

<u>V - SPEEDS (KIAS)</u>	
Vso.....	32
Vs.....	39
Vr.....	43
Vx.....	60
Vy.....	65
Vfe.....	75
Vno.....	108
Vne.....	138
Va (1320 lbs).....	88
Va (1025 lbs).....	84
Best Glide.....	60
Maximum Crosswind.....	10
Maximum Headwind.....	23

<u>PREFLIGHT COCKPIT CHECK</u>	
Weather.....	CHECK
ATIS/ASOS/AWOS.....	OBTAIN
Weight & Balance....	COMPLETE
Documents (AROW).....	CHECK
Inspection/AD status.....	CHECK
Hobbs.....	CHECK
Ignition.....	OFF
Avionics Master.....	OFF
Master.....	ON
Pitch-Roll Trim.....	TEST
Instruments.....	ON
Fuel Quantity.....	CHECK
Turn Coordinator.....	AUDIBLE
Flaps.....	EXTEND
Lights.....	ON/INSPECT/OFF
Fuel Selector.....	ON
Master.....	OFF
Circuit Breakers.....	CHECK
Canopy.....	CLEAN

<u>EXTERIOR INSPECTION</u>	
<u>Left Wing</u>	
Flaps.....	CHECK
Ailerons.....	CHECK
Leading Edge.....	CHECK
Pitot Tube.....	CHECK
Static Port.....	CHECK
Fuel Quantity.....	CHECK
Fuel Filler Cap.....	SECURE
Fuel Sump.....	CHECK
Main Wheel.....	CHECK
Fuel Tank Vent.....	CHECK
<u>Nose</u>	
Nose Cowling.....	SECURE
Fuel Strainer.....	CHECK
Oil Quantity.....	CHECK
Engine Coolant.....	CHECK
Cooling Inlets.....	CHECK
Engine Mount.....	SECURE
Prop. & Spinner.....	CHECK
Carburetor Air Filter.....	CHECK
Nose Wheel Strut/Tire.....	CHECK
<u>Right Wing</u>	
Leading Edge.....	CHECK
Fuel Sump.....	CHECK
Main Wheel.....	CHECK
Fuel Quantity.....	CHECK
Fuel Filler Cap.....	SECURE
Aileron.....	CHECK
Flap.....	CHECK
<u>Empennage</u>	
Horiz. Stabilizer.....	CHECK
Elevator.....	CHECK
Trim Tab.....	CHECK
Rudder.....	CHECK

<u>BEFORE ENGINE START</u>	
Preflight Inspection..	COMPLETE
Passenger Briefing..	COMPLETE
Safety Harness.....	SECURE
Controls.....	FREE & CORRECT
Canopy.....	CLEAN

<u>ENGINE START</u>	
Brakes.....	SET
Fuel Selector....	FULLEST TANK
Throttle.....	IDLE
Choke.....	FULL ON (HOT START – NO CHOKE)
Carburetor Heat.....	COLD
Master.....	ON
Strobes.....	ON
Fuel Pump.....	ON
Brakes.....	HOLD
Propeller Area.....	CLEAR
Ignition.....	START
Choke.....	OFF GRADUALLY
Instruments.....	ON
Throttle.....	2000 RPM
Oil Pressure.....	CHECK

<u>WARMUP ENGINE FOR 2 MINUTES AT 2000 RPM</u>	
Fuel Pump.....	OFF
Fuel Pressure.....	CHECK
Avionics.....	ON

<u>TAXI</u>	
Transponder.....	STBY
Flaps.....	RETRACT
Taxi Area.....	CLEAR
Brakes.....	RELEASE
Instruments.....	SET & CHECK
Controls.....	APPLY WIND CORRECTION

<u>RUNUP</u>	
Canopy.....	CLOSED & LOCKED
Brakes.....	SET
Power.....	2500 RPM
UNTIL OIL PRESSURE REACHES 50°C	
Power.....	4000 RPM
Ignition.....	CHECK L/R/BOTH MAX. DROP 300 RPM MAX. DIFFERENTIAL 120 RPM
Carb Heat.....	CHECK
Oil Temperature.....	CHECK
Oil Pressure.....	CHECK
Ammeter.....	CHECK
Power.....	IDLE

<u>BEFORE TAKEOFF</u>	
Altimeter.....	SET
Trim.....	NEUTRAL
Controls.....	FREE & CORRECT
Canopy.....	CLOSED & LOCKED
Safety Harness.....	FASTENED
Fuel Selector.....	FULLEST TANK
Fuel Pump.....	ON
Ignition.....	ON
Transponder.....	ALT
Lights.....	AS REQUIRED

<u>NORMAL TAKEOFF</u>	
Flaps.....	10°
Throttle.....	FULL OPEN Max. 5800 RPM for max. 5 mins.
Engine Speed.....	CHECK
Engine Instruments.....	CHECK
Rotate.....	43 KTS
Climb.....	65 KIAS (Vy)
Flaps..	RETRACT above 150' AGL

SHORT-FIELD TAKEOFF

Flaps.....20°
 Throttle.....FULL OPEN
 Engine Instruments.....CHECK
 Rotate.....43 KIAS
 Climb.....60 KIAS (Vx)
 Until clear of obstacle
 Climb.....65 KIAS (Vy)
 Flaps.....RETRACT

CLIMB

Throttle....REDUCE (5500 RPM)
 Airspeed.....CRUISE CLIMB
 Trim.....SET
 Engine Instruments.....CHECK

CRUISE

Throttle.....SET
 Trim.....SET
 Fuel Pump.....OFF
 Landing Light.....OFF
 Fuel Pressure.....CHECK
 Engine Instruments.....CHECK

DESCENT

Power.....ABOVE 3000 RPM
 Airspeed.....AS DESIRED
 Altimeter.....SET
 Landing Light.....ON

BEFORE LANDING

Safety Harness.....SECURE
 Fuel Pump.....ON
 Fuel Selector....FULLEST TANK
 Fuel Pressure.....CHECK
 Throttle.....BELOW 5500 RPM

NORMAL LANDING

Power.....AS NEEDED
 Flaps.....SET below 75 KIAS
 Airspeed.....60 KTS
 Trim.....AS NEEDED

AFTER LANDING

Flaps.....RETRACT
 Transponder.....STBY
 Lights.....AS REQUIRED
 Fuel Pump.....OFF
 Trims.....NEUTRAL

ENGINE SHUTDOWN

Throttle.....IDLE
 Engine Instruments.....CHECK
 Avionics.....OFF
 Lights.....OFF
 Ignition.....OFF
 Instruments.....OFF
 Master.....OFF
 Fuel Selector.....OFF

SECURING AIRCRAFT

Flight Controls.....SECURE
 Hobbs Time.....RECORD
 Squawks.....NOTE
 Trash.....REMOVE
 Canopy.....CLOSED/LOCKED
 Tie-Downs.....SECURE
 Flight Plan.....CLOSE

**EMERGENCY PROCEDURES
 ENGINE FAILURE IN
 FLIGHT**

Airspeed.....60 KIAS
 Landing Site.....LOCATE
 Fuel Pump.....ON
 Fuel Selector....FULLEST TANK
 Throttle.....IDLE
 Ignition.....START

***IF ENGINE FAILS TO RESTART
 PROCEED TO EMERGENCY
 LANDING CHECKLIST***

**EMERGENCY LANDING
 WITHOUT POWER**

Airspeed.....60 KIAS
 Trim.....ADJUST
 Safety Harness.....TIGHTEN
 Flaps.....EXTEND as necessary
 Radio Call.....121.5
 Transponder.....7700
 Fuel Selector.....OFF
 Ignition.....OFF
 Master Switch.....OFF

CARBURETOR ICING

Carburetor Heat.....ON
 Throttle.....SET 1/3 POWER
 Airspeed.....MIN. 76 KIAS
 Power.....INCREASE gradually

ENGINE FIRE ON START

Fuel Selector.....OFF
 Throttle.....FULL OPEN
 Ignition.....OFF
 Abandon Airplane

**EMERGENCY PROCEDURES
 ENGINE FIRE ON GROUND**

Cabin Heat.....CLOSE
 Fuel Selector.....OFF
 Throttle.....FULL OPEN
 Ignition.....OFF
 Abandon Airplane

**ENGINE FIRE DURING
 TAKEOFF**

Airspeed.....60 KIAS
 Cabin Heat.....CLOSE
 Fuel Selector.....OFF
 Throttle.....FULL OPEN
 Ignition.....OFF
 Land and Abandon Airplane

**ENGINE FIRE DURING
 FLIGHT**

Cabin Heat.....CLOSE
 Fuel Selector.....OFF
 Throttle.....FULL OPEN
 Ignition.....OFF
 when remaining fuel is consumed
 Landing Site.....LOCATE

***PROCEED WITH EMERGENCY
 LANDING CHECKLIST***

**CANOPY OPEN DURING
 FLIGHT**

Maintain positive control of aircraft
DO NOT TRY TO CLOSE
 Continue takeoff
 Climb to safe altitude
 Maintain airspeed of 65 KIAS
 Fly a normal traffic pattern
 Max. airspeed 75 KIAS
 Land then close and lock canopy