

## Testing>Rigging check

### Objectives of this task:

To perform a final check of all control surface deflections and make any adjustments that may be required prior to the first flight.

Each control surface has had its deflections set as part of the appropriate fitting task, so this final check is just to verify that nothing was missed during assembly.

### Materials required:

Deflection templates for all control surfaces

Straightedge 1 metre long

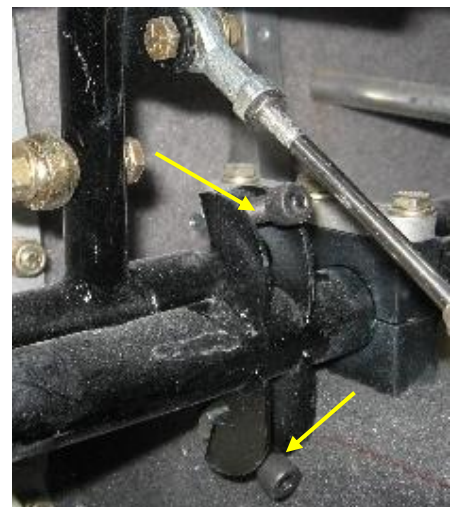
## Rudder

### Check the rudder travel



Tape the rudder template over the rear of the empennage. Place a saw stool under the front of the fuselage to lift the nose wheel off the ground and then adjust the rudder cable length so that the rudder sits on the centre mark with the rudder pedals centred and all level.

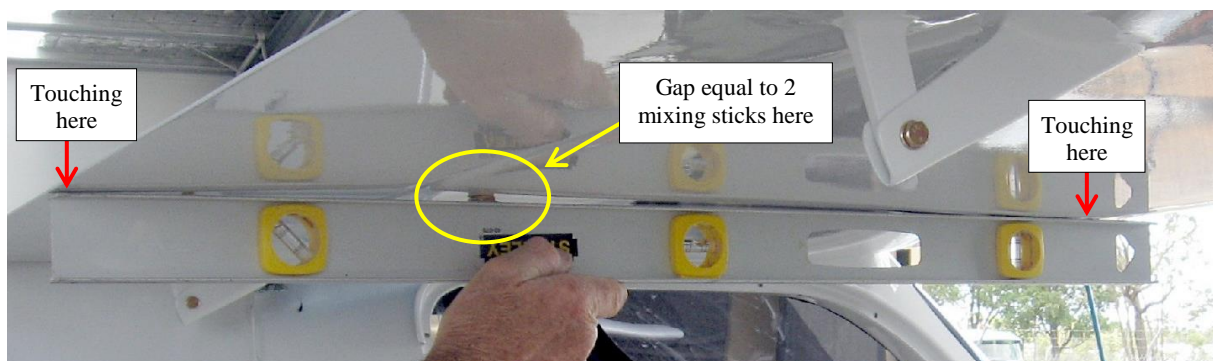
Use the rudder pedal adjustment set screws (shown arrowed at right) if required to adjust the rudder travel so that the rudder deflects to each full travel mark as shown in the photos above and mark each with *TorqueSeal*.



Rudder pedal adjustment detail

## Flaps

Hold a straightedge under the wing and flap with a gap equal to 2 mixing sticks at the rear of the wing and touching at the front and back, all as shown in the photo below. Adjust the flap pushrods if required until all 3 positions are touching on each wing. Tighten the pushrod locknuts and mark each with *TorqueSeal*.



## Ailerons

### Check the control stick with the ailerons in the neutral position



Set the ailerons to the neutral position: a straightedge held under the wing must touch the front and back of the wing and the back of the aileron as shown arrowed in the photo above. The control stick should be centred left to right at this position. Adjust the aileron cable lengths as required to centre the control stick. Check that all rod end jam nuts are tight and mark each with *TorqueSeal*.

### Check the aileron deflections



Place the aileron deflection template on top of the wing and set the aileron to the full UP travel deflection as shown in the photo above (note the 3 arrowed points where the template touches) and then check and adjust the stop bolt on the aileron bellcrank so that the bolt just touches the eccentric stop at full deflection. The eccentric stop that you fitted in the [Post-Paint>Fuselage>Interior>Fit console controls](#) task can be rotated if required to give an equal length to the stop bolts. Repeat the process for the other aileron, tighten the stop bolt locknuts and mark each with *TorqueSeal*.

## Elevator

### Check the elevator travel

Use the supplied deflection templates to check the up and down travel of the elevator.



Hold the control stick all the way forward (have someone help you) and check the amount of down deflection and adjust the cable length (by screwing the rod ends in or out an equal amount at each end of the cable) until the down deflection is correct.



Now have your helper hold full back stick and check the amount of up deflection: it should be very close to correct if the down deflection is OK, however you may need to make some fine adjustments to equalise elevator travel until both up and down deflections are correct. The elevator must clear the rudder and the down stop by 2mm at full deflection. Recheck the up and down deflections and then lock the rod end lock nuts at each end of the cable and mark each rod end lock nut with *TorqueSeal*.

This completes the *Testing>Rigging check* task.