

Instructions for transponder installation DG-500MB

For the installation refer to the drawing on page 5.

Required materials:

- Transponder
- Transponder aerial Honeywell KA 60
- Mounting plate for aerial (supplied with aerial)
- Aerial cable AIRCELL 7 Length: approx. 5 m
- HF-Connector TNC for AIRCELL 7 aerial cable
- BNC-Connector for AIRCELL 7 aerial cable
- BNC-elbow connector, type UG 306/U
- Aluminium tape, width 50mm, approx length 100mm
- Fireproof rubber bushing HV D17,5
- Ty-Rap's
- Silicone

Required tools:

Drill

Drills bits, diameter 5mm and 13mm

Abrasive paper

Crimping tool

Flat spanner Size 8 mm

Wire cutting pliers

1. Holes for aerial installation and wire feed-through, installation of the aerial

To drill the holes for the aerial installation it is necessary to position the drilling-template supplied with the aerial left of the centre line at the bottom of the engine compartment.

The two 5mm mounting holes have to be drilled and deburred afterwards. The aerial feed-through is also pre-drilled with 5mm and then enlarged to 13mm.

The support face on the outside of the fuselage has to be cleaned with acetone. Apply silicone to the support face of the aerial and mount according to drawing, including the mounting plate supplied with the aerial.

Drill a hole for the aerial cable through the firewall, see drawing on page 5, pre-drill to 5mm, then enlarge to 13mm and insert a fireproof rubber bushing.

Warning: Drilling through the bulkhead demands a great deal of attention in order to prevent damaging wires in front of the bulkhead.

2. Feeding-through of the aerial cable

In order to feed the aerial cable through, the following parts need to be removed:

- front instrument panel cover
- instrument panel bottom part in rear cockpit needs to be removed completely, not just folded open, this means that the hinges at the bottom must be disconnected from the fuselage
- baggage compartment covers (bottom and back part)

The aerial cable is delivered over length without terminals.

To make feeding through easier, it is recommended to wrap the cable ends with insulating tape in order to “round” the ends.

The cable is fed through from the opening in the rear cockpit floor to both the front and the fuselage center section.

First feed through to the front. Push the aerial cable parallel to the empty cable pipes to the front instrument panel, see Picture 1, until it comes out near the front instrument panel.

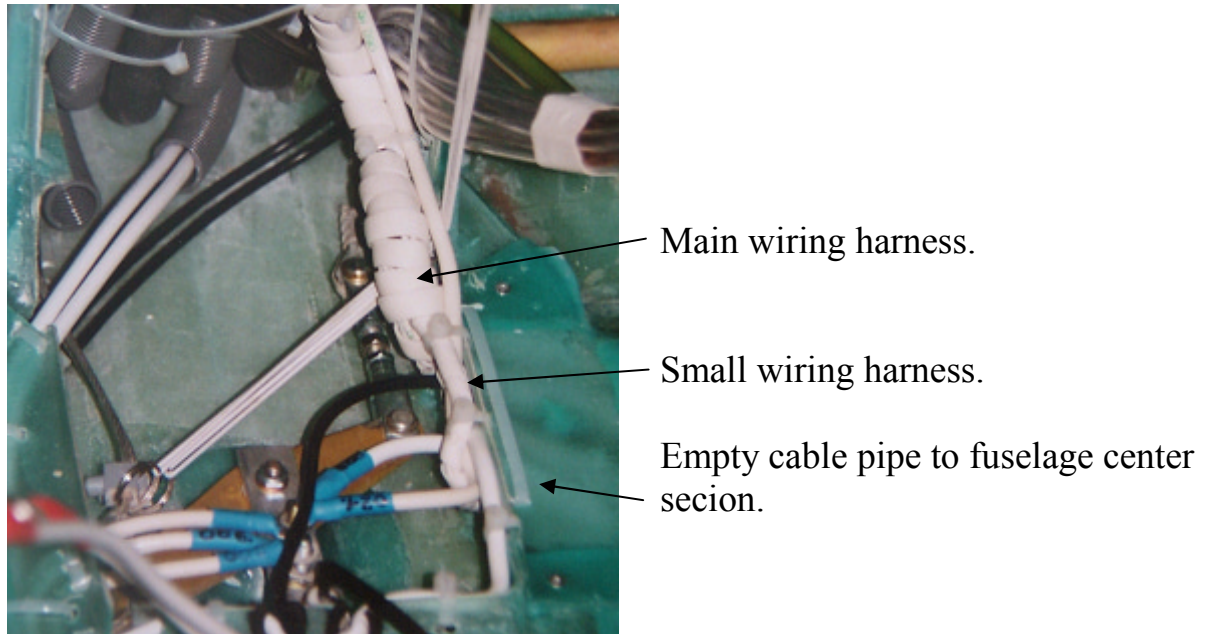


Empty cable pipes to the front instrument panel.

Picture 1.

Now, the HF-Connector TNC (threaded) can be attached to the front end of the aerial cable.

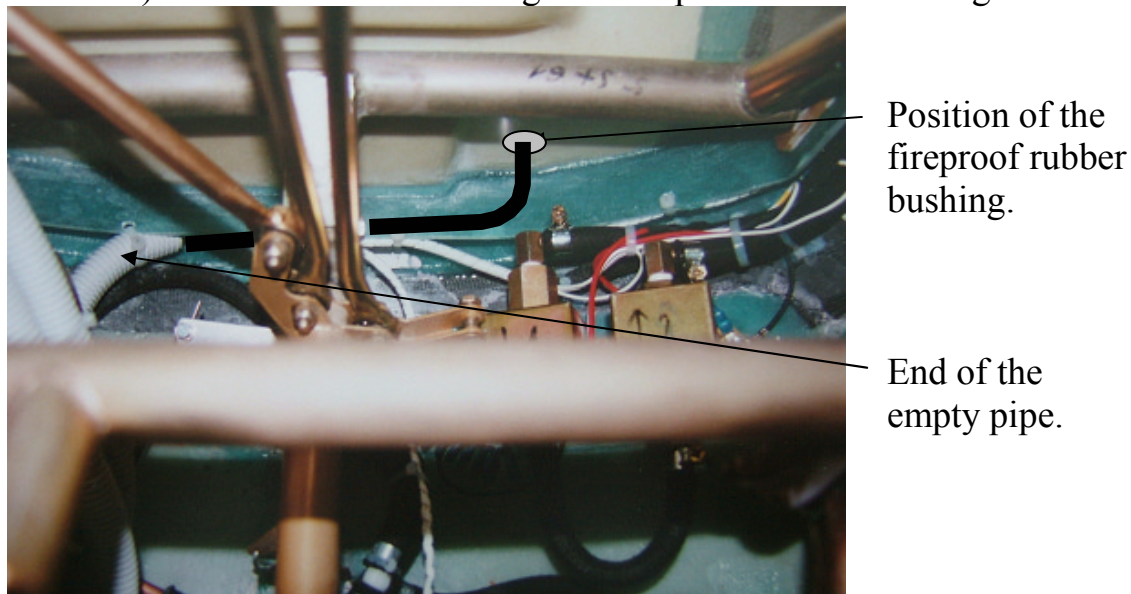
Insert the other end of the aerial cable into the empty pipe leading to the fuselage center section. A small wrapped wiring harness runs already through this pipe (either the last or second to last pipe in direction of flight) (see Picture 2). It is recommended to use a "pull-through" aid, since the empty pipe has tight radii.



Picture 2.

The aerial cable has to be fixed to the bottom of the opening in the rear cockpit with cable ties every 50mm; otherwise the function of the towing hook mechanism can be affected.

At the end of the empty pipe (at the rear main bulkhead on the right side of the fuselage), install the aerial cable together with the small wiring harness along the lower "U" of the main bulkhead towards the fireproof rubber bushing (see Picture 3) and feed the cable through the fireproof rubber bushing.



Picture 3.

To facilitate easier mounting of the BNC-Connector, cut the cable approx. 20cm behind the hole. Attach the BNC-Connector to the cable and then connect to the aerial through the elbow connector. Pull the excess of cable back into the compartment in front of the rear main bulkhead, form it into a loop and fix it with a Ty-rap.

In the engine bay, the aerial cable has to be covered with the aluminium tape in order to protect it against engine heat exposure.

2. Installation of the transponder

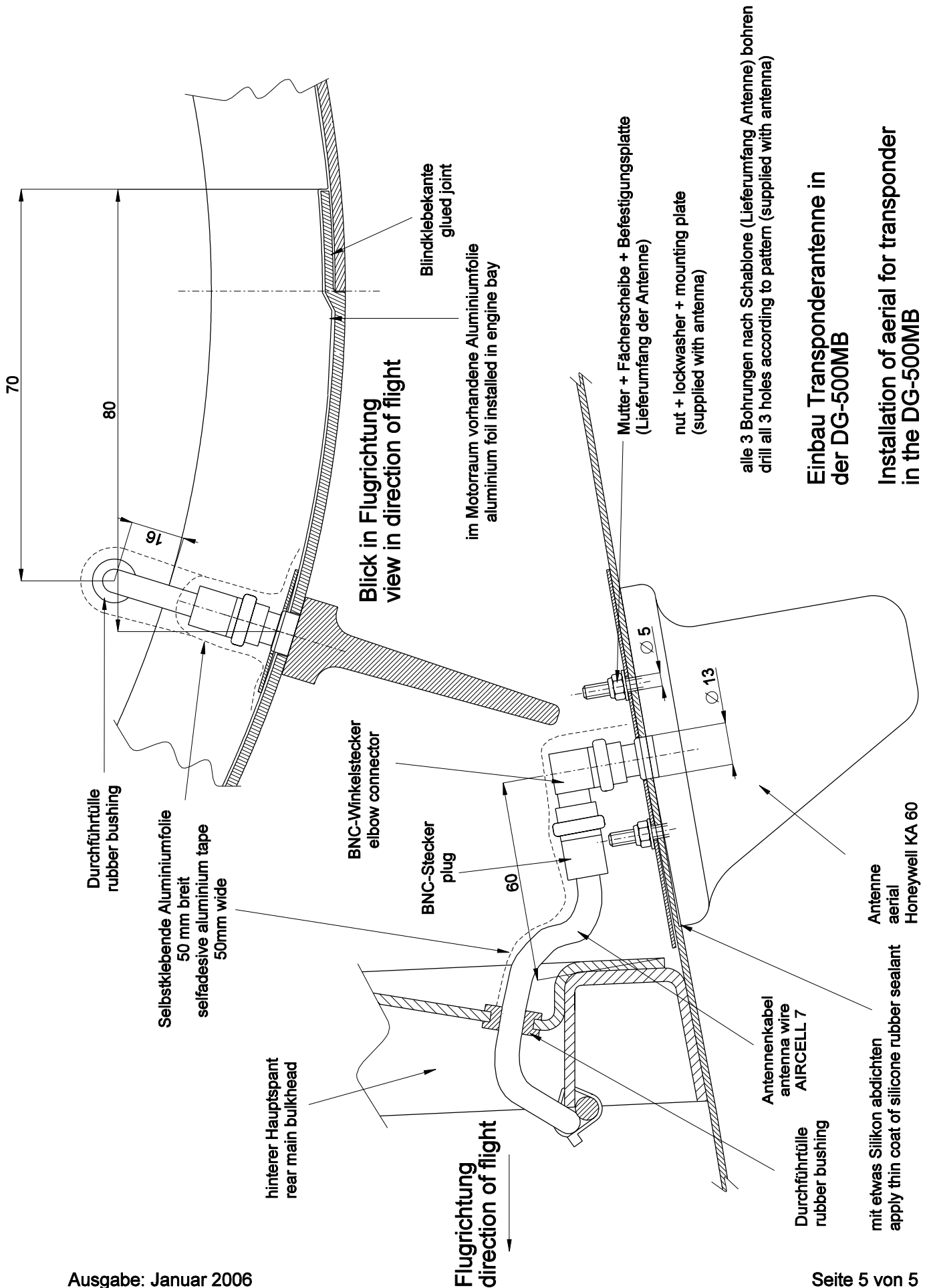
Mount the transponder in a suitable place on the instrument panel. In case of a transponder with separate control unit the control unit may be installed in the right hand cockpit side panel.

Connect the HF-Connector to the transponder. Power supply takes place through wire 10, included in the cable harness. Protection is then ensured via the installed circuit breaker (marked with GYROS). Connect earth-wire of the transponder to the earth conductor at the front end of the instrument panel console. If this circuit breaker is already used for another instrument, an extra fuse must be installed in the instrument panel in a suitable place. At the fuse for the 12V power socket a male+female connector must be plugged to the terminal of wire 17 and connected to the fuse for the transponder.

Connect the static port of the transponder or of the altitude encoder to the glider static system.

3. Inspection

The installation has to be examined by an approved maintenance organisation with the appropriate authorisation.



alle 3 Bohrungen nach Schablone (Lieferumfang Antenne) bohren
 drill all 3 holes according to pattern (supplied with antenna)

Einbau Transponderantenne in der DG-500MB
Installation of aerial for transponder in the DG-500MB