

PREFLIGHT ACTION

Aircraft Documents ARROW
 Weather STANDARD BRIEF
 Baggage WEIGHED/SECURED
 Weight/C.G. CALCULATED
 Navigation PLANNED
 Charts/Nav aids CHECK
 Performance DETERMINED
 VOR Log (IFR) CHECK

INTERIOR INSPECTION

Hobbs/Tach CHECK
 POH ONBOARD
 Control Lock REMOVE/STOW
 Ignition/Electrical/Avionics OFF
 Mixture IDLE CUTOFF (ICO)
 Master Switch ON/CALL
 Fuel Quantity CHECK
 Lights/Pitot Heat (IFR) ON/CHK/OFF
 Flaps EXTEND
 Avionics ON/CHECK FAN/OFF
 Annunciator Panel TEST
 Master Switch OFF
 Fuel Selector BOTH
 Fuel Shutoff IN
 Alternate Static OFF
 Elevator Trim NEUTRAL
 Flight Controls CHECK
 Windows CHECK/CLEAN

EXTERIOR INSPECTION

PER MANUAL

BEFORE START

Preflight/Towbar Stow COMPLETE
 Passenger Brief S.A.F.E.T.Y.
 Seats/Seatbelts ADJUST/SECURE
 Doors LOCKED
 Brakes TEST/SET
 Circuit Breakers CHECK IN
 Avionics OFF

STARTING ENGINE - COLD

Throttle FULL
 Mixture RICH
 Master Switch ON/CHECK OIL TEMP.
 FOR **HOT START**
 Flaps UP
 Beacon/Taxi/Nav ON
 Fuel Pump ON/3 Sec./OFF
 Throttle CRACKED
 Mixture ICO
 Prop Area CLEAR
 Ignition START
 Mixture RICH WHEN RUNNING
 Throttle 700 RPM
 Oil Pressure CHECK
 Mixture LEAN FOR TAXI

HOT START

Throttle CRACKED
 Mixture ICO
 Flaps UP
 Beacon/Taxi/Nav ON
 Prop Area CLEAR
 Ignition START
 Mixture RICH WHEN RUNNING
 Throttle 700 RPM
 Oil Pressure CHECK
 Mixture LEAN FOR TAXI

BEFORE TAXI

Avionics ON
 Transponder 1200
 Flaps UP VERIFY
 WX/ATIS OBTAIN
 Flight Instruments SET
 Taxi Clearance OBTAIN
 Throttle SMOOTH ADVANCE
 Brakes CHECK

RUN UP

Parking Brake SET
 Flight Controls FREE/CORRECT
 Fuel Selector BOTH
 Mixture RICH
 Throttle 1800 RPM
 Engine Gauges CHECK GREEN
 Magnetos (R/L) CHK<150 DROP
 <50 RPM DIFFERENCE
 Throttle IDLE/CHECK/700 RPM
 Mixture LEAN FOR TAXI

BEFORE TAKEOFF

Flight Instruments SET
 Radios/Avionics SET/CDI CHK
 Engine Gauges CHECK
 Seat Belts/Harness CHECK
 Flaps SET TAKEOFF
 Trim NEUTRAL
 Doors/Windows CHECK
 Emergency Brief PERFORM
 Brake RELEASE

TAKING RUNWAY

Land/Strobes (Lights) ON
 Transponder (Camera) ALT MODE
 Mixture (Action) RICH

TAKEOFF

V_R = 55
 V_X = 62
 V_Y = 74
 Short/Soft Field = Flaps 10°

CRUISE

Throttle AS DESIRED
 Trim SET
 Mixture SET
 Landing Light OFF
 Engine Gauges GREEN

PRE-MANEUVERS

Area CLEAR
 All Lights ON

DESCENT

Throttle AS DESIRED
 Mixture SET
 Fuel Selector BOTH
 Flight Instruments SET
 Engine Gauges MONITOR
 Landing Light ON

BEFORE LANDING

G.U.M.P.S. COMPLETE

BALKED LANDING (Go Around)

Throttle FULL
 Flaps RETRACT TO 20°
 Climb 60 KIAS
 Flaps 10° (until obstacle clear)
 Flaps RETRACT (safe altitude
 at 65 KIAS)
 Climb 74 KIAS

AFTER LANDING TAXI

Flaps UP
 Mixture LEAN FOR TAXI
 Land/Strobes OFF
 Transponder 1200
 Trim NEUTRAL

SHUTDOWN - SECURING

Avionics OFF
 Throttle IDLE
 Primary Lead (P-Lead) CHECK
 Mixture IDLE CUTOFF
 Ignition OFF/KEY OUT
 Master Switch OFF
 All Switches OFF
 Windows CLOSED
 Control Lock INSTALLED
 Fuel Selector LEFT/RIGHT
 Tach/Hobbs RECORD
 Aircraft SECURE
 Discrepancies WRITE UP

EMERGENCY PROCEDURES

<p>ENGINE FAILURE ON TAKEOFF Throttle IDLE Brakes APPLY Flaps RETRACT Mixture IDLE CUTOFF Ignition OFF Master OFF</p>	<p>PRECAUTIONARY LANDING WITH POWER Airspeed 65 KIAS Flaps 20° Field OVERFLY/INSPECT Avionics/Electrical OFF Flaps 30° FINAL Master Switch OFF Doors UNLATCH Touchdown TAIL LOW Ignition OFF Brakes APPLY HEAVILY</p>	<p>ENGINE FIRE DURING FLIGHT Mixture IDLE CUTOFF Fuel Shutoff OFF PULL FULL OUT Aux Fuel Pump OFF Master Switch OFF Cabin Heat/Air OFF Airspeed 100 KIAS Forced Landing EXECUTE</p>	<p>ELECTRICAL MALFUNCTIONS <u>Ammeter Excessive Charge</u> Master Switch OFF Master Switch ON <u>Still Excessive Charge</u> Flight TERMINATE ASAP <u>Low Voltage Annunciator/</u> <u>Ammeter Shows Discharge</u> Avionics OFF Alt Field Breaker CHECK IN Master Switch OFF then ON <u>Low Voltage Annunciator again</u> Alternator OFF Electrical Load REDUCE Flight TERMINATE ASAP</p>
<p>ENGINE FAILURE AFTER TAKEOFF Airspeed 70 KIAS FLAPS UP 65 KIAS FLAPS DOWN Mixture IDLE CUTOFF Fuel Shutoff OFF PULL OUT Ignition OFF Wing Flaps AS REQUIRED Master Switch OFF Cabin Door UNLATCH Land STRAIGHT AHEAD</p>	<p>DITCHING/WATER LANDING Radio TRANSMIT MAYDAY Squawk 7700 Heavy Objects SECURE/JETTISON Flaps 20° - 30° Power 300 FPM Desc./55 KIAS IF NO POWER 65 KIAS/Flaps 10° Approach HIGH WIND - INTO WIND LIGHT WIND - PARALLEL SWELLS Doors UNLATCH Touchdown LEVEL ATTITUDE Face BRACE ELT ACTIVATE EVACUATE/INFLATE FLOTATION WHEN CLEAR OF AIRCRAFT</p>	<p>ELECTRICAL FIRE IN FLIGHT Master Switch OFF Vents/Air/Heat CLOSED/OFF Fire Extinguisher ACTIVATE Avionics Master OFF Ignition Switch ON All Other Switches OFF After Fire Extinguished, Vent Cabin, <u>If Electrical Necessary</u> Master Switch ON Circuit Breakers CHECK (DO NOT RESET) Radio Switches OFF Avionics Master ON Radio Switches ON ONE AT TIME</p>	<p>LOSS OIL PRESSURE/ RISE OIL TEMPERATURE Power REDUCE Flight TERMINATE ASAP</p>
<p>ENGINE FAILURE DURING FLIGHT Airspeed 68 KIAS Fuel Shutoff ON PUSH FULL IN Fuel Selector BOTH Aux Fuel Pump ON Mixture RICH (If start not occurred) Ignition Switch BOTH/START</p>	<p>ENGINE FIRE DURING START Cranking CONTINUE <u>If Engine Starts</u> Power 1800 RPM (3 min.) Engine SHUTDOWN <u>If Engine Fails to Start</u> Throttle FULL OPEN Mixture IDLE CUTOFF Cranking CONTINUE Fuel Shutoff OFF PULL FULL OUT Aux Fuel Pump OFF Fire Extinguisher ACTIVATE Master Switch OFF Ignition Switch OFF Fire EXTINGUISH</p>	<p>CABIN FIRE Master Switch OFF Vents/Air/Heat CLOSED/OFF Fire Extinguisher ACTIVATE When Fire Extinguished VENT LAND AS SOON AS POSSIBLE</p>	<p>SPIN RECOVERY Power IDLE Ailerons NEUTRAL Rudder OPPOSITE FULL UNTIL SPIN STOPS Elevator FORWARD Elevator RECOVER FROM DIVE</p>
<p>FORCED LANDING WITHOUT POWER Airspeed 70 KIAS FLAPS UP 65 KIAS FLAPS DOWN Mixture IDLE CUTOFF Fuel Shutoff OFF PULL FULL OUT Ignition OFF Flaps AS REQUIRED Master Switch OFF Doors UNLATCH Touchdown TAIL LOW Brakes APPLY HEAVILY</p>		<p>WING FIRE Land/Taxi Lights OFF Nav Lights OFF Strobe Lights OFF Pitot Heat OFF</p>	<p>V-SPEEDS V_{S0} = 40 V_{S1} = 48 V_R = 55 V_X = 62 V_Y = 74 V_A (2550) = 105 V_{FE} = 85 V_{NO} = 129 V_{NE} = 163 Final Approach = 65/Short 61 V_{BEST GLIDE} = 68</p>