..... Normal Pressure (31psi)/Check Wear
Wheel Compartment.....…. Clear

LEFT WING

Flap.....	Extended (35 Degrees)
Flap Hinges.....	Secure, Undamaged/Unrestricted
Aileron.....…....	Proper Operation,Undamaged/Unrestricted
Aileron Cotter Pins.....	Secure
Navigation Light.....	Undamaged/Working
Wing Leading Edge.....	Undamaged
Inspection Plates.....	Secure
Wing Tie-Down.....	Untied
Fuel Vent.....	Clear/Undamaged
Fuel Tank Sump.....	Drain Fuel
Observe:	Water/Sediment/Color/Odor
Fuel Tank.....…...	100LL (Light Blue)/Quantity
Fuel Cap.....	Secure/Tight
Cabin Air Inlet.....	Clear/Unrestricted

LEFT MAIN LANDING GEAR

Main Gear ……....	CHECK for damage
Main Gear Tire.....	Normal Pressure (29 psi)/Wear
Hydraulic Brake Line.....…...	No Hydraulic Fluid Leaks
Brake Block and Disc.....	No Excessive Wear

BEFORE ENGINE START

Cabin Doors..... BOTH DOORS Closed/Latched (by P.I.C.)
Seats..... Adjust--Lift up to LOCK
Seat Belts..... Fastened
Shoulder Harness..... Fastened

PASSENGER BRIEFING

Seat Belts..... Fastened/Operation
Seats..... Upright
Door Operation..... Emergency Exit/Operation
Smoking/Eating/Drinking..... PROHIBITED
Fire Extinguisher..... Location/Operation
Survival Equipment..... Location/Operation
Flight Controls..... PIC Operation ONLY

Passenger Questions..... HOLD ALL Questions During Takeoff and Landing Phase

SAFE WINTER OPERATION

PILOTS MUST REMOVE ALL FROST/SNOW/ICE FROM ALL AIRCRAFT SURFACES PRIOR TO ALL FLIGHTS

EXTERIOR INSPECTION COMPLETE

NORMAL/COLD ENGINE START

Seats……..	Adjusted, LIFT TO LOCK
Flight Controls.....	Free and Correct
Parking Brake.....	Set
Fuel Selector.....	ON BOTH
Electrical switches.....	ALL OFF
Auto-Pilot …….....	OFF
Alternate Static Source.....	OFF / NORMAL
Elevator Trim Wheel.....	Slightly Forward of Neutral
Rudder Trim.....	Neutral
ELT Switch.....	Armed
Time……	Copy down
Master Switch.....	ON
Landing Gear Lights.....	Check 3 Green
Beacon/Strobes.....	ON
PROP…….	FULL FORWARD
Mixture.....	RICH
Electric Fuel Pump.....	ON, for 3 Seconds
Mixture.....	Idle Cut-Off
Throttle.....	Open 1/2 Inch
Propeller Area.....	CLEAR (SAY OUT LOUD)
Starter.....	Engage, Mixture RICH on Start
Throttle.....	Set to 1000 RPM
Engine Instruments.....	IN GREEN RANGE
Mixture.....	Slightly LEAN
COWL FLAPS……...	OPEN
FLAPS……	Retracted

MANCHESTER AIRPORT FREQUENCIES (MHT): CLASS C

ATIS.....	119.55		
CLEARANCE.....	135.90	ILS.....	109.10
GROUND.....	121.90	NDB (DRY).....	338
TOWER.....	121.30	UNICOM (Wiggins).....	122.95
MHT VOR.....	114.40	CON VOR.....	112.9
APPROACH/DEPARTURE....	124.90...127.35...134.75...125.05		

PRE-TAXI INSTRUMENT CHECK

Avionics Master Switch	ON
Intercom	ON (Check Volume/Squelch)
Engine Gauges	ALL IN GREEN RANGE
Ammeter	Check Output (Landing Light)
Vacuum Pump	Suction Pressure Normal
Magnetic Compass	Accuracy/Fluid
Clock	Correct Time/Operating
Airspeed Indicator	ZERO KIAS
Attitude Indicator	Level (+/- 5 Degree Tolerance)
Altimeter	Set ±75 ft. (MHT Elevation 234 Ft.)
Vertical Speed Indicator	ZERO (Compensate for Deviations)
Heading Indicator (DG)	Aligned with Compass
Turn and Bank Indicator	NO FLAG/Erect
Navigation Receiver (#1 VOR)	Set VOR/Tune and Identify Station
Navigation Receiver (#2 VOR)	Set VOR/Tune and Identify Station
Navigation (#1 and #2)	Check Sensitivity and Ambiguity
Distance Measuring Equip. (DME)	Set VOR/Tune and Identify Station
Transponder	Test Light/Set to Standby
GPS …	Set
ATIS	Current/Copy
Altimeter	Set to Current Barometric Pressure
Communication Radios	Transmission Clear Clearance Request
VFR/IFR	State Destination and Altitude
Ground Taxi Clearance	Request taxi to Active Runway

TAXI

Flight Controls	Position for Wind
Collision Avoidence……	Wing tips clear
Parking Brakes	Release, Test Brakes on First Roll
Power	800-1000 RPM

INSTRUMENT OPERATION DURING TAXI

Magnetic Compass	Check Movement
Heading Indicator	Check Movement with Compass
Turn Coordinator	Check Movement in Turns
Engine Instruments	GREEN RANGE

ENGINE RUN-UP CHECKS

Run-Up Area	Face Into WIND
Nose Wheel	Straight
Parking Brake	SET
Window/Doors	Closed/Latched
Flight Controls	Free/Correct Operation
Electric Fuel Pump	ON (Check Fuel Pressure)
Fuel Selector	BOTH
Propeller	FULL FORWARD
Mixture	RICH
Throttle	2000 RPM (Hold Throttle Lever)
Brakes	No Aircraft Movement
Engine Instruments	ALL in GREEN RANGE
Suction Gauge	Normal (4.5-5.2 In.)
Magnetos	Check RIGHT, Back to BOTH
	Check LEFT, Back to BOTH
MAXIMUM RPM DROP	175 RPM Each Magneto
MAXIMUM RPM DIFFERENTIAL	50 RPM Between Magnetos
Propeller Cycles (Cold - 3, Hot -1)	RPM drops to 1500 RPM
Alternate Air	ON, (Slight Drop in RPM)
Throttle	All the way back
Alternate Air	OFF
Throttle	Normal Idle 1000 RPM Induction

Mixture	Slightly Lean
Circuit Breakers	Normal (IN)
Magnetos	ON BOTH

ENGINE RUN-UP CHECKS COMPLETE

PRE-TAKEOFF CHECKS: IN RUN-UP AREA

Seat Belts and Shoulder Harness.....	Secure/Fastened
Flight Instruments.....	SET/Confirm
Navigation Instruments..... ..	SET/Confirm
GPS/DME	SET/Confirm
Emergency Landing Gear Handle …	UP (left side of center console)
Electric Fuel Pump.....	ON
Fuel Selector.....	BOTH
Landing Light.....	ON

Auto Pilot……..... OFF

Mixture.....	RICH
Alternate Air.....	OFF (COLD)
Flaps.....	SET, 10 degrees for take off
Transponder.....	SET Code and select ALT (Mode C)
Trim.....	Slightly Forward of Neutral
Take Off Time…….	Copy Down

NOTE: EACH INSTRUMENT FLIGHT

COMPLETE INSTRUMENT PRE-TAKE OFF CHECKS ON PAGE 26

ADDITIONAL TAKEOFF PROCEDURES ON PAGE 15

SHORT FIELD **SOFT FIELD**

ENROUTE CRUISE - LEVEL FLIGHT

Manifold Pressure.....	22 In. MP
Propeller.....	2400 RPM
COWL FLAPS…….	CLOSED
Mixture.....	10 GPH, Monitor EGT During Leaning
Heading Indicator (DG).....	RESET Periodically with Compass
Fuel Selector…….....	BOTH.
Engine Instruments.....	Monitor every 10 minutes Minimum
Alternator…….	Check
Vaccumm…….	Check

DESCENT CHECK----10 – 15 miles from Airport

ATIS.....	Current/Copy
Communication Radios.....	SET
Navigation Radios.....	SET
Contact Approach.....	Position and Intentions
IFR Approach.....	Review Procedure
Flight Instruments.....	Check, Reset
Fuel Selector.....	BOTH
Mixture.....	Rich
Seat Belts.....	Secure/Fastened
Seats.....	Upright

TAXI TO ACTIVE RUNWAY

Taxi..... Active Runway, HOLD SHORT
Request Departure Clearance..... Contact Tower

TAKEOFF - PERFORM ON RUNWAY

Taxi…… TO CENTERLINE
Heading Indicator (DG)..... Set to Compass Heading
Flight Controls..... Position Into Wind
NORMAL TAKE OFF:
Mixture…….. Rich
Propeller..... Full FORWARD
Power..... Full Throttle (Smoothly)
Engine Instruments..... In GREEN RANGE
Tachometer..... Normal
Airspeed Indicator..... Alive
Rotate..... 65-70 Kts (adjust for gust/wt.)
Climb (Vy)..... 80 Kts - Until Gear UP
Gear..... NO Remaining Runway - UP
Flaps..... Retracted

1000 FOOT AGL CHECK

Gear	Check UP (CHECK 3 GREEN)
Flaps	Retracted
Throttle/Prop	25”MP/2500RPM
Engine Instruments	In GREEN RANGE
Airspeed	Vx - 71 Kts
	Vy - 80 Kts
	Cruise Climb – 90 Kts
Trim	For Desired Airspeed

2000 FOOT AGL CHECK

Gear	Check UP (CHECK 3 GREEN)
Flaps	Check UP
Engine Instruments	In GREEN RANGE
Electric Fuel Pump	OFF
Landing Light	OFF
Airspeed	Cruise Climb – 90 Kts

PRE-LANDING CHECK - 5 NM FROM TRAFFIC PATTERN

APPROACH:

Communication Radios	SET
Electric Fuel Pump	ON
Fuel Selector	BOTH
Mixture	RICH
Alternate Air	OFF
Autopilot	OFF
Landing Light	ON
Flaps	As Required (below 130 Kts)
Gear	DOWN (below 130 Kts)
COWL FLAPS	Open (below 130 kts)

GUMPS + C CHECK - ON BASE AND FINAL LEGS:

Gas.....	Fuel Pump ON/ Tanks BOTH
Undercarriage.....	Gear Down (3 GREEN)
Mixture.....	RICH
Propeller.....	Full Increase
Seat Belts.....	Fastened/Tight
+	
Clearance.....	Land/Stop & Go/Low Approach

AIRSPEEDS ON FINAL: Compensate for Weight and Gust Factors

Normal VFR.....	80 - 85 kts
Normal IFR.....	100 kts
Soft Field.....	80 kts
Short Field.....	71 kts

AFTER LANDING - CLEAR OF ACTIVE/FULL STOP

Flaps..... Retracted
COWL FLAPS……. OPEN
Electric Fuel Pump..... OFF
Landing Light..... OFF (Daytime)
Mixture..... Slightly Lean
Transponder..... OFF
Flight Controls..... Adjust for Wind
Taxi Clearance..... Ground Control

ENGINE SHUTDOWN - AT TIEDOWN SPOT

Throttle..... 1200 RPM
Flight Plan..... CLOSED ASAP
Confirm ELT Silent..... Tune 121.5
Landing Light..... OFF
Panel Lights..... OFF
Navigation Lights..... OFF
Pitot Heat..... OFF
Beacon/Strobes..... LEAVE ON
GPS……. OFF
Transponder……. OFF
ADF……. OFF
DME……. OFF
Intercom..... OFF
Avionics Master Switch..... OFF
Mixture..... Slowly Reduce to Idle Cut-Off
Magneto..... OFF
REMOVE KEY WHEN PROP STOPS
Beacon/Strobes..... OFF
Master Switch..... OFF
Brakes..... Released
Fuel Selector……. OFF
Emergency Gear Handle…….. Down & LOCKED
Hobbs/Tach Time..... Record

TIE DOWN

Control Yoke..... Secure with Seat Belt
Pitot Tube..... Cover ON
Wings and Tail..... Tie Down at 3 Points
Sunshields/Cover…… In place (for summer)
Doors and Baggage Compt..... Locked

AIRSPEEDS

Vne.....….....**180 kts** Red line/NEVER exceed speed

Vno..... **143 kts** Maximum structural cruising speed; smooth air

Va.....….....**113 kts @ 2650 lbs** GW
118 kts @ 2488 lbs GW

Vle.....…...**130 kts** Maximum landing gear extension speed.

Vlo..... **130 kts** Maximum landing gear retraction/operation speed.

Vfe..... **130 kts** 0^0 - 20^0 Maximum flap extension speed.
109 kts 20^0 - 35^0

Enroute Climb…..**90 kts**

Best Glide.....…...**85 kts**

Vy.....….**80 kts** Best rate-of-climb speed, flaps and gear up.

Vx..... **71 kts** Best angle-of-climb speed, flaps and gear up.

Vs1..... **61 kts** Stalling speed clean.

Vso..... **54 kts** Stalling speed in the landing configuration.

Final Approach... **75-85 kts** (Depending on weight and wind) with full flaps (35^o)

Demonstrated Crosswind Component.....**12 kts**
Uses maximum rudder and appropriate aileron to maintain aircraft direction during landing.

Rotation Speed... **60-65 kts** Lift-Off

ADDITIONAL PROCEDURES

SHORT FIELD TAKE-OFF - WITH OBSTACLE

Flaps	25 Degrees (Second Notch)
Propeller	Full Increase
Full Power	Before Brake Release
Rotate	60-65 kts
Climb (Vx - Best Angle)	71 kts Until Clear of Obstacles
Flaps	Retract Slowly
Climb (Vy - Best Rate)	80 kts
COWL FLAPS	OPEN

SHORT FIELD TAKE-OFF - NO OBSTACLE

Flaps	Retracted
Propeller	Full Increase
Full Power	Before Brake Release
Rotate	60-65 kts
Accelerate (Vx - Best Angle)	71 kts
Gear	UP
Climb (Vy - Best Rate)	80 kts

SOFT FIELD TAKE-OFF - NO OBSTACLE

Flaps	25 Degrees
Propeller	Full Increase
Full Power	Control Wheel Aft - Lift Nose Wheel
Rotate	ASAP
Accelerate	In Ground Effect to 78 kts
Gear	UP
Flaps	Retract Slowly
COWL FLAPS	OPEN

SOFT FIELD TAKE-OFF - WITH OBSTACLE

Flaps	25 Degrees (Second Notch)
Full Power	Control Wheel Aft - Lift Nose Wheel
Rotate	ASAP
Accelerate	In Ground Effect to 74 kts
Gear	UP
Flaps	Retract Slowly
Climb (Vx - Best Angle)	71kts - Until Clear of Obstacles
COWL FLAPS	OPEN

ADDITIONAL PROCEDURES CONTINUED ON PAGE 16

ADDITIONAL PROCEDURES - CONTINUED

SHORT FIELD LANDING

Flaps..... Full
Propeller..... Full Increase
Power..... Maintain 75 kts
Control Yoke..... Apply Back Pressure
Flare to contact ground close to stall speed (54 kts); power at idle.
Upon Ground Contact:
Flaps..... Retract
Brake..... Maximum without Skidding
COWL FLAPS…….. OPEN

SOFT FIELD LANDING

Power..... Maintain 80 kts
Propeller..... Full Increase
Flaps..... Full
Flare to contact ground at stall speed (54 kts) with minimum vertical sink rate.
Upon Ground Contact:
Control Yoke..... Apply Back Pressure
Brake..... Apply as Needed

GO AROUND (BALKED LANDING)

Propeller..... Full Increase

Throttle..... Full Forward

Flaps..... If full, reduce to (10 degrees)

Accelerate..... Vx then Vy (71 kts then 80 kts).

Gear..... UP

Retract flaps slowly when clear of all obstacles and positive climb rate.
Inform tower of situation and intentions

EMERGENCY PROCEDURES

The recommended procedures for coping with various types of Emergencies and Critical Situations are provided in this section. Emergency Procedures associated with optional systems and equipment requiring supplements the Aircraft Flight manual are not included. Please see AFM for detailed information and explanations.

ENGINE FIRE DURING START

Starter	Continue Cranking
Mixture	Idle Cut-Off
Throttle	Full Open
Electric Fuel Pump	OFF
Fuel Selector	OFF
Magneto Switch	OFF
Master Switch	OFF

EXIT AIRCRAFT IF FIRE CONTINUES

ENGINE POWER LOSS ON TAKE-OFF ROLL -SUFFICIENT RUNWAY REMAINING

Maintain Directional Control	Use Rudder
Throttle	Closed
Mixture	Idle Cut-Off
Brakes	Apply without Skidding
Radio Communication	Notify Tower/Unicom
Attempt Engine Re-Start	Exit Runway (Do NOT Take-Off)

EMERGENCY PROCEDURES CONTINUED ON PAGE 19

ENGINE POWER LOSS ON TAKE-OFF ROLL - INSUFFICIENT RUNWAY REMAINING, NOT AIRBORNE

Maintain Directional Control	Use Rudder
Brakes	Apply without Skidding
Shallow Turns	Avoid Obstructions
Mixture	Idle Cut-Off
Electric Fuel Pump	OFF
Fuel Selector	OFF
Magneto Switch	OFF
Radio Communication	Notify Tower/Unicom
Master Switch	OFF
Exit Aircraft	As Soon as Possible

ENGINE POWER LOSS ON LIFT-OFF - SUFFICIENT RUNWAY REMAINING FOR NORMAL LANDING

Airspeed	Trim for 85kts (Best Glide Speed) Keep Airspeed ABOVE STALL
Throttle	Closed
Flaps	Set as Needed
Land	Straight Ahead
Radio Communication	Notify Tower/Unicom After Landing
Attempt Engine Re-Start	Exit Runway, DO NOT Take Off

EMERGENCY PROCEDURES CONTINUED ON PAGE 20

ENGINE POWER LOSS ON LIFT-OFF - INSUFFICIENT ALTITUDE FOR ENGINE RE-START

1. Airspeed.....	Trim for 85 kts (Best Glide Speed)
2. Gear.....	UP for obstacles/rough terrain

SECURE ENGINE:

4. Throttle.....	Closed
5. Mixture.....	Idle Cut-Off
6. Fuel Selector.....	OFF
7. Electric Fuel Pump.....	OFF
8. Ignition Switch.....	OFF

MAKE DISTRESS CALL--GIVE CALL SIGN, POSITION, ALTITUDE, SITUATION, INTENTION: (MAY-DAY...MAY-DAY...MAY-DAY)

9. Transponder.....	Squawk 7700
10. Radio.....	Notify ATC/ or Tune 121.50 MHz
11. Shallow Turns.....	Avoid Steep Turns
12. Seat Belts/Harness.....	Fastened
13. Passengers.....	Brief for Emergency Landing
14. Flaps.....	Full (or as needed)
15. Door.....	Unlatch (Top ONLY)
16. Master Switch.....	OFF
17. Touchdown.....	Slowest Possible Airspeed (MCA)
18. Exit Aircraft.....	As Soon as Possible
19. Assistance.....	Seek HELP

Note: When choosing suitable landing site, consider Size, Texture, and Wind Direction

EMERGENCY PROCEDURES CONTINUED ON PAGE 21

ENGINE POWER LOSS IN FLIGHT WITH MANEUVERING ALTITUDE

1. Airspeed.....	85 kts (Trim Best Glide Speed)
2. Select Landing Site.....	Fly to Selected Field
3. Shallow Turns.....	Avoid Steep Turns

TROUBLESHOOT:

4. Electric Fuel Pump.....	ON, Check Fuel Pressure
5. Fuel Selector.....	Switch Tanks
6. Mixture.....	RICH
7. Alternate Air.....	ON
8. Primer.....	IN and LOCKED
9. Magneto Switch.....	Check RIGHT and LEFT, then BOTH

NO RESTART, COMMITTED TO LANDING - SECURE ENGINE

10. Throttle.....	Closed
11. Mixture.....	Idle Cut-Off
12. Fuel Selector.....	OFF
13. Electric Fuel Pump.....	OFF
14. Magneto Switch.....	OFF

MAKE DISTRESS CALL--GIVE CALL SIGN, POSITION, ALTITUDE, SITUATION, INTENTION: (MAY-DAY...MAY-DAY...MAY-DAY)

ONCE CERTAIN OF REACHING LANDING SITE:

15. Transponder.....	Squawk 7700
16. Radio.....	Notify ATC/ or Tune 121.50 MHz
17. Shallow Turns.....	Avoid Steep Turns
18. Seat Belts/Harness.....	Fastened
19. Passengers.....	Brief
20. Gear.....	Down
21. Flaps.....	Full (or as needed)
22. Door.....	Unlatch (Top ONLY)
23. Master Switch.....	OFF
24. Touchdown.....	Slowest Possible Airspeed (MCA)
25. Exit Aircraft.....	ASAP
26. Assistance.....	Seek Help

Note: When choosing suitable landing site, consider Size, Texture, and Wind Direction.

EMERGENCY PROCEDURES - CONTINUED

ENGINE FIRE IN FLIGHT

Source of Fire..... Check

ELECTRICAL FIRE:
Master Switch..... OFF
Vents..... Open
Cabin Heat..... OFF
Land..... ASAP

ENGINE FIRE:
Fuel Selector..... OFF
Throttle..... Closed
Mixture..... Idle Cut-Off
Electric Fuel Pump..... OFF
Heater/Defroster..... OFF
PROCEED WITH POWER OFF LANDING

LOSS OF OIL PRESSURE

Land as soon as possible and investigate cause.
PREPARE FOR POWER OFF LANDING.

LOSS OF FUEL PRESSURE

Electric Fuel Pump..... ON
Fuel Selector..... Fullest Tank or BOTH

HIGH OIL TEMPERATURE

Land at nearest airport and investigate the problem.
Avoid changes in power settings.
Maintain altitude until in position for power-off approach.
Prepare for power-off approach and landing.

EMERGENCY PROCEDURES CONTINUED ON PAGE 23

EMERGENCY PROCEDURES - CONTINUED

ELECTRICAL FAILURES

Ammeter..... Verify Operative

If inoperative or failing:

Alternator Switch..... OFF
Reduce electrical loads to minimum.

Check/Reset alternator circuit breaker
Alternator Switch..... ON

If power is not restored:
Alternator Switch..... OFF
Reduce electrical loads to minimum and land as soon as practical.
The battery is the only remaining source of electrical power.

ELECTRICAL OVERLOAD

Alternator reads more than 20 amps above normal for loads:
Electrical Load..... Reduce

If ammeter indicates normal:
Electrical Loads..... Re-Power loads individually to identify faulted device, turn off device with excessive current draw.

If alternator loads reduced and overload persists:
Alternator Switch..... OFF
Land as soon as practical. The battery is the only remaining source of electrical power. Anticipate complete electrical failure.

EMERGENCY PROCEDURES CONTINUED ON PAGE 24

EMERGENCY PROCEDURES - CONTINUED

SPIN RECOVERY

Throttle..... Closed
Ailerons..... Neutral
Rudder..... Full Opposite to Rotation direction
Control Yoke..... Full Forward
Rudder..... Neutralize as Rotation Stops
Control Yoke..... Apply Back Pressure as required to achieve level flight attitude.

OPEN DOOR IN FLIGHT

If both upper and lower latches are open, the door will trail slightly open and airspeeds will be reduced slightly.

To close door in flight:
Airspeed..... Slow to 85 kts
Cabin Air Vents..... Closed
Storm Window..... OPEN
Side Latch..... Latch while pulling on armrest
Upper Latch..... Latch

PROPELLER OVERSPEED

Throttle..... Retard
Oil Pressure..... Check
Propeller Control..... Full Decrease, SET if any control
Airspeed..... Reduce
Throttle.....As Required Below 2700 RPM

EMERGENCY PROCEDURES ARE COMPLETE

ENGINE START PROCEDURES – CONTINUED

HOT START

Master Switch..... ON
Landing Gear Lights..... Check 3 Green
Beacon/Strobes..... ON
Mixture..... Idle Cut-Off
Throttle..... Open 1/2 Inch
Propeller Area..... Clear
Starter..... Engage, Increase Mixture on Start
(DO NOT CRANK FOR MORE THAN 30 SECONDS)
Throttle..... Adjust to 1000 RPM
Oil Pressure..... Check in Green
Mixture..... Slightly Lean
COWL FLAPS……. OPEN

FLOODED START

Master Switch..... ON
Landing Gear Lights..... Check 3 Green
Beacon/Strobes..... ON
Mixture..... Idle Cut-Off (Richen on Engine Start)
Electric Fuel Pump..... OFF
Throttle..... Full Open (Throttle Back on Start)
Propeller Area..... Clear
Starter.....…Engage, Increase Mixture on Start

Throttle..... Adjust to 1000 RPM
Oil Pressure..... Check
Mixture..... Slightly Lean
Ammeter..... Check Output (key mike)
Flaps..... Retracted
COWL FLAPS……. OPEN

STARTING WITH EXTERNAL SOURCE

Master Switch..... OFF
All Electrical Switches..... OFF
Auxiliary Power Unit..... Set Output (13.5 - 14.25 Volts)
Auxiliary Power Unit.....….OFF, Connected
Battery Switch.....….ON
Auxiliary Power Unit.....…ON
Engine Start..... Use Normal Procedures
Auxiliary Power Unit.....….OFF after Engine Start
Auxiliary Power Unit.....Disconnect
Alternator..... ON

INSTRUMENT PRE-TAKEOFF

Magnetic Compass..... Check Accuracy
Clock, Time, Second Indication..... Correct time
Attitude Indicator..... Level ± 5 Degrees Tolerance
Altimeter..... ± 75 feet of Field Elevation
Vertical Speed Indicator..... Check Pointer on ZERO

Turn and Bank Indicator..... Check NO FLAG
Heading Indicator (DG)..... Aligned with Compass

VOR Units Operational..... Check/ID/Morse Code
ADF Operational..... TEST/ID
DME Readout..... Check/ID

Marker Light..... Test Light and Audio
Marker-to-Speaker Switch..... ON

Transponder Light..... Teat and SET
Comm Radios..... Check Transmit and Receive

Pitot Heat..... Check Working
Flaps..... Functional and Retracted

Vacuum..... Check (Normal Range)
Engine Gauges..... GREEN

Maps, Approach Plates, SIDS, and STARS
Flight Plan, Alternate Airports
Weather Briefing
Return Approach Plate in Clip

CLEARANCE
Radios Set: Comm 1 - Tower/Approach
Comm 2 - Ground/ATIS

Actual IFR Conditions: Set one NAV Receiver for an Approach back to the departure airport in case of an emergency.

INSTRUMENT PRE-TAKEOFF CHECKS COMPLETE