

Repair of hangar damage for the Trailing Edge of the elevator of the Jora UA2.

The elevator TE of a Jora UA-2 consists of two wooden profiles glued together in a V-shape. The damage was a fracture of these wooden profiles, and it was necessary to glue the profiles together reinforced before the cover was repaired with a patch. A typical hangar damage when moving the plane around. The elevator rests on the top of fin, and such a fracture can easily happen.



Since the TE consists of two wooden profiles in a V-shape, it has an internal opening of approximately 2 by 5 millimeter. A carbon fibre rod in that dimension was cutted in approximately 100 millimeter length. This will avoid the repair to break up again and add a lot of strength to the damaged area.



It was possible to glue inside both sides of the damaged area. Pressing T-88 epoxy inside for at least 50 mm from both sides, also adding a generous layer of glue on the carbon rod would ensure a strong bond.

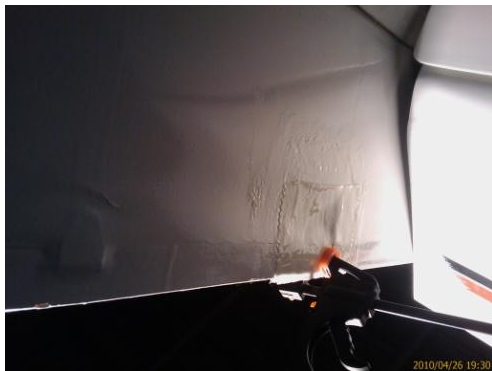
Heat was applied from a Halogen lamp, so the surface temperature of the the tail was around 27. degrees celsius. The T-88 hardens at lower temperatures, but a minimum of 25 is recommended.

The picture below shows where the carbon rod was mounted. The rich layer of epoxy inside the V-shaped TE and around the carbon rod is visible in the damaged area.

The rod was pushed all the way in on one side before the joint were held together in the correct position. Then a tiny model builders knife was used to pry the rod back into the opening of the other side. The rod was mounted approximately centered with 50 mm on each side of the fracture.



After the repair was done, the paint was sanded with 120 grit sandpaper, and patches were glued on the top and bottom of the elevator.



The patch material was of a similar type as the cover used originally. The patch were totally filled with T-88 epoxy and the fracture were held together with a clamp until the glue had settled. The left side picture shows the damaged area from the bottom, and the right picture from the top. After a week, when the T-88 was fully cured, the

patches were trimmed, sanded and painted. Visually the repair looks fine and is strong. The treatment of heat did shrink the cover back to normal.

