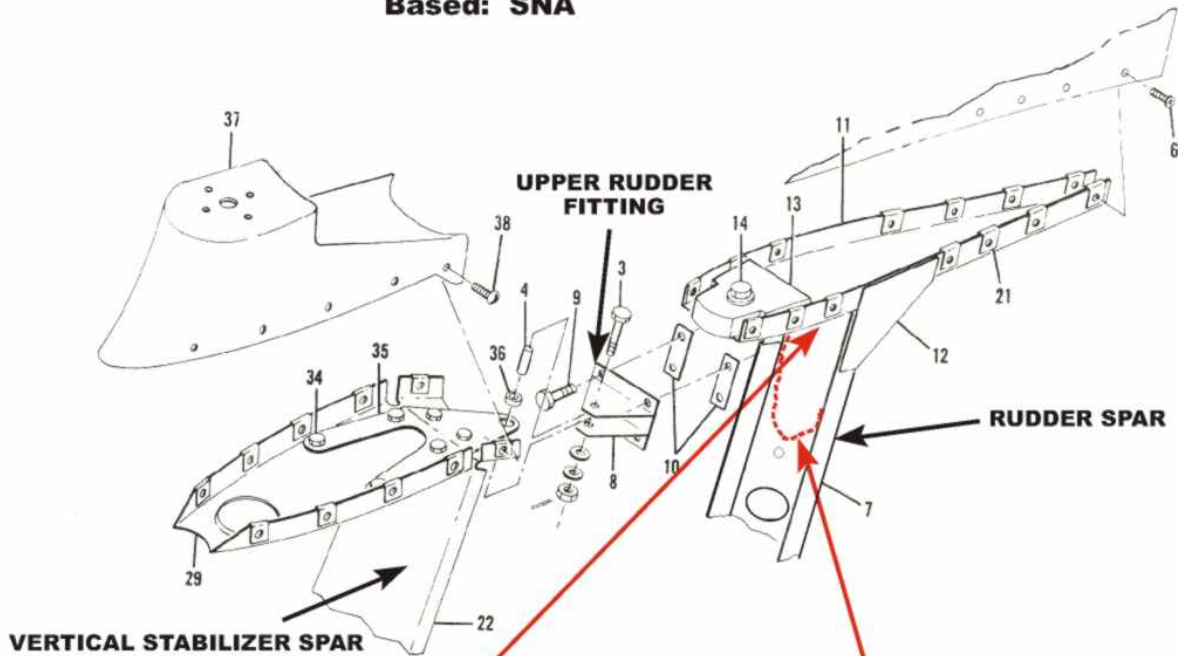


The following information is being provided by Ronald D. Bishop in relation to the near failure of the entire rudder assembly of the aircraft listed below. It is provided in the spirit and hopes that this information will encourage the owners of similar types of aircraft to perform frequent inspections of the major parts that obviously failed in this particular case.

GULFSTREAM
COMMANDER
114/A

**Rockwell Commander
AC114-A
SN-14408
Owner: Ronald D. Bishop
Based: SNA**

SECTION II
EMPENNAGE



During a return flight back to our home base at the Orange County (John Wayne) Airport the rudder pedals began to oscillate in a manner that put the aircraft into a slow yawing motion. In order to make a determination as to what was causing this uninvited movement I slowed the aircraft down to 90 knots. This did in fact stop the unwanted motion and the rudder pedals stayed steady. I then checked to make sure that the autopilot was not engaged and I pulled the breaker out to make certain the AP was not the culprit. The aircraft maintained a rock steady on course progress and I decided to proceed with the addition of power and back up to a normal cruise speed. The yawing immediately returned as I passed 100 knots. I am now about 20 miles from home base so I decided to slow her down to below 90 knots, drop out the gear, and make a slow descent without pitching the aircraft and bringing up the speed and the yawing again. I decided to land the aircraft with my feet flat on the floor and I had to remind myself constantly not to use the rudder and keep the speed below 80 knots on final. On touchdown I decided to go ahead and use the rudder for directional control only after I was solidly on the runway. I then taxied the aircraft to our tiedown.

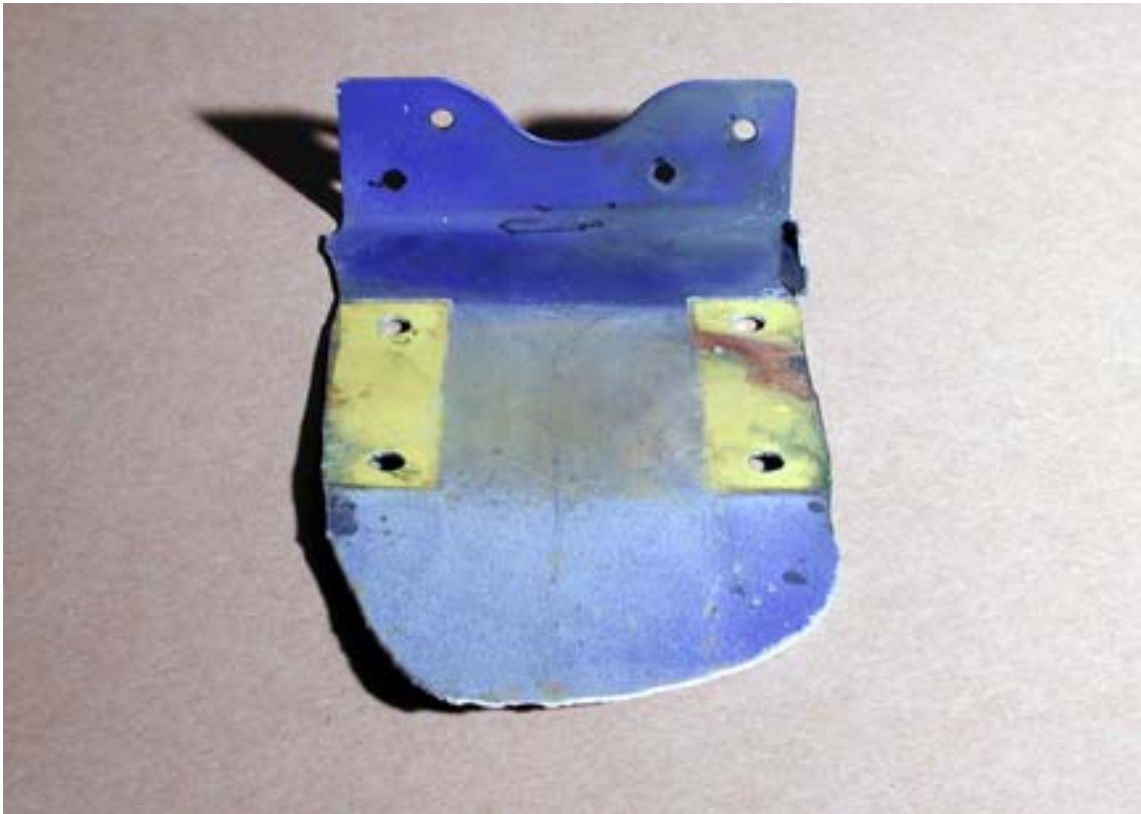
Upon inspection of the rudder assembly you could literally grab the top of the rudder itself and pull the rudder outward about 10 inches from the vertical stabilizer. The rudder was still well connected at the bottom by both the hinge assembly with the bellcrank and control cables.

Once the rudder was removed it was very obvious that we had a major failure.



The upper rudder fitting broke completely away from the rudder spar. The fitting stayed connected to the vertical stabilizer and the rudder was leaning aft.

Here is the broken out piece of the rudder spar after we removed the connecting fitting assembly.



This is another view of where the broken out piece belongs on the spar.



Here is the cause of the failure.



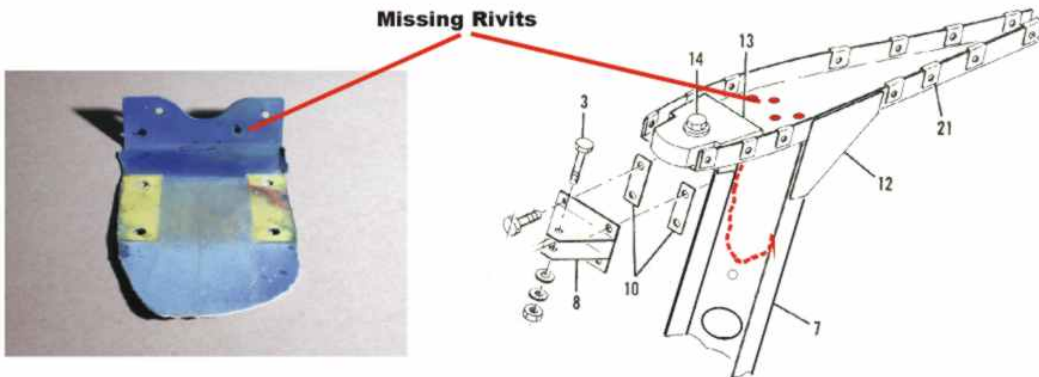
The rivets on the upper part horizontal plane of the rudder tip were never installed from the factory since new. For 24 years the rudder spar has been moving.

The inspectors and FAA approved repair facility pointed out the amount of black and shinny areas on the part clearly indicates the amount of movement that had been going on before the failure.



This drawing shows you where to look in order to make certain the four rivets on the top of your rudder spar are in fact connected to the top rudder cap assembly.

If you take a look at the broken out piece of the rudder spar you will note that there are four holes drilled for rivets on the horizontal plane of the spar.



Here are a series of other pictures to assist you in your inspection.

