

Dennys Stuff

Question: Do Servo connectors wear out from repeated insertion and removal?

This question was raised in www.wattflyer.com in one of their recent threads. And, IMHO, it is a very good question.

Your editor has a old model, the scratch built Electrostreak built in 2000. Since the aileron servos have likely been plugged in and out over a thousand times over the past 13 years, the question of the contact reliability is a concern.

So, I took a standard no-name contact laying in my servo connector drawer, and measured its contact resistance. That resistance came out to 0.0033 Ohms on the first insertion. Then, that connector was inserted and removed 100 times, and retried. The new resistance came out to 0.0035 Ohms, still a very low value.



What was very disturbing on this no-name contact, picked up at one of those RC fun fly flea markets is the construction of the female terminal.

The pressure required to insert the two male-female terminals varied widely, depending on how the male terminal was inserted. If the male terminal was inserted a bit off center, the terminal resistance doubled.

“No Name” Servo Connector Terminal

Taking a look under a microscope showed why. The female pressure contact was only about 60% of the total width of the contact. That allowed the male terminal to be inserted, where only half of the terminal was faced against the female terminals contact point. Total crap.

For those flying giant scale models with gasoline

engines up front, I'd be very concerned that one of those no-name servo connectors could vibrate out during flight.

Next, a Mpi MAXX products RC connector was checked out in the same way. The first results showed a resistance of 0.0032 ohms. And, after 100 insertions, that value stayed at 0.0032 ohms. Checking the terminal with a micrometer showed no measureable difference, before and after the insertion gest.

An inspection of the MAXX products female terminal under the microscope showed the pressure contact was the full width of the terminal, and inserting the male terminal sideways made absolutely no difference.

Guess the bottom line, for the models you like to keep flying safely, only buy quality terminals, not something found at one of those flea markets.



MAXX Products Servo Connector Terminal