

AIR SPEEDS (KIAS)

V _{S0}	54
V _{S1}	66
V _{MC}	62
V _X	78
V _{XSE}	83
V _Y	85
V _{YSE}	84
V _{FE1}	122 (T/O)
V _{FE2}	93 (FULL)
V _{REF}	70
V _{LO}	122
V _A	122
V _{SSE}	>70
V _{NO}	138
V _{NE}	171
CRUISE CLIMB.....	100

WEIGHT & BALANCE

EMPTY WT.....	1878 LBS
GROSS WT.....	2711 LBS
USEFUL LOAD.....	833 LBS

CAPACITIES

TOTAL FUEL.....	56 GALLONS
USABLE FUEL.....	55 GALLONS
MINIMUM OIL.....	2-3 LITERS

CONTACT INFORMATION

VFA.....	(123.3) 802-863-5988
BTVA AIRPORT POLICE...	802-658-7663
ATIS.....	(123.8) 802-658-8382
CLEARANCE.....	(119.15)
GROUND.....	(126.3)
TOWER.....	(118.3) 802-657-4402
APPROACH.....	(121.1) 802-657-4401

LIGHT USAGE

START/SHUTDOWN.....	NAV/STROBE
RAMP.....	NAV / TXI*
RUNUP.....	NAV
TAXI.....	NAV / TXI*
CROSS RWY.....	ALL LGTS ON
TAKEOFF / CLIMB.....	ALL LGTS ON
PRAC. AREA.....	ALL LGTS ON
CRUISE.....	NAV / STRB

DESCENT / LANDING ...ALL LGTS ON

* TAXI LIGHT SHALL BE ON WHENEVER AIRCRAFT IS IN MOTION AND OFF WHEN AIRCRAFT IS STOPPED.

NOTE

IF ENVIRONMENTAL CONDITIONS EXIST IN WHICH THE EXTERNAL LIGHTS CREATE A DISTRACTION TO FLIGHT, TURN THE EXTERNAL LIGHTS OFF AS APPROPRIATE.

PREFLIGHT

AIRCRAFT LOGBOOK.....	CHECK
AIRCRAFT / PILOT DOCS.....	CHECK
CONTROL WHEEL..	RELEASE BELTS
ALL COVERS.....	REMOVED
FUEL SELECTORS..	DESIRED TANKS
IGNITION SWITCHES.....	OFF
AVIONICS POWER SWITCH.....	OFF
GEAR SELECTOR...CONFIRM	DOWN
BREAKERS.....	ALL IN
MASTER SWITCH.....	ON
LH/RH CROSS BUS.....	ON
LIGHTS.....	CHECK / OFF
PITOT HEAT.....	CHECK / OFF
STALL WARNING.....	CHECK
FLAPS.....	DOWN
FUEL QUANTITY.....	CHECK
RH/LH FUEL PUMP.....	ON/OFF
CHECK FUEL PRESSURE GAUGE CORRECT OPERATION AND RETURNS TO ZERO WHEN PUMP IS TURNED OFF	

GEAR LIGHTS.....	TEST
FIRE DETECTOR.....	TEST
VOLTMETER.....	12-14V
LH/RH CROSS BUS.....	OFF
MASTER SWITCH.....	CONFIRM OFF
START BATT.....	TEST 12-14V
CABIN HEAT.....	CLOSED
FIRE EXTINGUISHER.....	GREEN ARC
INTERIOR CHECKS COMPLETE	

FUEL SUMPS/STRAINER..	CHECKED
FUEL TANKS / CAPS.....	CHECKED
ENGINE OIL LEVEL.....	CHECKED
COOLENT LEVEL.....	CHECKED
ALL LANDING GEAR.....	CHECKED
EMERG. GEAR.....	>20BAR/300PSI
CONTROL SURFACES.....	CHECKED
PITCH/RUDDER TRIM..	CONNECTED
AIRCRAFT EXTERIOR.....	CHECKED
ALL TIEDOWNS.....	REMOVED
ALL COVERS.....	REMOVED
PREHEAT.....	DISCONNECTED
CHOCKS.....	REMOVED
TOWBAR.....	STOWED
CARGO DOOR.....	SECURE
PREFLIGHT.....	COMPLETE

BEFORE START

CFI WALK-AROUND.....	VERIFIED
PASSENGER BRIEF.....	SEAT BELTS
DOORS, EMERGENCIES	
STERILE COCKPIT	
PASSENGER BRIEF.....	COMPLETE
SEATS, BELTS.....	ADJUST/LOCK
DOORS.....	SHUT AND LOCKED
BRAKES.....	CHECK / SET
CIRCUIT BREAKERS.....	CHECK
FUEL SELECTORS..	DESIRED TANKS
IGNITIONS.....	ON
CARB HEAT.....	OFF
PROPELLERS.....	HIGH RPM
THROTTLES.....	IDLE
MASTER SWITCH.....	ON
AVIONICS POWER SWITCHES..	OFF
RH/LH FIELDS.....	OFF
LIGHTS.....	SET

ENGINE START

START RIGHT ENGINE FIRST

CHOKE.....	ON (IF ENGINE COLD)
FUEL PUMP.....	ON (check pressure)
PROP AREA.....	CLEAR
START.....	PUSH

ENGINE STARTED

OIL PRESSURE.....	CHECK
CHECK INCREASING WITHIN 10 SECONDS	
MAX 7 BAR IF COLD	
CHOKE.....	OFF (IF COLD START)
FIELD.....	ON
THROTTLE.....	1000 RPM
FUEL PUMP.....	OFF
AVIONICS.....	ON
CROSS BUS.....	ON
AMMETER..	CHECK POSITIVE AMPS
VOLTMETER.....	12-14V
REPEAT START PROCEDURE FOR LEFT ENGINE	

BEFORE TAXI

FLAPS.....	T/O
LIGHTS.....	SET
BRAKE CHECK.....	COMPLETE

RUN UP

BRAKES.....	SET
RADIOS / GPS.....	SET
ATIS / WEATHER.....	CHECK
FLT INSTRUMENTS.....	CHECK
FLT CONTROLS....	FREE / CORRECT
RH FUEL SELECTOR...	RIGHT TANK
LH FUEL SELECTOR.....	LEFT TANK
ELEVATOR TRIM.....	SET FOR T/O
RUDDER TRIM.....	SET
CT and OIL PRESSURE.....	GREEN
OIL TEMP.....	ABOVE 50°
PROPELLERS.....	FULL FORWARD
THROTTLES.....	1650 RPM
CT and OIL PRESSURE.....	GREEN
OIL TEMP.....	ABOVE 50°
ALTERNATE STATIC.....	CHECK
RH/LH IGNITIONS.....	CHECKED
LESS THAN 130 RPM DROP	
PROP GOVERNORS.....	CHECK
REDUCE PROP SPEED TO 1200 RPM, THEN	
BACK TO FULL FORWARD, REPEAT 3 TIMES	
DO NOT LET RPM DROP BELOW 1150 RPM	
CARB HEAT.....	CHECKED
100 RPM DROP EACH SIDE	
IDLE.....	CHECK
THROTTLES.....	1000 RPM
THROTTLE FRICTION LOCK.....	SET
FUEL CROSSFEED.....	CHECK
ALTIMETERS.....	SET
TRANSPONDER.....	ASSIGNED / SET
TAXI ROUTE.....	BRIEF

BEFORE TAKEOFF

SEATS / BELTS.....	LOCK / ON
PRE-TAKEOFF BRIEF.....	COMPLETE
FLAPS.....	SET T/O OR AS REQ.
ANNUNCIATOR WINDOW.....	CHECK
FUEL.....	DESIRED TANKS
FUEL PUMPS.....	ON
CARB HEAT.....	COLD
PROPS.....	FULL FORWARD
DOORS.....	LATCHED/LOCKED
BEFORE CROSSING HOLD SHORT LINE	
LIGHTS.....	SET
PITOT HEAT.....	AS REQUIRED
ELECTRIC FAN.....	OFF

TAKEOFF

RUNWAYVERIFY
X-WIND CORRECTIONAPPLY
THROTTLE FULL OPEN
ENGINE INSTRUMENTSGREEN
ROTATE 65 KIAS
POSITIVE RATE OF CLIMB

BRAKESTAP
GEAR SELECTORUP
CLIMB SPEED V_y
300 AGL FLAPS UP

CLIMB (1000 AGL)

AIRSPEED 100 KIAS
THROTTLES <27" MP
PROPELLERS 2200 RPM
FUEL PUMPS OFF

CRUISE

POWERSET (BELOW 27" MP)
PROPS 1900-2200 RPM
LIGHTSSET

DESCENT / BEFORE LANDING

ATIS / WEATHERCHECK
ALTIMETERSET
APPROACH BRIEFINGCOMPLETE
FUEL DESIRED TANKS
IGNITIONS ON
CARB HEATAS NEEDED
RH/LH AVIONICS ON
RH/LH CROSSBUSES ON
RH/LH FIELDS ON
LIGHTSSET
MID-FIELD ON DOWNWIND OR 5NM TO FAF

FUEL PUMPS ON
THROTTLE 20" MP
CARB HEATAS REQUIRED
SPEEDBELOW VLE
GEAR SELECTOR DOWN
VERIFY THREE GREEN

ABEAM TOUCHDOWN POINT OR 1/2 DOT HIGH
FOR GLIDESLOPE INTERCEPT

FLAPST/O
PROPS FULL FORWARD
(IF ON AN IAP, PROPS FULL FORWARD 1000 FT
ABOVE MINIMUMS)

SPEED90 KIAS

LANDING

FLAPSSET
LANDING CLEARANCE VERIFY
FUEL PUMPS VERIFY ON
PROPS FULL FORWARD
GEAR VERIFY THREE GREEN
FINAL APPROACH SPEED

FULL FLAPS 70 KIAS
 V_{REF} 70 KIAS

GO AROUND

THROTTLE FULL OPEN
FLAPSTAKE-OFF
CLIMB SPEED V_y
POSITIVE RATE

GEAR SELECTORUP
300 AGL FLAPS RETRACT

AFTER LANDING

FUEL PUMPS OFF
LIGHTSSET
FLAPS RETRACT
TRIM SET FOR TAKEOFF
ELECTRIC FAN ON (if desired)

SHUTDOWN

BRAKESSET
THROTTLESIDLE
IGNITIONSOFF ONE AT A TIME
LIGHTSSET
ELECTRIC FAN OFF
AVIONICS SWITCH OFF
CROSS BUSS OFF
DOORS SAFETY LOCKS.. VERIFY OFF
LH/RH FIELDS OFF
MASTER SWITCH OFF
FUEL SELECTORS OFF
EMG BATT/EMG COCKPIT LIGHT . OFF

SECURING AIRCRAFT

CHOCKS INSTALL
TOWBAR REMOVE
AIR VENTSCLOSED
CONTROL LOCKINSTALL
TIEDOWNS SECURE
COVERSINSTALL
AIRCRAFT TIMESRECORD
360° WALK AROUNDCOMPLETE

SHORT FIELD TAKEOFF

FLAPS T/O
BRAKES SET
THROTTLE FULL OPEN
ENGINE INSTRUMENTSGREEN
BRAKES RELEASE
ROTATE 65 KIAS
CLIMB SPEED 70 KIAS
GEAR SELECTOR UP
CLEAR OF OBSTACLE

AIRSPEED V_x
AT A SAFE ALTITUDE

FLAPS UP
AIRSPEED V_y

SHORT FIELD LANDING

FLAPSFULL
FINAL APPROACH SPEED 70 KIAS
AFTER TOUCHDOWN

BRAKES APPLY HEAVILY
YOKE APPLY BACK PRESSURE

ENGINE FIRE (DURING START)

FUEL SELECTORS..... OFF
IGNITIONS OFF
FUEL PUMPS..... OFF
CABIN HEAT OFF
MASTER SWITCH OFF
EVACUATE IMMEDIATELY

ABORTED TAKEOFF WITH RUNWAY REMAINING

BEFORE ROTATION

DIRECTION CONTROL MAINTAIN
THROTTLES IDLE
BRAKES APPLY HEAVILY
REFER TO OVERRUN

AFTER ROTATION

DIRECTION CONTROL MAINTAIN
THROTTLES.. ADJUST FOR LANDING
PITCH..... FOR LANDING
REFER TO OVERUN

RUNWAY OVERRUN

MASTER SWITCH OFF
IGNITIONS OFF
FUEL SELECTORS..... OFF
BRACE FOR OVERRUN

ENGINE FAILURE NO RUNWAY REMAINING (BELOW 2000' AGL)

DIRECTIONAL CONTROL MAINTAIN
AIRSPEED 84 KIAS
POWER MAXIMIZE
LDG GEAR UP
FLAPS UP
FAILED ENGINE IDENTIFY, VERIFY
FAILED ENGINE PROP FEATHER
FAILED ENGINE THROTTLE RETARD
CONTINUE TO SECURING ITEMS

ENGINE FAILURE AFTER GEAR RETRACTION (ABOVE 2000' AGL)

AUTOPILOT OFF
DIRECTIONAL CONTROL MAINTAIN
AIRSPEED..... >70 KIAS
POWER MAXIMIZE
DRAG MINIMIZE
FAILED ENGINE IDENTIFY, VERIFY
FAILED ENGINE THROTTLE..... RETARD
FAILED ENGINE FUEL PUMP ON
FAILED ENGINE FUEL TANK..... SWITCH
CARB HEAT ON (if icing suspected)

REFER TO ENGINE RESTART CHECKLIST

ENGINE FAILURE DURING CRUISE

AUTO PILOT..... OFF
DIRECTIONAL CONTROL MAINTAIN
AIRSPEED..... <80 KIAS
POWER MAXIMIZE
DRAG MINIMIZE
FAILED ENGINE..... IDENTIFY, VERIFY
FAILED ENGINE THROTTLE..... RETARD
FAILED ENGINE FUEL PUMP ON
FAILED ENGINE FUEL TANK SWITCH
CARB HEAT ON (if icing suspected)

REFER TO ENGINE RESTART CHECKLIST

IN FLIGHT ENGINE RESTART

FAILED THROTTLE IDLE
FAILED PROP FULL FORWARD
CARB HEAT ON (if required)
FIELD OFF
FUEL SELECTOR DESIRED TANK
FUEL PUMP ON
IGNITION..... BOTH ON
STARTER..... ENGAGE
FAILED PROP SET AS DESIRED
FIELD ON (check for pos. ammeter)

IF RESTART UNSUCCESSFUL

EMERG BATT. ON
REPEAT START PROCEDURE

REFER TO AFM 3.6.2

IF NO RESTART-CONTINUE TO SECURING ITEMS

SECURING ITEMS

INOP. PROP CONFIRM L/R:FEATHER
INOP. ENG IGNITIONS CONFIRM L/R:OFF
INOP. ENGINE FUEL PUMP OFF
OPER. ENGINE FUEL PUMP ON
FUEL SELECTOR CONFIRM L/R:OFF
INOP. ENGINE FIELD OFF

Determine closest suitable airport and execute a single engine approach and landing

FUEL CROSSFEED

OPERATIVE ENGINE FUEL PUMP ON
OPERATIVE ENGINE FUEL SELECTOR
..... DESIRED TANK

PRECAUTIONARY ENGINE SHUTDOWN

Turn on fuel pump for the engine that **WILL NOT** be shut down

Follow this checklist for the engine you desire to shut down **ONLY**. Maintain a minimum speed above V_{sse} (70 KIAS)

FUEL PUMP CONFIRM L/R OFF
THROTTLE IDLE
IGNITIONS CONFIRM L/R OFF
FUEL CONFIRM L/R OFF
PROP LEVER ... CONFIRM L/R FEATHER
FIELD OFF

Determine closest suitable airport and execute a single engine approach and landing

ENGINE FIRE (IN FLIGHT)

CABIN HEAT OFF
AUTO PILOT..... OFF
EMERGENCY DESCENT..... ESTABLISH
FUEL SELECTOR OFF
IGNITION OFF
THROTTLE FULL FOWARD
PROP FEATHER
ELECTRIC FUEL PUMP..... OFF
AFFECTED ENGINE FIELD OFF
CABIN VENTS OPEN

REFER TO ENGINE FAILURE CHECKLIST FOR APPROPRIATE STAGE OF FLIGHT

SINGLE ENGINE APPROACH

AUTO PILOT..... CONFIRMED OFF
INOP. ENGINE..... SECURED
OPER. ENG FUEL SEL. DES. TANK
OPER. ENG PROP FULL FORWARD
OP. ENGINE FUEL PUMP..... ON

ON FINAL OR BEGINNING DESCENT
ON INSTRUMENT APPROACH

FLAPS..... T/O
GEAR..... DOWN
APPROACH SPEED..... 84 KIAS
1 MILE FINAL..... SLOW TO 75 KIAS

ALTERNATOR FAILURE

FAILED FIELD. CYCLE
IF CAUTION STAYS DISPLAYED
FAILED FIELD OFF
AVIONIC LH..... OFF

CABIN FIRE (IN FLIGHT)

EMERGENCY DESCENT .. ESTABLISH
MASTER SWITCH OFF
VENTS..... OPEN
FIRE EXTINGUISHER... AS REQUIRED
LAND..... IMMEDIATELY, IF FIRE NOT
EXTINGUISHED

WING FIRE

EXTERIOR LIGHTS OFF
PITOT HEAT OFF
EMERG. DESCENT ESTABLISH
LAND IMMEDIATELY

FLAPS UP LANDING

AIRSPEED ABOVE 75 KIAS
INCREASE REQ. LANDING
DISTANCE BY 25%

EMERGENCY GEAR EXTENSION

AIRSPEED BELOW V_{le}
LANDING GEAR HANDLE..... DOWN
EMERG GEAR ACCESS DOOR
..... REMOVE
RH CONTROL LEVER..ROTATE 180°
COUNTERCLOCKWISE
WAIT 20 SECONDS
LH CONTROL LEVER ROTATE
COUNTER CLOCKWISE 360°
3 GREEN LIGHTS..... VERIFY

EMERGENCY DESCENT

THROTTLE IDLE
TURN START
FLAPS..... EXTEND
AIRSPEED 93+
(or as fast as possible in event of a fire)