

Grumman AA5B C-GVXY

Pilot's Checklist, Emergency Procedures and Operating Data



**Version 1.1
October 2019**

Applicability

This document is the in-flight reference for the Kelowna Flying Club's Grumman Tiger AA5B C-GVXY

Structure:

This checklist is organized in four sections:

White Pages – Normal Operating Checklists

Yellow Pages – Non Critical Emergency Checklists

Red Pages – Critical Emergency Checklists

Blue Pages – Performance Data and Aides Memoire

Emergency Procedures

In any emergency, the first priority is to maintain aircraft control, and then take the necessary actions to eliminate or mitigate the problem.

Emergency procedures have been developed to address all relevant elements of the required response. The pilot may need to eliminate specific elements based on time available.

For emergency procedures, the following definitions apply:

As Soon As Possible - means immediately (i.e. land in the nearest suitable area)

As Soon As Practicable - means at the nearest suitable aerodrome.

**THIS CHECKLIST IS NOT A
REPLACEMENT FOR AIRCRAFT POH
AND STC's**

PREFLIGHT

PRE - EXTERNAL

Weight & Balance ----- CHECK
 Journey Log ----- CHECK

Hours to next inspection
Hours to next oil change

Chocks ----- IN PLACE
 Plugs / Tie Down ----- OFF
 First Aid Kit ----- SECURE
 Survival Kit ----- AS REQD
 Mags & Switches ----- OFF
 Control Lock ----- REMOVE
 Controls ----- FREE / CORRECT
 Trim ----- CHECK FCT
 Fire Ext ----- CHARGED/SECURE
 Docs & Pubs ----- PRESENT
 Canopy ----- CHECK RAILS
 (silicone if required)
 Master ----- ON
 Flaps ----- SET 30 DEG
 Int & Ext Lights ----- FUNCTION
 Pitot Heat ----- FUNCTION
 Master ----- OFF
 Fuel status (CHECK at TABS)

- | |
|---|
| <ul style="list-style-type: none"> • Refuel or dip tanks to confirm fuel state for Mission. • Confirm fuel caps are secure and in-line • Check fuel tank drains • (4) for water & sediment • Pull fuel strainer drain for approx 4 seconds |
|---|

Oil Quantity ----- CHECK / ADD
 Dipstick / Filler Cap ----- SECURE

Oil Qty (US Quarts)

Norm Oil Level	6
Top Up Below	4
Min Oil Level	2

PREFLIGHT

EXTERNAL

LEFT MAIN GEAR

Brake Line ----- CONDITION
 Brake ----- CONDITION / WEAR
 Tire ----- INFLATION / WEAR

FUSELAGE - FRONT

Nose Gear Tire ----- CONDITION
 Nose Strut ----- CONDITION / CLEAN
 Cowling Left Side ----- SECURE
 Static Port ----- CLEAR
 Propeller ----- CONDITION
 Air Intakes ----- CLEAR

CAUTION

During nesting season check thoroughly inside engine cowling

Cowling Right Side ----- SECURE

RIGHT MAIN GEAR

Brake Line ----- CONDITION
 Brake ----- CONDITION / WEAR
 Tire ----- INFLATION / WEAR

RIGHT WING

Strut ----- CONDITION
 Wing Surfaces ----- CONDITION
 Wing Tip ----- CONDITION
 Aileron / Flap ----- CHECK
 Fuel Cap ----- SECURE / INLINE

FUSELAGE - RIGHT REAR

Fuselage Skin ----- CONDITION
 Antennae ----- CONDITION

PREFLIGHT

EXTERNAL (CONTINUED)

TAIL SECTION

V & H Stabs ----- CONDITION
Elevator / Rudder ----- CHECK
Trim Tab ----- CONDITION

FUSELAGE – LEFT REAR

Fuselage Skin ----- CONDITION
Belly ----- CHECK FOR OIL
Baggage Door ----- LOCKED

LEFT WING

Fuel Cap ----- SECURE / IN-LINE
Aileron / Flap ----- CHECK
Wing Tip ----- CONDITION
Wing Surfaces ----- CONDITION
Fuel Vent / Pitot ----- CHECK
Strut ----- CONDITION

BETWEEN FLIGHT

Engine ----- CHK FOR LEAKS
Oil ----- QTY / CAP SECURE

NOTE

If checking oil within 1 hour
of shutdown, oil level may appear
low as oil has not fully drained into
the sump

Fuel ----- QTY / CAPS SECURE
Main Gear ----- CONDITION
Nose Gear ----- CONDITION

NORMAL CHECKLIST

PRE – START

Chocks ----- CONFIRM OUT
 Canopy-----CLOSE / LOCK(A/R)
 Seats ----- ADJUST / LOCK
 Harnesses ----- SECURE
 Beacon ----- ON
 Circuit Breakers ----- ALL IN
 Fuel Selector ----- RIGHT

NORMAL START

Master Switch ----- ON
 Mags-----Left
 Brakes ----- APPLY
 Prop Area ----- CLEAR
 Throttle ----- SET 1/4 INCH
 Mixture ----- FULL RICH
 Aux Pump -----ON/CHECK.5-8 PSI
 Carb Heat ----- COLD
 Primer ----- AS REQD
 Starter ----- ENGAGE

CAUTION

Immediately release starter upon partial firing. Do not re-engage until prop is completely stopped.

Oil Press ----- NORM < 30 SEC
 Mags ----- BOTH
 Aux Pump ----- OFF
 Throttle ----- SET 1000 RPM

NORMAL CHECKLIST

FLOODED START

CAUTION

Be alert for the possibility of a ground fire or engine fire during a flooded start

Master Switch ----- ON
 Beacon ----- ON
 Brakes ----- APPLY
 Prop Area ----- CLEAR
 Throttle ----- FULL OPEN
 Mixture ----- ICO
 Starter ----- ENGAGE

CAUTION

Engine will start at very high RPM

NORMAL CHECKLIST

PRE - TAXI

Avionics Master ----- ON
 Fuel Quantity ----- CHECK QTY
 Fuel Selector ----- LEFT
 Altimeter ----- SET/BOTH
 Gyro Compass ----- SET
 Live Mag ----- L / R / BOTH
 Flaps ----- RETRACT
 Audio Panel ----- SET
 Radio ----- ON / SET
 GPS ----- INITIALIZE
 Transponder ----- ALT
 Navigation Lights ----- A/R
 Strobes ----- ON

TAXI

Brake Function ----- CHECK
 Nose Castering ----- CHECK
 Instrument Function ----- CHECK

RUN - UP

Area ----- ALL CLEAR
 Brakes ----- APPLY
 Mixture ----- FULL RICH
 Temp / Press ----- MINS

Min Oil Press -----	50 psi
Min Oil Temp -----	140 F
Min CHT -----	150 F

Throttle ----- SET 1700 RPM
 Mixture ----- SET FOR ALT
 Mag Check ----- L / R / BOTH

EGT Rise -----	All Cylinders
Max RPM Drop -----	100
Max RPM Split -----	50

NORMAL CHECKLIST

RUN - UP(CONT)

Carb Heat ----- CHECK FCT
 Suction ----- 4.5 - 5.5
 Alternator ----- CHECK
 Voltage ----- 12 VDC
 Current ----- POSITIVE CHARGE
 Carb Heat ----- ON
 Idle Check ----- (650-750 RPM)
 Carb Heat ----- OFF
 Throttle ----- SET 1000 RPM

PRE-TAKEOFF

Canopy Secure ----- SECURE
 Flaps ----- UP
 Fuel ---- CHECK QTY/FULLEST TANK
 Mixture ----- SET FOR ALT/TEMP
 Carb Heat ----- COLD
 Master Switch ----- ON
 Mags ----- BOTH
 Strobes Lights ----- ON

CAUTION

Do not enter GPS data while taxiing or during critical regimes of flight

XPDR ----- CODE SET / ALT
 ELT ----- ARMED
 Fuel Selector ----- L/R
 Flaps ----- SET TAKEOFF

Takeoff	Flaps	KTS
Normal	0	50-55
Soft	10	50-60
Short	10	60

Temps / Press ----- NORMAL
 Trim ----- FUNC / SET TAKEOFF
 Controls ----- FREE / CLEAR /

NORMAL CHECKLIST

PRE-TAKEOFF BRIEF

Runway / Winds
 Departure / Climb Profile
 Threats
 Decision Gates

Climb Profiles – IAS (KTS)		
	Sea Level	10,000 ft
Best Angle	73	
Best Rate	89	85
Normal	90	90

POST – TAKEOFF

Flaps ----- UP
 Climb Profile ----- SET
 Mixture ----- AS REQD

LEVEL OFF / CRUISE

Power ----- SET
 Trim ----- AS REQD
 Mixture ----- SET MIXTURE (LOP)

PRE – STALL (ASCOT)

A - Altitude ----- AS REQD
 S – Straps ----- SECURE
 C – Cockpit ----- CHECK

Mixture ----- RICH
Fuel ----- BOTH
Flaps ----- AS REQD
Temp/Press ----- GREEN
Doors ----- SECURE

O – Objects ----- SECURE
 T – Traffic / Terrain ----- CLEAR

NORMAL CHECKLIST

PRE – DESCENT

Mixture ----- ENRICH AS REQD
 Throttle ----- REDUCE SLOWLY

PRE – LANDING

Fuel ---- CHECK QTY/FULLEST TANK
 Mixture ----- SET FOR ALT/TEMP
 Carb Heat-----A/R
 Master Switch ----- ON
 Mags ----- BOTH
 Harnesses ----- SECURE
 Brake Pressure ----- CHECK

APPROACH SPEEDS

Configuration	IAS (KTS)
Approach - 0 Flap	77-86
Approach - 30 Flap	70

STOP & GO

Mixture ----- FULL RICH
 Trim ----- SET TAKEOFF
 Flaps ----- SET TAKEOFF
 Temps/Press ----- NORMAL
 Fuel Quantity ----- CHECK

POST – LANDING

Flaps ----- UP
 Transponder ----- OFF
 Pitot Heat ----- OFF

SHUTDOWN

Idle ----- 1 MIN @ 1000 RPM
 Avionics Master Switch ----- OFF
 Throttle ----- 700 RPM
 Live Mag ----- OFF/BOTH
 Mixture ----- ICO
 Flaps ----- DOWN
 Mags ----- OFF/ REMOVE KEY
 Lights (except Beacon) ----- OFF
 Master Switch ----- OFF
 Control Lock ----- A/R
 Fuel ----- BOTH/FILL TO TABS
 Aircraft ----- SECURE

**NON-CRITICAL
EMERGENCIES**

HIGH CHARGE RATE

Master ----- OFF
 Electrical Services ----- OFF
 Master ----- ON
 Essential Services ----- ON
 Ammeter ----- MONITOR
 Land ----- ASA PRACTICABLE

BATTERY DISCHARGE

Master -----RECYCLE
 Unnecessary Electrics ----- OFF
 Battery Volts ----- MONITOR
 Land ----- ASA PRACTICABLE

CAUTION

Total electrical failure will result in lost communications and navigation instruments.

LOW OIL PRESSURE

Power ----- REDUCE
 Oil Temp ----- MONITOR
 Land ----- ASA PRACTICABLE

WARNING

If Oil Temp is high, engine failure may be imminent

Land ----- ASA POSSIBLE

**NON-CRITICAL
EMERGENCIES**

FLIGHT INTO ICING

Pitot Heat-----ON

TURN BACK OR CHANGE
 ALTITUDE

Obtain OAT less conducive to icing

Cabin Heat -----FULL ON
 Defroster ----- FULL ON
 Throttle----- FULL
 Carb Heat ----- ON
 Land ----- ASA PRACTICABLE

If ice buildup is extremely rapid Land
 ASA Possible

Flaps ----- LEAVE RETRACTED
 Fwd Slip ----- IF REQ'D FOR VIS
 Approach IAS ----- 92-103 MPH
 Landing Attitude ----- LEVEL

**NON-CRITICAL
EMERGENCIES**

ROUGH ENGINE

Assess the situation

Consider manoeuvring the aircraft to optimize position for a forced landing should situation deteriorate

Take IMMEDIATE ACTIONS as detailed

If problem cannot be corrected quickly, land as soon as practicable

Carburetor Ice Symptoms

Engine roughness/Loss of Power

Corrective Action

Carburetor Heat --- ON
If roughness continues Land ASA
Practicable

Improper Mixture Symptoms

Engine roughness

Corrective Action

Adjust mixture as required

Fuel Exhaustion Symptoms

Low fuel quantity

Corrective Action

Switch to fullest tank
Land ASA Practicable

**NON-CRITICAL
EMERGENCIES**

ROUGH ENGINE (CONT)

Fouled Plugs Symptoms

Rough Running Engine

Corrective Action

Lean Mixture
If condition persists, Land ASA
Practicable

Faulty Magneto Symptoms

Sudden engine roughness

Corrective Action

Reduce power if safe
Land ASA Practicable

Do NOT select single Mag

Stuck Valve Symptoms

Rough running engine

Corrective Action

Reduce power
Land ASA Practicable

**CRITICAL
EMERGENCIES**

FMS – SHUTDOWN

F – FUEL
Fuel Selector ----- OFF

M - MIXTURE
Mixture ----- ICO

S - SWITCHES
Magnetos ----- OFF

FMS – RE-START

F – FUEL
Fuel Selector ----- L/R
Fuel Quantity----- CHECK
Throttle ----- 1/4 INCH

M - MIXTURE
Mixture ----- RICH

S - SWITCHES
Magnetos ----- BOTH
Master ----- ON
Starter ----- ENGAGE AS
REQD

Engage the starter ONLY if the propeller has stopped turning

**CRITICAL
EMERGENCIES**

ENGINE FIRE ON START

Starter --- KEEP CRANKING

Throttle ----- FULL OPEN
Mixture ----- ICO

If No Evidence of further Fire
Normal Shutdown ----- C/O

If Fire Continues
Engine Fire on Ground - C/O

ENGINE FIRE ON GROUND

FMS Shutdown ----- C/O
Abandon Aircraft ----- ASAP
Fire Ext ----- USE W/ CAUTION

ENGINE FIRE IN FLT

FMS Shutdown ----- C/O
Cabin Heat & Air ----- CLOSE
Except Upper Air Vents
Airspeed -----100 KTS
Forced Landing ----- C/O

WING FIRE

Slip Away from Burning Wing

All Lights ----- OFF
Pitot Heat ----- OFF
Land ----- ASA POSSIBLE

RITICAL EMERGENCIES

CABIN FIRE

Cabin Heat / Air ----- CLOSE
 Fire Ext ----- USE AS REQD
 Ventilate Cabin ----- AS REQD
 Land ----- ASA POSSIBLE

ELECTRICAL FIRE

Master Switch ----- OFF
 All Electric Services ----- OFF

If Cabin Fire Evident
 Cabin Fire Checklist ---- C/O

If Essential Electrics Required For
 Safety:
 Master Switch ----- ON
 Essential Systems ----- ON

Check CB's for faulty circuit and DO NOT
 RESET
 Monitor Ammeter
 Land ----- ASA PRACTICABLE

ENGINE FAIL ON T/O

Throttle ----- CLOSE
 Brakes ----- AS REQD
 Flaps ----- RETRACT
 FMS Shutdown ----- C/O

CRITICAL EMERGENCIES

ENGINE FAIL AFTER T/O

Glide ----- 72 KTS W/ FLAPS
 80 NO FLAPS
 Throttle ----- CLOSE
 Select Landing Area ----- FLY TO
 Forced Landing ----- C/O

ENGINE FAIL IN FLT

Glide ----- 72 KTS
 Throttle ----- CLOSE
 Carb Heat ----- ON
 Select Landing Area ----- FLY TO
 FMS Restart ----- C/O
 If engine will not start
 Forced Landing ----- C/O

FORCED LANDING

Glide ----- 72 KTS
 ELT ----- ON
 Mayday ----- TRANSMIT
 Transponder ----- 7700
 Landing Area ----- RECHECK
 FMS Shutdown ----- C/O
 Fuel Pump ----- OFF
 Harnesses ----- SECURE
 Brakes ----- CHECK
 Canopy ----- UNLATCH
 Flaps ----- AS REQD
 Master Switch ----- OFF AFTER
 FLAPS SET

OPERATING LIMITS

WEIGHTS

Maximum Certificated Weight	
Take Off - Normal	2400 lbs
Take Off – Utility	2050 lbs
Landing - Normal	2400 lbs
Landing – Utility	2050 lbs

FLUIDS (FUEL AND OIL)

Oil Quantity (US Quarts)	
Max Oil Cap	8
Norm Oil Level	6
Top Up if Below	4
Min Oil Level	2

ENGINE LIMITATIONS

Engine	Lycoming O-360-A4A
Horse Power	180 hp @ 2700 RPM
Max Cont RPM	2540
Normal RPM	2250-2540
Cruise RPM	2250-2540
Min Oil Press	55 psi
Norm Oil Press	60-90 psi
Max Oil Press	95 psi
Min Oil Temp	140 F
Max Oil Temp	245 F
Norm Fuel Flow	40 LPH
Avoid Continuous Ops descending	
	1850-2250
Suction	4.5 - 5.5

OPERATING LIMITS

AIRSPEED LIMITATIONS

Limitation	IAS (KTS)
Vne	172
Vno	142
Va – 2500 lbs	112
VFE	103
Canopy Open	112
Crosswind	16

STALL SPEEDS (2500 LB)

Flap	Stall Speed - CAS (KTS)			
	Angle of Bank			
0	0			
0	56			
30	53			

TAKE-OFF SPEEDS

Take-Off	IAS (KTS)
Normal Takeoff	50-55
Max Perf	65

CLIMB PROFILES

Climb	IAS (KTS)
Best Rate @ Sea Level	90
Best Rate @ 10,000	90
Best Angle @ Sea Level	70
Best Angle @ 10,000	72
Obstacle	65

LANDING SPEEDS

Condition	IAS (KTS)
Downwind - 1900 RPM	~90
Approach - 0 Flap	70-80
Approach - 30 Flap	70

In gusty wind conditions, add half the gust spread to the approach speed