

**WARNING: When handling the high pressure bottle always insert safety pin**

**1. Preparation**

Remove seat pan, when the seat pan is divided remove only front part. When installed remove right hand side battery mount under the seat pan. Remove left hand side cockpit side wall cover and remove oxygen tube by sliding it forward out of the main bulkhead.

**2. Positioning mount Z90 for the actuation unit (Picture 1)**

To do so attach mounts Z90 on actuation unit Z80 and position then according to drawing Z150 on the left hand cockpit wall. Fix then into place using resin mixed with cotton-flocks. Before bonding remove paint and roughen surfaces.

**3. Positioning pulley (Picture 1)**

The mount for the pulley Z88 is to be positioned 50mm in front of the actuation unit. It should be positioned in such a fashion that the cable running from the actuation unit to the pulley runs parallel to the actuation direction.

Grind away as much as necessary of the mount to position it as close as possible to the stringer 3GR-154 (see Z150) and fix using resin mixed with cotton-flocks. The bolt and disk inside Z88 may not be damaged, just like the surface near the pulley. Before bonding remove paint and roughen surfaces.

**4. Installing and fixing the guide tube (Pictures 1, 2 und 3)**

To install the guide tube for the release a hole has to be made in the bulkhead 3GR-155 on the right hand side of the cockpit, about 60mm below the canopy rail, see Z150 (maximum size 8x16mm !). Over the polyamide tube of 6x1mm a polyamide tube of 8x1mm, 400mm long, is fitted and fixed with resin. The 8x1mm tube must have 35 mm excess length compared to the 6x1mm tube (see Z150 Section D-D).

About 10 mm below the cut-out in lower part of the bulkhead 2 holes Ø4mm have to be drilled. The Tube must be fed into the Bulkhead and fixed at the holes with a Tyrap 3,6mm. The tube has to run along the fuselage wall, below the foot support. Grind out the foot support at the pulley on the left side in such a manner that the tube runs directly at the pulley (see Z150). After positioning the tube at the Bulkhead the foot support is to be repaired with its original lay-up (3x92125 ±45°, 90°, ±45°). Apply reinforcements and mounting of the tube at the right side of the cockpit as shown in drawing Z150. After the resin has set cut the tube at the pulley as in drawing Z150. Before bonding remove paint and roughen surfaces.

**5. Fitting the mount for the pressure bottle 4GR-326 (Pictures 4 und 5)**

To route the Bowden cable from the actuation unit to the pressure bottle mark position of holes in the left bulkhead 3GR-156 according to Z150. Apply reinforcements around the marking (2x92125 ±45°, Ø30mm). After the resin has set drill holes Ø5mm. Pass a Bowden cable 1020mm long through the holes.

To fit the mount for the pressure bottle a recess has to be cut in the left main bulkhead according to drawing Z137 (Picture 4). When the mount does not fit the recess must be enlarged, but not into the Carbon fibre material of the seat support! The mount must be bonded into the corner of main bulkhead, landing gear box and the left cockpit wall using resin mixed with cotton-flocks. Before bonding check if the pressure bottle comes in contact with the airbrake controls (especially the guiding tube, see Picture 3), to do so insert the mount with pressure bottle positioned as in drawing Z150. To protect the control tubes below the mount cover them with a plastic sheet during bonding. After curing check for free movement of all controls. Before bonding remove paint and roughen surfaces.

**6. Installation of the actuation unit and release cable (Pictures 6 und 7)**

Install actuation unit Z80. Locate stop Z135 onto the canopy frame as in Z150. In the most rearward position there must be 2-4mm clearance between the slider in the actuation unit and the stop on the canopy frame when the canopy is closed. The stop should prevent the slider in the actuation unit to move forward when the canopy is closed. Bolt on Z135.

Fit pulley 1R73b on mount Z88. To prevent the cable from coming off the pulley, fit cover 6Ru50. After tightening the nut, glue on plastic cap.

Insert a cable 1,6mm LN9374 through the release tube and over the pulley. Fit NICO-press clamp 28-1-c and loop the cable back into the clamp (Z134). Adjust the length of the cable as described in the manual for NAOH section 3.1 point 7 and compress the clamp. Fit a grommet and fix with a NICO-press clamp 28-1-c. Mount cable on actuation unit (see Z150). On the other side on the right hand side of the cockpit fix release knob as in drawing Z150. Before compressing the NICO-press adjust the length of the cable in such a manner that when the slider in the actuating unit is in the rearward position, the clamp at the release knob is inside the tube in the cockpit wall (see. Z150 Section D-D). Apply sticker to the release as in manual for NAOH section 3.1 point 10.

**7. Bowden cable to the safety harness**

The safety harness must be exchanged for a safety harness from Schroth with part number 4-01-01A04XX (Existing Schroth systems can be altered by Schroth). Attach the fitting Z87/2 and Z133/1 to the buckle as in drawing Z134. Drill the hole Ø2mm in the buckle as in Z134.

Attach the Bowden cable Z96/2 to the actuation unit, to the seat support with two hose clamps 10mm with rubber covers (Z150, section B-B) and to the buckle (Z134). Feed the cable K5 (with ball on one end) from the actuation unit through the Bowden cable. Fit NICO-press clamp 28-1-c and loop the cable back into the clamp (Z134). Adjust the length of the cable as described in the manual for NOAH section 3.1 point 7 and compress the clamp.

**8. Attachments for the pressure bottle**

Position the attachments Z136 and Z141 to the main bulkhead. To do so mount Z141 onto the pressure bottle and fit into the mount as in drawing Z150. Mark positions for the holes and insert Blind rivet nuts. Insert the safety pin into the high pressure bottle before handling!

**9. Mounting the high pressure bottle**

Insert the safety pin into the high pressure bottle!

Insert Bottle with attached fitting Z141 into the mount and insert bolts M5. Fix the Bowden cable as in Z150 to the actuation unit and Z136. Insert cable 2533/1400 (with cylinder on one end) into the pulley on the bottle and through the Bowden cable. Fit grommet and NICO-press clamp 28-1-c. Adjust the length of the cable so that when the cable is taut, the bolt touches the front part of oblong hole (see Z150). Compress NICO-press clamp and assemble the actuation unit including the cable to the release, the Bowden cable to the safety harness buckle and to the pressure bottle. Insert Bowden cable in the pulley on the bottle and secure it with two split pins and aluminium tape as in Z150.

**10. High pressure hose**

Attach high pressure to the high pressure bottle and fasten it onto the left shoulder harness mount with a Tyrap 3,6mm. Attach cable clamps to seat pan and/or seat back as in drawing Z150

**11. Installation of the Airbag**

To secure the airbag into the seat pan two strips of Velcro (hooks side) have to be bonded onto the seat pan (see picture 8). Position the airbag in the centre of the seat, connect the high pressure hose and fix hose into applicable clamp on seat back or seat pan.

**12. Installation of the cover for the pressure bottle**

Install Cover 4GR-327 as per drawing Z146. Bond cockpit side wall cover into place using contact adhesive.

**13. Alteration or removal of objects that prevent a secure emergency exit**

In case there are systems installed in the cockpit that prevent or hinder a secure emergency exit, these have to be removed or altered in such a way that they no longer present a hindrance. These systems could be bug wiper systems or PDA mountings. A safe installation for a bug wiper system is shown in drawing Z147

Every connection between the canopy and the fuselage or instrument panel must be fitted with a coupling that can be separated with a pulling force of maximum 2kg. The cable has to have a free excess length allowing the canopy to rotate at least 60° upwards around the rear canopy hinge before becoming taut, ensuring that the forces from the air can separate the connection.

**14. Perform a new weight and balance measurement.**

**15. Check of the system.**

Perform a check of the system according to the Manual for NOAH section 3.4 point 2 and 4-10.



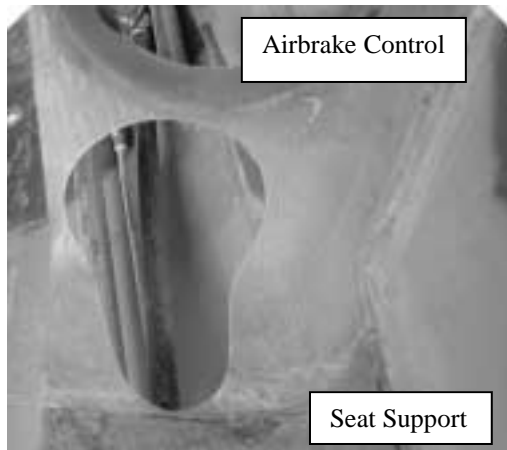
Picture 1



Picture 2



Picture 3



Picture 4



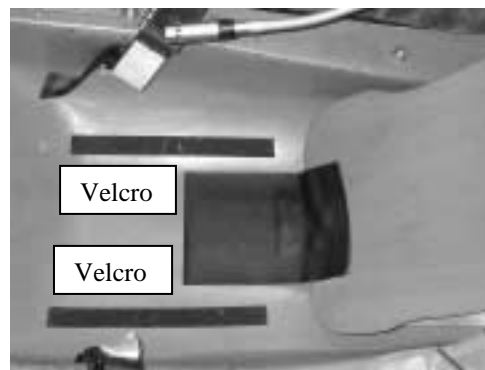
Picture 5



Picture 6



Picture 7



Picture 8