Fluids

Cabin

5 on each wing, 3 on bottom. Inspect for contamination.

AS NEEDED

**CHECK VISUALLY** 

Minimum 5 quarts

OFF

DRAIN

**SECURE** 

**SECURE** 

**REMOVE** 

OFF

ON

**ACCESSIBLE** 

**ACCESSIBLE** 

**VERIFY ON** 

CHECK

CHECK

**EXTEND** 

RECORD

**VERIFY SHOWN** 

ON

OFF

OFF

**BOTH** OFF

**CHECK** 

**REMOVE** 

TAKEOFF

**CHECK QUANTITY** 

**VERIFY SHOWN** 

**VERIFY SHOWN** 

**VERIFY NOT SHOWN** 

CHECK

**Preflight** 

Magnetos

Fuel quantity

Fuel filler caps

Dipstick

POH

Master

PFD

Lights

**Flaps** 

Tach time

Pitot heat

Pitot heat

LOW VOLTS Master

Elevator trim

Fuel selector

Alt static air Fire extinguisher

Control lock

Fuel gauges

**OIL PRESSURE** 

LOW VACUUM

Avionics fans

LOW FUEL

Pitot cover

Engine oil level

G1000 reference

Avionics (BUS 1 and BUS 2)

When the master switch is on,

treat propeller as if magnetos are on. Do not stand in propeller arc.

Avionics bus 1 ON, verify fan heard, bus 1 OFF. Avionics bus 2 ON, verify fan heard, bus 2 OFF.

Verify warm within 30 seconds

Fuel sumps

Brakes

Preflight (continued)			
Empennage			
Autopilot static	: VERIF	Y CLEAR	
Rudder gust lo	ck	REMOVE	
Control surface	!S	CHECK	
Freedom of	movement,	security	
Trim tab	CHECK	<b>SECURE</b>	
Antennas	CHECK CO	NDITION	
	Right		

#### CHECK SECURE, CONDITION Flap CHECK FREE, SECURE Aileron Main wheel tire CHECK INFLATION

#### Nose **VERIFY CLEAR** Cooling inlets Propeller **CHECK FOR NICKS VERIFY SECURE** Spinner Air filter CHECK CLEAR Nosewheel strut, tire CHECK Static source **CHECK CLEAR**

L	-еп
Main wheel tire	<b>CHECK INFLATION</b>
Fuel vent	VERIFY CLEAR
Pitot tube	VERIFY CLEAR
Stall warning	TEST
Landing, taxi ligi	hts CHECK CLEAN
Aileron CH	ECK FREE, SECURE
Flap CHECK SE	<b>ECURE</b> , CONDITION

Final	
Weight and balance	CHECKED
Flight Circle	DISPATCH
Tach, Hobbs times	RECORD
Baggage door	LOCK
Chocks	REMOVE
Tie-downs	REMOVE

Securing	
Control lock	INSTALL
Tie-downs, chocks	APPLY
Vents, windows	CLOSE
Pitot cover	APPLY
Fuel selector	LEFT or RIGHT
Tach, Hobbs times	RECORD
Flight Circle	CHECK IN
Doors	LOCK

Operating C	necklists
Start	
Before S	Start
Preflight inspection	COMPLETE
Passenger briefing	COMPLETE
Brakes	TEST, SET
Seats, belts, harnesse	s SECURE
Circuit breakers	CHECK IN
Electrical equipment	OFF
Avionics (BUS 1 and B	US 2) OFF
Beacon switch	ON
Fuel selector	BOTH
Fuel shutoff valve	ON
Engine Start (W	
Throttle	OPEN 1/4 INCH
Mixture	CUT-OFF
Standby battery	TEST
	20 seconds, verify
TEST light stays or	1
Standby battery	ARM
	Verify PFD turns on
Engine instruments	CHECK
Verify no red	d X on engine page
BUS E Volts	VERIFY ≥ 24V
M BUS Volts	$VERIFY \leq 1.5V$
BATT S Amps	VERIFY negative
STBY BATT Annunciato	or VERIFY SHOWN
Master	ON
	ENGINE NOT WARM
Fuel pump ON, mixto	
flow stable (3-5 seco	onds), mixture CUT-
OFF, fuel pump OFF	
Propeller area	CLEAR
Ignition switch	START
	when engine starts
	when engine starts
If engine flooded, mi	
open throttle 1/2 to f	
When engine starts,	
retard throttle promp	
Oil pressure VERIFY	GREEN WITHIN 60
NA' I	SECONDS
Mixture	GROUND LEAN
Before	
Amps (M BATT, BATT S	
	ERIFY NOT SHOWN
Annunciator	ON
Avionics	ON
Headset	ON ON
Navigation, strobe, tax	
Flaps	RETRACT
Weather	OBTAIN
Altimeters (PFD, stand	
EFB Setup	IF DESIRED

Operating Checklists

**Version 1 PR 47** 

## **Emergency Checklists**

Engine Failure During Roll	Takeoff
Throttle	IDLE
Brakes	APPLY
Flaps	RETRACT
Mixture	CUT-OFF
Magnetos	OFF
Standby battery	OFF
Master (ALT and BAT)	OFF

# Engine Failure Immediately After Takeoff

lakcon		
Airspeed		Flaps up: 70 KIAS
	Flaps	10°-FULL: 65 KIAS
Mixture		CUT-OFF
Fuel shutoff v	alve	OFF (pull full out)
Magnetos		OFF
Flaps	Α	S REQUIRED (FULL
		recommended)
Standby batte	ery	OFF
Master (ALT a	nd BA	AT) OFF
Door		UNLATCH
Land		STRAIGHT AHEAD

# Engine Failure During Flight (Restart Procedures)

ruei snuton v	/aive	ON (push full in)
Fuel selector	valve	BOTH
Fuel pump		ON
Mixture	RICH	(if restart has not
		occurred)
Magnetos		BOTH
		l: START, advance
throttle slow	ly, lear	n mixture as
required		
Fuel numn		OFF

If fuel flow drops to zero, turn fuel

Airspeed 68 KIAS (best glide speed)

## Emergency Landing Without Engine Power

pump back on

Engine Power	
Seats, seatbelts	UPRIGHT, SECURE
Airspeed	Flaps up: 70 KIAS
Fla	ps 10°-FULL: 65 KIAS
Mixture	CUT-OFF
Fuel shutoff valve	e OFF (pull)
Magnetos	OFF
Flaps	AS REQUIRED (FULL
	recommended)
Standby battery	OFF
Master (ALT and	OFF (when landing
BAT)	is assured)
Doors	UNLATCH BEFORE
	TOUCHDOWN
Touchdown	SLIGHTLY TAIL LOW
Brakes	APPLY HEAVILY

## Precautionary Landing With

Engine Pov	ver	
Seats, seath	elts	UPRIGHT, SECURE
Airspeed		65 KIAS
Flaps		20°
Selected fie	ld	FLY OVER, noting
		terrain and
		obstructions
Flaps	FULL	(on final approach)
Airspeed		65 KIAS
Standby bat	tery	OFF
Master (ALT	and	OFF (when landing
BAT)		assured)
Doors		UNLATCH BEFORE
		TOUCHDOWN
Touchdown		SLIGHTLY TAIL LOW
Mixture		CUT-OFF
Magnetos		OFF
Brakes		APPLY HEAVILY

## Ditching

Radio	MAYDAY	on 121.5 MHz (Give
		location, intentions)
Transp	onder	SQUAWK 7700
Heavy	objects (in	SECURE or
bagga	ge area)	JETTISON (if
		possible)
Seats,	seatbelts	UPRIGHT, SECURE
Flaps		20°-FULL
Power	3	00 FT/MIN DESCENT
		AT 55 KIAS
If no p	ower avail	able, approach flaps
up 70	KIAS or fla	ps 10° 65 KIAS
	wind, hear	vy seas: LAND INTO
WIND		
		swells: LAND
PARAL	LEL TO SW	ELLS

1711012	_ 10 5	LLU
Doors		UNLATCH
Touchdo	wn	LEVEL ATTITUDE at
		established rate of
		descent
Face	CUSHION	I at touchdown with
		folded coat
ELT		ACTIVATE
Airplane	EVACUA <sup>T</sup>	TE THROUGH CABIN
		DOORS
If neces	sary, ope	n window and flood
cahin to	محناجيتهم م	nressure so doors

Life vests, raft	INFLATE WHEN CLEAR
	OF AIRPLANE

can be opened.

## Fire During Start on Ground

M	agnetos switch			(continue start the engine)
f	engine starts:			_
	Power 1800 R	PM 1	for a fe	w minutes
	Engine		SH	HUTDOWN
f	engine fails to	star	t:	
	Throttle			FULL
	Mixture			CUT-OFF
	Magnetos swit	ch	START	(continue
				cranking)
	Fuel shutoff va	lve		OFF (pull)
	Fuel pump			OFF
	Magnetos			OFF
	Standby batte	ry		OFF
	Master (ALT ar	ıd B	AT)	OFF
	Engine			SECURE
	Parking brake			RELEASE
	Fire extinguish	er		OBTAIN
	Airplane		- 1	EVACUATE
	Fire	EX	TINGUI	SH via fire
	extinguis	sher	, wool b	lanket, or
				dirt
_			-	

Both cases: inspect and repair damage before conducting another

## Engine Fire in Flight Mixture

Fuel shutoff valve	OFF (pull)
Fuel pump	OFF
Master (ALT and BAT)	OFF
Cabin heat and air	OFF (except
	overhead vents)
Airspeed	100 KIAS
If fire not extinguish	ed, increase
speed to find an airs	speed, within
airspeed limitations	, which provides
an incombustible m	ixture
Forced landing	EXECUTE
Refer to Emergency	Landing Without

**CUT-OFF** 

OFF

# Engine Power checklist Electrical Fire in Flight Standby battery

Master (ALI and BAT)	OFF
Vents/cabin air/heat	CLOSE
Fire extinguisher	USE
Avionics (BUS 1 and BUS 2)	OFF
All switches (except magnetos	) OFF
Vents/cabin air/heat	OPEN
When sure fire is com	pletely
extinguished	
If fire extinguished and electric	cal
power necessary to continue f	light:
Circuit breakers CHECK,	do not
	reset
Master (ALT and BAT)	ON
Standby battery	ON
Avionics (BUS 1)	ON
Avionics (BUS 2)	ON

Capin	rire	
Standb	y battery	OFF
Master	(ALT and BA	AT) OFF
Vents/c	abin air/	CLOSE (to avoid
heat		drafts
Fire ext	tinguisher	USE
Vents/c	abin air/hea	
	When sure	e fire is completely
	extinguish	ned
Land	ASAP to i	nspect for damage

## **Emergency Checklists**

## Wing Fire

Landing, taxi lights	OF
Nav, strobe lights	OF
Pitot heat	OF
NOTE: Sideslip to keep flames as	way
from fuel tanks and cabin. Land	
ASAP using flaps only as require	d for
final approach and touchdown.	

## Inadvertent Icing Encounter During Flight

Pitot heat		ON
Turn or change alti		an
OAT less conducive	e to icing.	
Cabin heat	FULL	. ON
Defrosters	0	PEN
Cabin air	ADJ	
Maximize defrost	er heat and air	low
Induction icing	MONI	ΓOR
Adjust throttle to I	hold RPM. Adjus	st
mixture as needed	d for any chang	e in
power settings		
Land	NEAREST AIRP	ORT
With an extremely	rapid ice build-	up,
select suitable off-	airport landing	site
With $\geq 1/4$ inch of	ice on the lead	ing
edges, prepare for	significantly	
higher stall speed		
Flaps	LEAVE RETRACT	TED
Open left window a	and scrape ice	

from windshield, if necessary for visibility
Forward slip if necessary for visibility
Approach speed 65-75 KIAS
Depending on level of accumulation
Landing Perform in level attitude
Avoid missed approaches if possible
Missed approaches should be
avoided whenever possible

## Static Source Blockage (Erroneous Instrument Reading Suspected)

Alternate	static	PULL ON
Cabin hea	at/air	PULL ON
Vents		CLOSED
Airspeed	Consult	calibration table
	Section 5, F	igure 5-1 of POH

## Excessive Fuel Vapor (Fuel Flow Stabilization Procedures)

	If flow fluctuates ≥	: 1 GPH or power		
	surges occur			
	Fuel pump	ON		
	Mixture	ADJUST		
	as necessary fo	r smooth operation		
	Fuel selector valve	SELECT OTHER		
		TANK (if		
		symptoms		
contin				
	Fuel pump	OFF (after fuel flow		
		stabilized)		

## Landing With a Flat Main Tire

	Approach			NORMA	L
	Flaps			FUL	L
	Touchdown	G00	D MAIN	TIRE FIRS	Γ
	Keep	o flat ti	re in aiı	as long a	S
possible with aileron con				on control	
	Directional c	ontrol	MAIN	ITAIN using	9
				ke on good	
			wheel	as required	t

## Landing With a Flat Nose Tire

Approach Flaps	NORMA
Flaps	AS REQUIRE
Touchdown	ON MAIN:
Hold nosewheel off	ground as long a
possible, maintain fu	ull up elevator as
airplane slows to sto	р

## HIGH VOLTS or M Bat Amps > 40

Master (ALT only)	OFF
Reduce Electrical Load checklist	RUN

## LOW VOLTS Annunciator Comes On < 1000 RPM

Throttle	1000 RPM	
Low voltage annunciator	<b>VERIFY OFF</b>	
If annunciator remains or	n, run "LOW	
VOLTS Annunciator On ≥	1000 RPM"	
checklist, and have electrical system		
inspected before next flig	ht	

# LOW VOLTS Annunciator On ≥ 1000 RPM

	Master (ALT only)	OFF
	ALT FIELD breaker	CHECK IN
	Master (ALT and BAT)	ON
	LOW VOLTS annunciator)	
	M Bus volts VERIFY 27.5	5V minimum
		<b>FY POSITIVE</b>
If LOW VOLTS annunciator remains		
	on:	
	Reduce Electrical Load	RUN

# Reduce Electrical Load Avionics (BUS 1)

OFF

checklist

7 to 10 mes (BOO 1)	٠	
Pitot heat	OFF	
Beacon, taxi, nav, strobe lights	OFF	
Landing light OFF (use as req'	d for	
land	ding)	
Cabin power 12V	OFF	
Note: When M bus volts drops be	low	
20V, the standby battery will supply		
power to the essential bus for at		
least 30 minutes		
COM1, NAV1	TUNE	
COM1 MIC and NAV1 SE	LECT	
If COM2 MIC and NAV2 are selec	ted	
when avionics bus 2 is off, the ra	adios	
cannot be tuned		
Avionics (BUS 2) OFF if clear of cl	ouds	
The following items will not ope	rate:	
autopilot, COM2, transponder, a	audio	
panel, NAV2, MFD		

Land AS SOON AS PRACTICAL Make sure a successful landing is possible before extending flaps. Flap motor is a large electrical load.

## Red X - PFD Airspeed Indicator

ADC/AHRS circuit breakers CHECK IN (ESS BUS and AVN BUS 1)
If open, reset circuit breaker. If circuit breaker opens again, do not reset
Standby airspeed
INSE for airspeed indicator information

## Red X - PFD Altitude Indicator

ADC/AHRS circuit breakers CHECK IN (ESS BUS and AVN BUS 1)
If open, reset circuit breaker. If circuit breaker opens again, do not reset Standby altimeter CHECK current barometric pressure SET. USE for altitude information

#### Red X - PFD Attitude Indicator

ADC/AHRS circuit breakers CHECK IN (ESS BUS and AVN BUS 1)
If open, reset circuit breaker. If circuit breaker opens again, do not reset Standby attitude USE for attitude indicator information

## Red X - Horizontal Situation Indicator

ADC/AHRS circuit breakers CHECK IN (ESS BUS and AVN BUS 1) If open, reset circuit breaker. If circuit breaker opens again, do not reset Magnetic compass USE for heading

# PFD1 COOLING or MFD1 COOLING Annunciator(s)

Cabin heat REDUCE (minimum preferred)
Forward avionics CHECK (feel for fan airflow from screen on glareshield)
If forward avionics fan failed:
Standby battery OFF unless needed

If PFD1 COOLING or MFD1 COOLING annunciator does not go off within 3 minutes or if both annunciators come on:

for emergency

Standby battery OFF (land as soon as practical)

# LOW VACUUM Annunciator Comes On

Vacuum indicator CHECK EIS ENGINE
page to make sure
vacuum pointer is
within green arc

If vacuum pointer not in green arc or gyro flag shows on standby attitude indicator, do not use standby attitude indicator

#### High Carbon Monoxide (CO) Level

# Cabin heat OFF (push full in) Cabin air ON (pull full out) Cabin vents OPEN Windows OPEN (163 KIAS maximum windows open speed)

If high CO level remains:

Land AS SOON AS PRACTICAL