

**E 1****EMERGENCY OE-AKW****1. ENGINE FAILURES**

BEFORE TAKEOFF E 3

AFTER T/O &amp; DURING CLIMB E 3

**2. ENGINE FAILURE IN FLIGHT**

ROUGH ENGINE E 4

LOSS OF OIL PRESSURE E 4

LOSS OF FUEL PRESSURE E 4

**3. ENGINE RESTART**

STOPPED PROPELLER E 5

PROPELLER WINDMILLING E 6

**4. FORCED LANDING**

PRECAUTIONARY LANDING E 7

EMERGENCY LANDING E 8

**5. SMOKE AND FIRE**

ENGINE FIRE ON GROUND E 8

ENGINE FIRE IN FLIGHT E 9

EL. FIRE / SMOKE ON GROUND E 9

EL. FIRE / SMOKE IN FLIGHT E 10

**6. EL. SYSTEM MALFUNCTIONS**

COMPLETE EL. SYSTEM FAIL E 10

**7. ALTERNATOR FAILURES**

ALTERNATOR ALT1 FAILURE E 11

ALTERNATOR ALT2 FAILURE E 11

ALTERNATORS ALT1 + ALT2 FAIL E 12

VOLT WARNING LIGHT E 12



## E 2

**EMERGENCY OE-AKW****8. LOW VOLTAGE INDICATION**

LOW VOLT ON GROUND E 13

LOW VOLT IN FLIGHT / APP E 13

**9. TRIM CONTROL SYSTEM FAILURES**

TRIM SYSTEM INOPERATIVE E 13

TRIM ACTUATOR RUNAWAY E 13

**10. FLAP CONTR. SYS. MALFKT.**

INDICATOR OR ACTUATOR FAIL E 14

**11. AVIONICS MALFUNCTIONS**

COMPLETE AVIONICS FAILURE E 14

COM - RECEIVE MODE FAILURE E 14

COM - TRANSMIT MODE FAILURE E 14

**12. GARMIN G500 MALFUNCTIONS**

G500 - PFD FAILURE E 15

G500 - HEADING FAILURE E 15

G500 - AHRS FAILURE E 15

G500 - AIR DATA COMP. FAILURE E 15

**13. OTHER EMERGENCIES**

SPIN RECOVERY E 16

INADVERTENT FLIGHT IN ICING E 16

POWER OFF GLIDE E 16

FLAT TIRE LANDING E 17

FLAT NOSEWHEEL TIRE LANDING E 17

STARTER MALFUNCTION E 17

CANOPY OPENS IN FLIGHT E 17



Consult POH / AFM for "Warnings, Cautions and additional Information"

## E 3

**ENGINE FAILURE** **BEFORE TAKEOFF**

1	Throttle	IDLE
2	Brakes	APPLY
3	Tower (ATC)	INFORM

**AFTER T/O & DURING CLIMB**

1	Airspeed	<b>70 KIAS</b>
2	ATC - Call for Emergency	CALL
3	Fuel Selector	FULLER TANK
3	Fuel Pump	ON
4	Ignition	BOTH
5	Throttle	FULL FWD
6	Prop	FULL FWD
7	Choke	PUSH (OFF)
8	Carburetor Heat	PULL (ON)
9	Flaps	AS REQ
<b>Before Landing</b>		
10	Fuel Selector	OFF
11	Ignition	OFF
12	Master - ALT1 / BAT	OFF

## E 4

**ENGINE FAILURE IN FLIGHT**  **ROUGH ENGINE**

1	Carburetor Heat	PULL (ON)
2	Fuel Pump	ON
3	Ignition Switch cycle	L-BOTH
4	Ignition Switch cycle	R-BOTH
5	Throttle	MAINTAIN
6	If roughness continues	REDUCE PWR
7	Precautionary LDG	PERFORM

**LOSS OF OIL PRESSURE**

1	Oil Temperature	CHECK NORM
2	If Oil Press. Below Green	LAND NRST A/D
3	Oil Temperatur	RISING
4	Throttle	REDUCE MIN
5	Precautionary LDG	PERFORM

**LOSS OF FUEL PRESSURE**

1	Fuel Pump	ON
2	Fuel Selector	FULLER TANK
3	Fuel press. Warning Light	CHECK OFF
4	Fuel Pump	OFF
5	Fuel press. Warning Light ON	LAND NRST A/D

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**E 5****ENGINE RESTART**  **STOPPED PROPELLER**

1	Non Essential Electrics	OFF
2	Master - ALT1 / BAT	ON
3	Prop	FULL FWD
4	Fuel Selector	FULLER TANK
5	Fuel Pump	ON
6	Throttle when hot	2 cm OPEN
7	when cold	IDLE
8	Choke when hot	PUSH (OFF)
9	when cold	PULL / HOLD
10	Ignition	BOTH / START
<b>When Power Restored</b>		
11	Oil Pressure	CHECK
12	Choke	PUSH (OFF)
13	Electrical Equipment	AS REQ
14	Oil Temperature	CHECK

## E 6

ENGINE RESTART  

<b>PROPELLER WINDMILLING</b>	
1 Airspeed	<b>78 KIAS</b>
2 Master - ALT1 / BAT	ON
3 Fuel Selector	FULLER TANK
4 Prop	FULL FWD
5 Fuel Pump	ON
6 Ignition	BOTH
7 Throttle when Hot	2 cm OPEN
8       when cold	IDLE
9 Choke when Hot	PUSH OFF
10       when Cold	PULL / HOLD
11 Oil Pressure	CHECK
12 Choke	PUSH (OFF)
13 Electrical Equipment	AS REQ
14 Oil Temperature	CHECK

## E 7

**FORCED LANDING**  

<b>PRECAUTIONARY LANDING</b>	
1 ATC	INFORM
2 Locate a suitable Field - Caution	WIND / OBSTACLE
3 Seat Belt / Harness	TIGHT
4 Initiate Descent	INSPECT FIELD
5 Abeam touchdown	PREP LANDING
6 Throttle	AS REQ
7 Prop	FULL FWD
8 Carburetor Heat	PUSH (OFF)
9 Fuel Pump	ON
10 Flaps	LDG
11 Airspeed	<b>60 KIAS</b>
12 Touchdown	LOWEST SPEED
13 Brakes	AS REQ
14 Fuel Selector	OFF
15 Ignition Switch	OFF
16 Master - ALT1 / BAT	OFF



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**E 8****FORCED LANDING** 

<b>EMERGENCY LANDING</b>	
1 Emergency Frequency	121,5 MHz
2 Emergency Call (121,5 MHz)	REPORT
3 Flap LDG	<b>60 KIAS</b>
4 Flap T/O	<b>65 KIAS</b>
5 Flap UP	<b>70 KIAS</b>
6 Fuel Selector	OFF
7 Ignition	OFF
8 Seat Belt / Harness	TIGHT
9 Master - ALT1 / BAT	OFF

**SMOKE AND FIRE** 

<b>ENGINE FIRE ON GROUND</b>	
1 Fuel Selector	OFF
2 Throttle	FULL FWD
3 Master - ALT1 / BAT	OFF
4 Ignition	OFF
5 Aircraft	EVACUATE

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**E 9****SMOKE AND FIRE** **ENGINE FIRE IN FLIGHT**

1	Throttle	FULL FWD
2	Fuel Selector	OFF
3	Cabin Heat	PUSH (OFF)
4	Canopy Slide Window	OPEN
5	Precautionary LDG	PERFORM (E7)

**ELECTRICAL FIRE / SMOKE ON GROUND**

1	Master - ALT1 / BAT	OFF
<b>If engine is running</b>		
2	Throttle	IDLE
3	Fuel Selector	OFF
4	Ignition	OFF
5	Canopy / Window	OPEN
6	Fire Extinguisher	AS REQ


**E 10****SMOKE AND FIRE**  **ELECTRICAL FIRE/ SMOKE IN FLIGHT**

1	Master - ALT1 / BAT	OFF
2	ALT2 CB	PULL
3	Avionics	OFF
4	All Electr. Switches	OFF  
5	Vents, Slide Window	OPEN
6	Flashlight (Night)	ON
7	Fire Extinguisher	AS REQ
8	Forced Landing	PERFORM (E8)
9	Engine	SHUTDOWN
10	Canopy	OPEN
11	After Engine stops	EVACUATE

**ELECTRICAL SYSTEM MALFUNCTIONS**  **COMPLETE ELECTRICAL SYSTEM FAIL**

1	Flight Attitude	STABILISE
2	Flashlight	ON
3	Master - ALT1 / BAT	CHECK ON
4	ALT2 CB	RESET
5	BAT CB	RESET
6	ALT1 CB	RESET
<b>If still no Power</b>		
8	Precautionary LDG	PERFORM (E7)

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**E 11****ALTERNATOR FAILURES**  **ALTERNATOR ALT1 FAILURE**

1	ALT1 Warning Light	ILLUMIN
2	Master - ALT1	OFF / ON
3	ALT1 CB	RESET
4	If ALT1 warning Light	STILL ON
5	ALT1 CB	PULL
6	Master - ALT1	OFF
7	Non-Essential Equipment	OFF
8	Voltmeter / Ammeter	MONITOR
9	Land	NEAREST A/D

**ALTERNATOR ALT2 FAILURE**

1	ALT2 CB	RESET
2	If ALT2 Warning Light	STILL ON
3	ALT2 CB	PULL
4	If ALT1 operating	CONTINUE
5	Non-Essential Equip	OFF

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## E 12

ALTERNATOR FAILURES  **ALTERNATORS ALT1 + ALT2 FAIL**

1	Master - ALT1	OFF / ON
2	ALT1 CB	RESET
3	ALT2 CB	RESET
<b>If ALT1 + ALT2 Warn-Light still on, or If Voltage still low</b>		
4	ALT1 CB	PULL
5	ALT2 CB	PULL
6	Master - ALT1	OFF
7	Non-Essential Equipment	OFF
8	Land at nearest A/D	< 30 MIN



**VOLT WARNING LIGHT**

1	Master - ALT1	OFF / ON
2	ALT1 CB	RESET
3	ALT2 CB	RESET
<b>If still Low Voltage</b>		
4	ALT1 CB	PULL
5	ALT2 CB	PULL
6	Master - ALT1	OFF
7	Non-Essential Equipment	OFF
8	Land at nearest A/D	< 30 MIN

**E 13****LOW VOLTAGE INDICATION**  **LOW VOLT ON GROUND**

- |   |                                |  |
|---|--------------------------------|--|
| 1 | Increase RPM                   | UP TO 1350 rpm   |
| 2 | Non-Essential Equipment        | OFF  |
| 3 | If Voltage still low on Ground | DO NOT FLY   |

**LOW VOLT IN FLIGHT / APP**

- |   |  |   |
|---|--|---|
| 1 | Non-Essential Equipment                      | OFF   |
| 2 | If Voltage still low                         | ALT FAIL  |
| 3 | Land at nearest A/D                          | < 30 MIN  |
| 4 | After Landing, perform CL low Volt on Ground |   |

**TRIM CONTROL SYSTEM FAILURES**  **TRIM SYSTEM INOPERATIVE**

- |   |                   |               |
|---|-------------------|---------------|
| 1 | Trim Actuator CB  | RESET         |
| 2 | Trim Control CB   | RESET         |
| 3 | Trim Switch: NOSE | UP / DOWN     |
| 4 | Land              | LAND NRST A/D |

**TRIM ACTUATOR RUNAWAY**

- |  |                    |               |
|--|--------------------|---------------|
| 1  | Control Column     | HOLD          |
| 2  | Trim Actuator CB   | PULL          |
| <b>If Trim Switch is pressed or jammed</b> |                    |               |
| 3  | Trim Actuator CB   | RESET         |
| 4  | If Problem remains | LAND NRST A/D |

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**E 14****FLAP CONTROL SYSTEM MALFUNCTION** **INDICATOR OR ACTUATOR FAIL**

1	Flap Actuator CB	RESET
2	Flap Control CB	RESET
3	Flap Position left Wing	CONFIRM
4	Airspeed	WHITE ARC
5	Flaps selector	ALL POSITIONS
6	Approach / Landing	SAFE SPEEDS

**AVIONICS MALFUNCTIONS** **COMPLETE AVIONICS FAILURE**

1	Avionic Master	OFF - 20 sec - ON
2	If AV-Switch trips to the off position	LAND NRST A/D

**COM - RECEIVE MODE FAILURE**

1	PTT- Button PIC/CO (Radio Display)	CHECK IF TX
2	Squelch	CHECK
3	Squelch	SWITCH OFF
4	Headset Connectors	CHECK
5	If Problem remains - inform ATC	TRANSMIT BLIND

**COM - TRANSMIT MODE FAILURE**

1	Transmit Signal TX	CHECK
2	Selected Frequency	CHECK
3	Microphone	CHECK/REPLACE
4	If Problem remains	X-PDR 7600

**E 15****GARMIN G500 MALFUNCTIONS****G500 - PFD FAILURE**

1	Attitude of Flight	STABILIZE
2	CB - PFD / MFD	RESET
3	Standby Instruments	USE

**G500 - HEADING FAILURE**

1	CB - AHRS	RESET
2	Magnetic Compass	USE

**G500 - AHRS FAILURE**

1	CB - AHRS	RESET
2	Standby Instruments	USE

**G500 - AIR DATA COMPUTER FAILURE**

1	CB - ADC	RESET
2	Standby Instruments	USE



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**E 16****OTHER EMERGENCIES** **SPIN RECOVERY**

1	Rudder	FULL OPPOSITE
2	Elevator NEUTRAL	SLIGHT FWD
3	Aileron	NEUTRAL
4	Throttle	IDLE
5	Flaps	UP
6	When rotation stops - RUDDER	NEUTRAL
7	Elevator carefully recover	<b>V<sub>NE</sub> 165 kts</b>

**INADVERTENT FLIGHT IN ICING**

1	Carburetor Heat	PULL (ON)
2	Leave Ice Condition	IMMEDIATELY
3	P/S Heat	ON
4	Prop Lever	FULL FWD
5	Cabin Heat	PULL (ON)
6	Control Surfaces	MOVE
<b>ATTENTION:</b> Stall Speed increases		
<b>ATTENTION:</b> Airspeed, ALT, VSI unreliable		

**POWER OFF GLIDE**

1	Flaps	UP
2	Airspeed	<b>78 KIAS</b>
3	Glide Ratio	14
2,3 NM / 1000 ft (at no Wind)		



**E 17****OTHER EMERGENCIES**  **FLAT TIRE LANDING**

1	Flaps	LDG
2	Runway Side	GOOD TIRE
3	Touchdown	GOOD TIRE
4	Nosewheel down	ASAP
5	Steering with Nosewheel	
6	Aileron deflect to good Tire	

**FLAT NOSEWHEEL TIRE LANDING**

1	Touchdown	MIN SPEED
2	Nosewheel	KEEP HIGH

**STARTER MALFUNCTION**

1	Starter does not decouple from Engine	
2	Throttle	IDLE
3	Ignition	OFF
4	Do not Fly	

**CANOPY OPENS IN FLIGHT**

1	Keep calm	NO DANGER
2	Flight attitude	STABILIZE
3	Airspeed	<b>65 - 75 KIAS</b>
4	Canopy	CLOSE / LOCK
5	If closing impossible	LAND NRST A/D

## NORMAL AIRSPEEDS

### TAKEOFF

Climb Flaps T/O	57 KIAS
V <sub>x</sub> Flaps T/O	52 KIAS
V <sub>y</sub> Flaps UP	65 KIAS 

### LANDING

Final APP Flaps LDG	60 KIAS
Balked Ldg Flaps LDG	60 KIAS
Max. demo X Wind	15 KIAS
V <sub>fe</sub> max, Flaps LDG	90 KIAS

### CRUISE

V <sub>A</sub> Maneuvering	112 KIAS
V <sub>no</sub> Max Turbulent Air	130 KIAS
V <sub>(NE)</sub> Max Airspeed	165 KIAS

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## AIRSPEEDS FOR EMERGENCY

V <sub>A</sub> Maneuvering	112 KIAS
Best Glide Flaps UP	78 KIAS
Best Glide Flaps T/O	73 KIAS
Precautionary Flaps LDG	60 KIAS
<hr/>	
No Engine Power	
Flaps T/O	65 KIAS
Flaps UP	70 KIAS



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