

Customer Information 01/2011

Modification of an Electrical Resistor for the IVO Propeller

MANDATORY

Symbol Key:

- ❖ Warning: Identifies an instruction, which if not followed, may cause serious injury or even death to the user or third party.
- Caution: Denotes an instruction which if not followed, may severely damage the aircraft or could lead to suspension of warranty
- Hinweis: Special information to improve handling.

1. Planing information

1.1 Reference

1.1.1 All gyrocopters

1. MTOsport: All models with an electrically adjusted propeller IVO DL3 fitted.
2. MT 03: All models with an electrically adjusted propeller IVO DL3 fitted.
3. Calidus: All models with an electrically adjusted propeller IVO DL3 fitted.

1.2 Reason

In isolated cases electrical adjustment of the propeller can lead to a re-positioning of the end cut-off point and consequently irreparable damage to the propeller servo motor.

1.3 Subject

Insertion of an electrical resistor and replacement of the operating switch for the adjustment of the IVO propeller.

1.4 Compliance

Customer Information 01/2011

Before the next start of the aircraft

- **Warning:** Safety related components
- **Warning:** Failure of propeller adjustment in a disadvantageous position can lead to a noticeable lengthening of the take-off distance required.
- **Caution:** Failure of propeller adjustment in a disadvantageous position can lead to the maximum engine RPM being exceeded.

1.5 Approval

The technical content is approved under the authority of

- AutoGyro GmbH

1.6 Manpower

Estimated manhours: installation of resistor and replacement of switch approx. 0.5 hrs.

1.7 Mass data

No change.

1.8 Electrical load date

No change.

1.9 References

In addition to this technical information refer to current issue of

- Parts catalog www.auto-gyro.de

1.10 Other publications affected

none

1.11 Interchangeability of parts

All used parts which cannot be used must be returned to AutoGyro GmbH or authorized distributor

2. Material Information

2.1 Material – cost and availability

Customer Information 01/2011

The spare part S.EL71 IVO Propeller Electrical Resistor set is available on request from AutoGyro GmbH or their representatives and service partners.

2.2 Material requirement per gyro

Should removal of a locking device (e.g. lock tabs, lock-wire, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one

2.3 Material requirement per spare part

IVO Propeller Electrical Resistor set S.EL71

2.4 Rework of parts

none

2.5 Special tooling/lubricant-/adhesives-/sealing compound – Price and availability

None

3. Accomplishment / Instructions

3.1 Accomplishment

All the measures must be taken and confirmed by the following persons or facilities:

- AutoGyro GmbH maintenance authorised persons
- AutoGyro GmbH

- ❖ **WARNING:** Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation. Secure aircraft against unauthorized operation. Disconnect negative terminal of aircraft battery!
- ❖ **WARNING:** Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one

3.2 Instructions

Customer Information 01/2011

1. Block wheels against rolling away
2. Secure stick in forward position
3. Turn Flight/Brake switch to „Brake“
4. Operate compressor until maximum pressure is reached
5. Secure rotor system with tie-down bag
6. Disconnect and isolate the minus pole of the battery. For Calidus: remove the lower right engine cowling.
7. Push the IVO adjustment switch out of the cockpit or seat surround, see pictures 1, 2 and 3
8. For the Calidus, if the adjustment switch is not able to be pushed out then it has been fitted using heat glue. In this case the cockpit panel must be tilted back for access. To enable this the six cockpit fastening screws must be removed, see picture 4
9. Remove the wires from the old switch, see picture 5. Ensure that the wires are removed by pulling on the plastic housing and not the wire
10. Remove the wires from the circuit breaker, see pictures 6, 7 und 8. Ensure that the wires are removed by pulling on the plastic housing and not the wire
11. Connect the wires with the resistor to the new switch in the same positions as they were removed from the old switch, picture 9
12. Feed the wiring through the opening and push the switch back into position in the cut-out, picture 10
13. Connect the wires with the resistor to the circuit breaker, see pictures 11 and 12.
14. Re-connect the minus pole of the battery

3.3 Checking Operating Direction of IVO Propeller

Check that the propeller reaches the endpoints and the motor cuts off in both directions

3.4 Test Run

Finally, carry out a test run with engine running. Check that the propeller adjusts in the correct direction with the engine running at 3000rpm. When the propeller is adjusted to 'Coarse' the engine rpm should drop, and conversely when adjusted to 'Fine' the engine rpm should increase. If the opposite occurs, the two wires connected to the propeller plate brushes should be swapped.

3.5 Summary

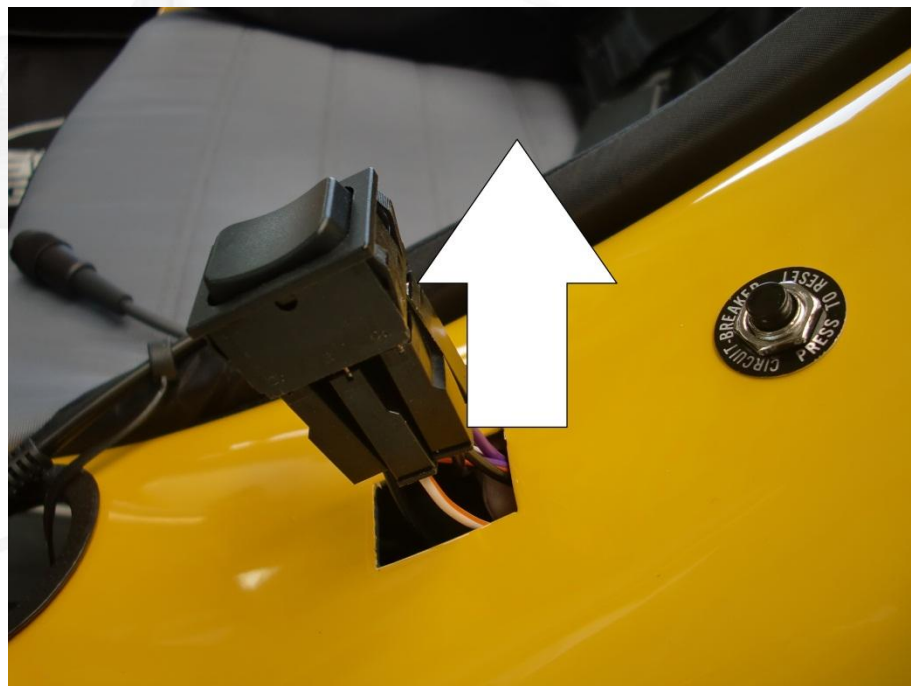
These instructions (section 3) have to be conducted in accordance with section 1.4.

Customer Information 01/2011

4. Photos



Pic 1



Pic 2

Customer Information 01/2011



Pic 3

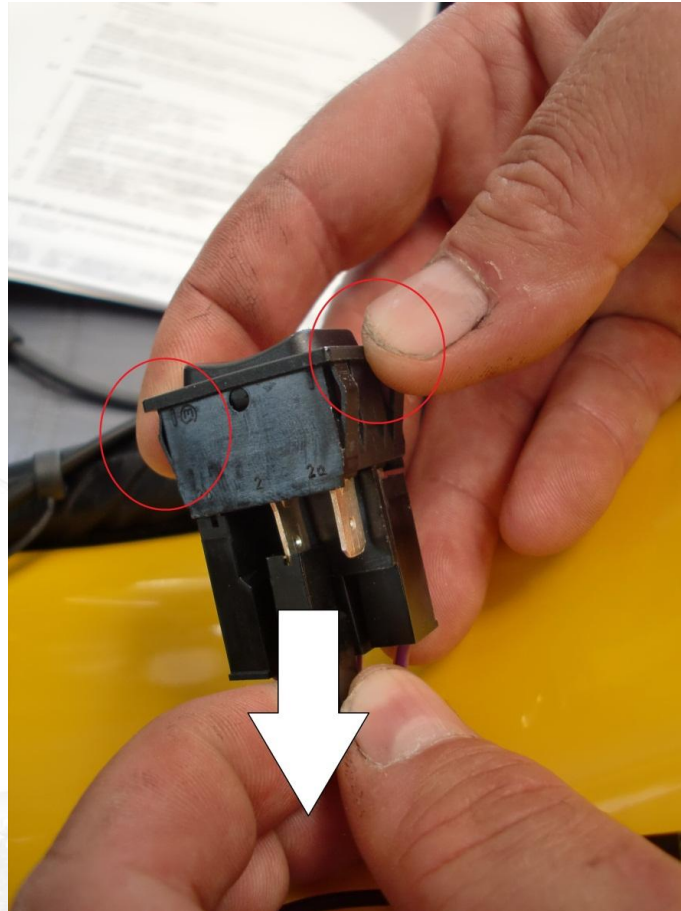
Customer Information 01/2011



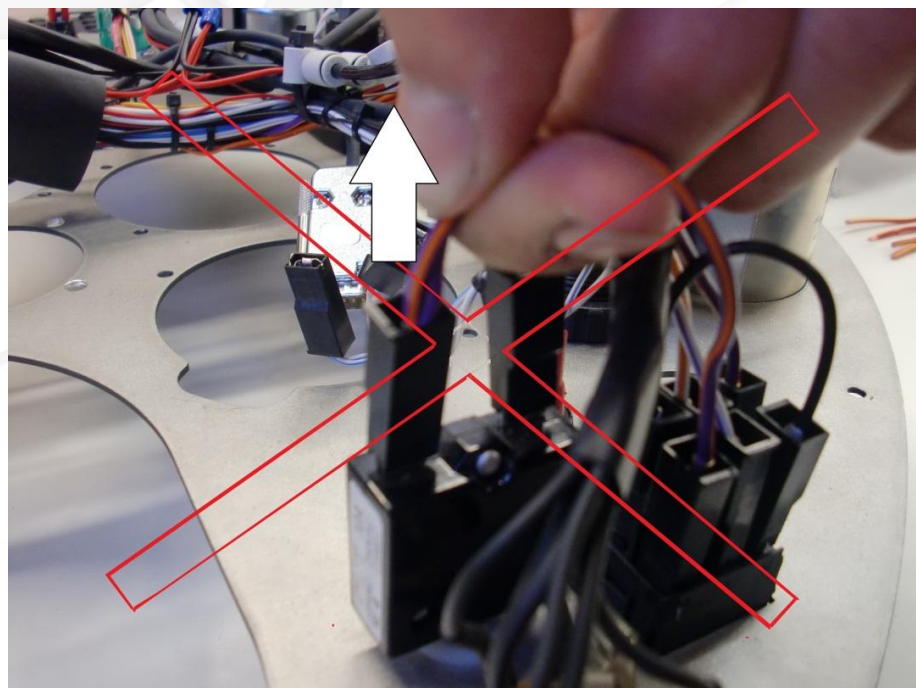
Pic 4



Customer Information 01/2011

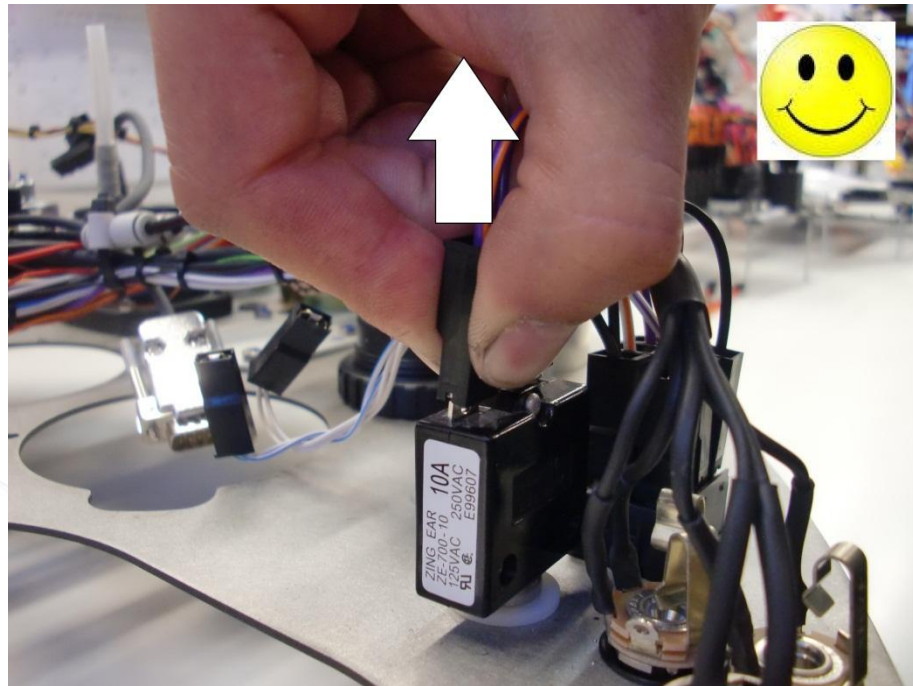


Pic 5

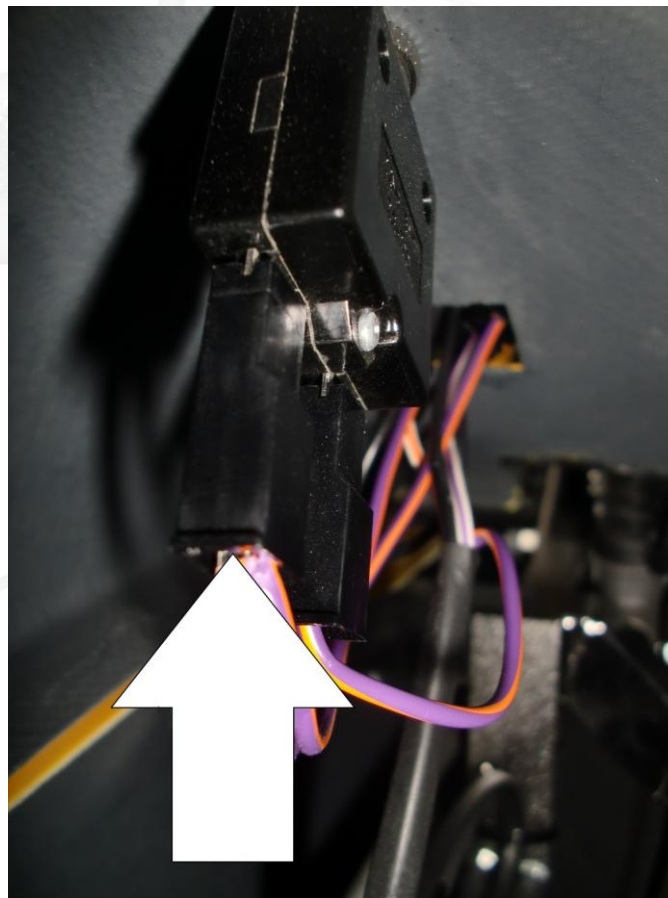


Pic 6

Customer Information 01/2011

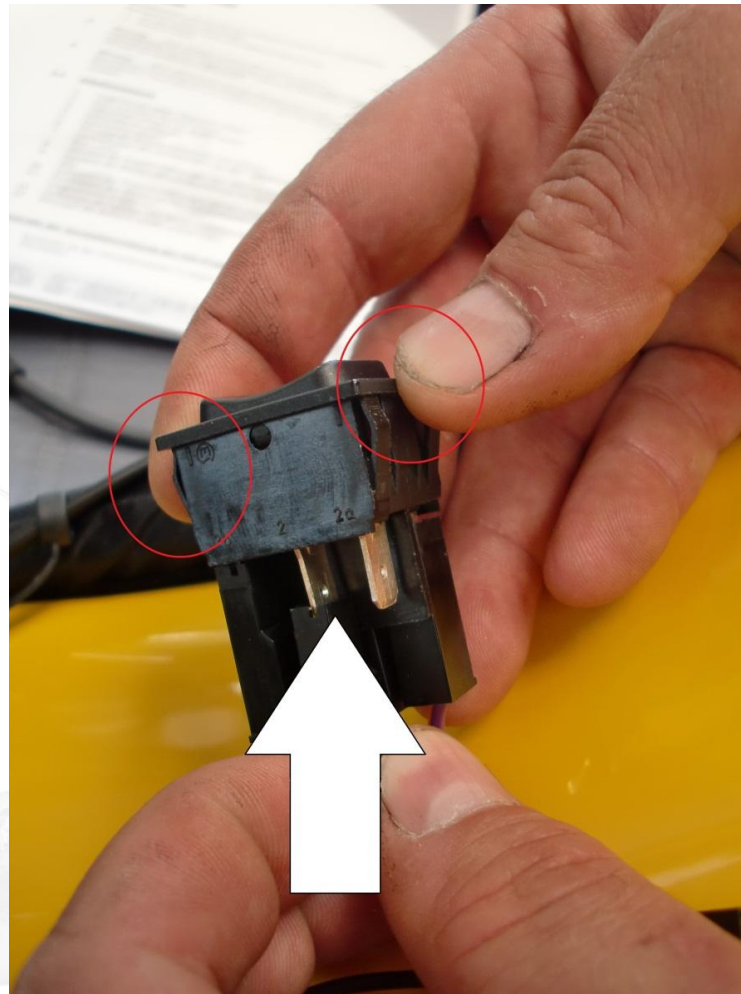


Pic 7

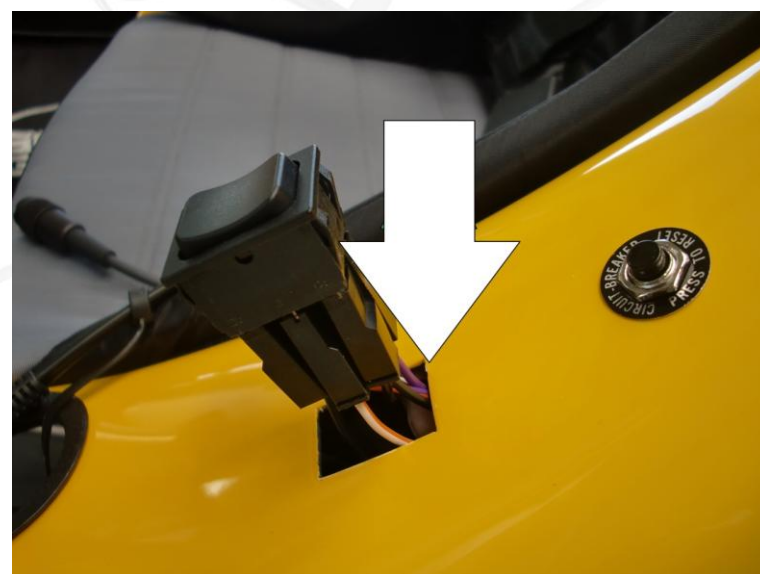


Pic 8

Customer Information 01/2011

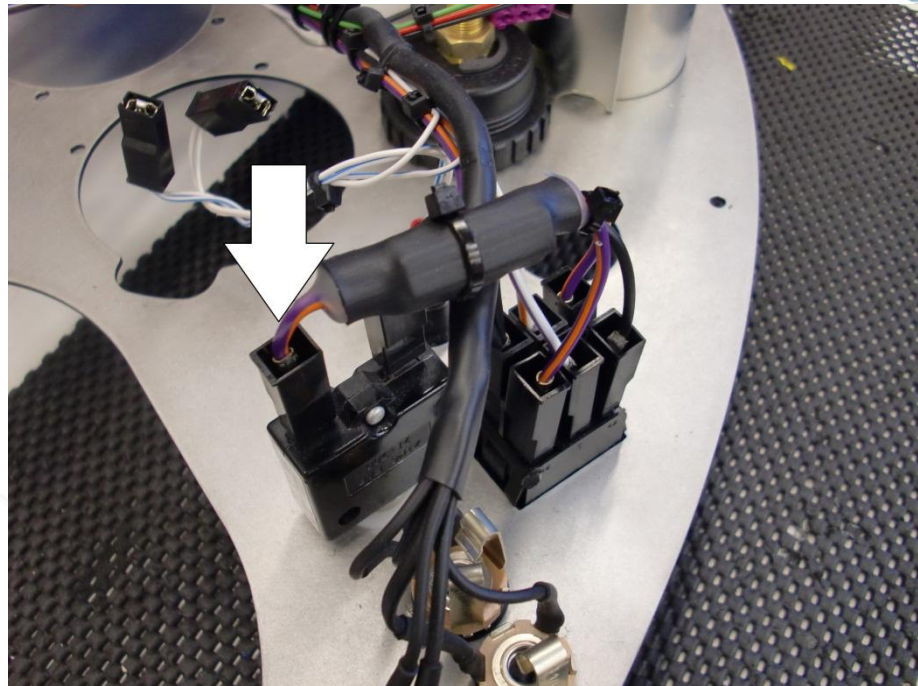


Pic 9



Pic 10

Customer Information 01/2011



Pic 11



Customer Information 01/2011



Pic 12