ALPHA ELECTRO

Stall recovery

1. Reduce the angle of attack by easing-off on the control stick.
2. If the motor is running, add full power.
3. Resume horizontal flight.

Spin recovery

1. If the motor is running, set power to “cut off “(lever in full back position).
2. Apply full rudder deflection in the direction opposite to spin direction.
3. Lower the nose towards the ground to build up speed (release stick force to neutral).
4. As the aircraft stops spinning neutralise rudder deflection.
5. Slowly pull up and regain horizontal flight (do not exceed airspeed and g-load limits).

Motor failure during takeoff or under 100ft

Ensure proper airspeed by lowering the nose and land the aircraft in runway heading, avoiding eventual obstacles in your way. Set master switch to the OFF position. Land straight ahead.

Motor failure in climb under 500 ft

First ensure proper airspeed by lowering the nose, then start scanning the terrain underneath and choose the most appropriate site for landing out.

Motor restart in flight

1. Set the POWER LEVER to CUT OFF
2. Set PWR EN SWITCH to OFF
3. Set MASTER SWITCH to OFF
4. DISENGAGE the PWR CTRL Circuit breaker After 3 seconds:
5. ENGAGE the PWR CTRL Circuit breaker
6. Set MASTER SWITCH to ON
7. Set PWR EN SWITCH to ON
8. SLOWLY INCREASE the POWER LEVER If restart is not successful, perform an emergency landing.

Emergency procedures checklist

EMERGENCY LANDING

1. Master switch OFF.
2. Fasten your seat harness tightly.
3. Approach and land with extreme caution with +10 km/h (+5 kts) airspeed reserve if the chosen landing terrain length permits.
4. Leave the aircraft immediately after landing.

FIRE

POWERTRAIN FIRE ON GROUND

1. Come to a complete standstill, master switch OFF and disengage PWR CTRL circuit breaker. 2. Abandon the aircraft and start extinguishing the fire with a waterless agent. WARNING! After the fire has been extinguished DO NOT attempt to restart the motor.

POWERTRAIN FIRE IN FLIGHT

1. Set master switch to OFF and disengage PWR CTRL circuit breaker. 2. Open all cabin vents. 3. Perform side-slip (crab) maneuver in direction opposite the fire. 4. Perform emergency landing procedure and leave the aircraft immediately.

BATTERY SYSTEM FIRE

Indication of battery fire is dense smoke and a distinctive chemical smell. Disengage both battery circuit breakers, land immediately and leave the aircraft as soon as possible. **WARNING! Be aware that lithium battery fires are extremely dangerous because they are self-sustaining! They are a result of chemical reactions and are impossible to extinguish. You can only prevent or delay fire propagation by continually cooling down the batteries and surrounding items with a copious amount of water.**

PIPISTREL

EPSI 570 failure

While on the ground:
During taxi: Do not takeoff!
During takeoff run: If possible and safe, abort the takeoff procedure!
While in flight:
With power to the motor: Do not switch the motor off. Attempt to fly to the next airfield and land as practical.
Without power to the motor: Look for a spot to carry out a safe outlanding. If practical check the circuit breakers, disengage the system’s four main switches, power lever to cut-off, and attempt a re-start.

Battery failure

With two battery packs on board the battery system is automatically redundant. A failure of one battery pack will be displayed on EPSI570 as a warning and the system will automatically switch to a single-battery mode, enabling continuation of flight. Land as soon as practical and have the battery system verified by authorised personnel. **WARNING! Single battery operation is considered an emergency situation in which the maximum power output must be kept below 35 kW! Plan actions and maneuvers accordingly.**

Powertrain over temperature

Continuous monitoring and a careful management (power setting) of powertrain components temperature is essential for flight safety. Motor, power controller and battery temperatures are displayed on the EPSI570 screen in the form of vertical bar-type indicators. Temperature ranges (normal, caution, warning) are indicated beside each vertical bar. If temperature warning is incurred, reduce power to minimum straight and level setting to reduce temterature and land as required.

ALPHA ELECTRO

EPSI User action guide

CAUTION:

BATTERY 1/2 OVERTEMPERATURE (at battery temp. 45°C)

- Reduce power - Monitor battery temperature - Land as soon as practical if the problem persists

SOC < 10%

- **Power lever cut off - Land as soon as practical -** monitor the residual %SOC (battery will disconnect by itself, depends on the cell voltage)

BATTERY 1/2 SOC ADJUSTED

Reset the message by pressing the knob.

- Change the flight plan according to the updated SOC value.

WARNING:

ONLY ONE BATTERY PACK IS ACTIVE

- if appears while on the ground: do not takeoff
- if appears during flight: reduce power to 35 kW or less. Land as soon as practical

BATTERY 1/2 NOT PRESENT

- If this occurs on the ground do not take-off and check battery installation
- If this occurs in flight reduce power to 35 kW or less, land as soon as practical

DRIVE OVERTEMPERATURE

- Reduce power immediately (to minimum possible) - Monitor motor/power controller temperature - Land as soon as practical if the problem persists but power is still available (possible power reduction) - Land as soon as possible (emergency) if power is cut off by the system

WARNING:

BATTERY 1/2 DISCONNECTED DUE TO [DISC CURRENT, CHG CURRENT, OVERTEMP, INTERLOCK, UNDERVOLTAGE, OVERVOLTAGE]

- Reduce power immediately to 35 kW or less (battery will disconnect by itself) and land as soon as practical

BATTERY 1/2 DISBALANCED REDUCE POWER

- Reduce power
- Reset message and monitor system status

BATTERY 1/2 STARTUP FAILED EC: [X]

Do not take-off - NOTE the number

DRIVE TEMPERATURE SENSOR FAILURE

WARNING! The power controller may reduce power to 0 if and when sensor failure happens.
- Land as soon as possible

DRIVE COMMUNICATION FAILURE

In flight - Perform MOTOR RESTART IN FLIGHT
On the ground - perform restart procedure

COOLANT PUMP/SENSOR FAILURE

- Reduce power - Monitor temperatures - Land as soon as practical

DC/DC COMMUNICATION FAILURE/MALFUNCTION/NOT WORKING

- If this occurs on the ground do not take-off - If this occurs in flight land as soon as practical

POWER LEVER COMMUNICATION FAILURE

If power to the motor remains - Land at the nearest airfield.
If power to the motor is cut, perform glide back to the airfield or emergency off-field landing

Battery management checklist

Before Flight..

Individual cell balancing

If the individual cells in each battery pack are reading GREATER than 30mV difference, perform battery balance procedure.

Battery stack balancing

If the front or rear battery are displaying a difference of greater than 5% on the main page of the EPSI, perform a battery reset procedure.

In Flight..

Battery balance misread in flight

If the EPSI display makes a rapid SOC % adjustment in flight, reduce power to glide setting, switch to the system page and check the following...

1. Make sure the battery BATT voltage of the F and R battery are within 5% of each other.

A BATT V of 350V represents approx. 50% SOC
A BATT V of 320V represents approx. 20% SOC
Minimum Cell voltage should be above 3200mV

2. If the batteries present within or above these values, slowly re apply power and adjust your flight plan to immediately return to your closest electric-enabled airport using the system page as your primary SOC reference. Continue flying as normal for an efficient return to the closest airfield and disregard the SOC % estimation error on the main display.

Charging

Battery stack balancing

If the batteries presented a misread in the prior flight, perform a battery reset prior to charging. Always charge the batteries at the lowest possible setting on the charger to still accommodate the next scheduled flight.

Eg. Overnight at 3A if it is the last flight of the day.