

THE BOATYARD

“GLITCHING”

Glitching (said to be a term first used by John Glenn in 1962) describes any uncommanded activity of boat servos. This can range from fast, small amplitude vibrations of the servo arms to large excursions.

In most cases it is caused by radio interference. We have observed glitching from:

- Standing the wrong distance from a chain link fence,
- Standing the wrong distance from other Tx(s),
- Having a couple people walk behind the Tx.
- Transmitter too close to the boat,
- No identifiable reason.

Try raising the antenna to vertical and move the transmitter to a different location. A couple feet can make a difference.

Servo “Glitching” from dirt in the “Pot”

Dirt in the servo potentiometer (pot) can cause glitching. The dirt can cause the servo to not respond to Tx commands.

Replace the servo or disassemble it to clean the pot. It is a trade-off between servo cost and the time to clean the pot.

Cleaning the pot

Remove four screws holding the servo case together. By removing only the bottom case, the gears in the pot don't have to be disturbed. If you do remove the top case, remember how the gears are to be reinstalled.

The pot is usually at the bottom end of the output shaft for the servo arm.

Carefully remove the pot cover by bending back the metal “ears”. Look for dirt in the track of the wiper arm on the pot. (Manually move the servo arm to see how the pot works.) A jewelers loupe, or magnification of some kind, will be useful. Carefully remove the dirt and test to see if the problem is fixed. Reassemble.

SERVO “GROWL”

Steve Lang, Thin Air Model YC, Evergreen, CO, asked about servo “growl”. The noise caused concern among the new owners at this new club.

Discussion

In most cases there is no cause for concern when a servo makes a noise.

Any servo may “growl” or “buzz” when it is at stall load or close to it. A servo is stalled when it has a load that is so large that it can't move the servo arm to the position being commanded by the Tx. In strong winds the sheet loads can pull out the sheet, actually reversing the servo arm. It certainly buzzes when that happens but you will never hear it.

Experiment by using the Tx to set the arm in a mid-point position with no load. Grab the common sheet and pull until you back-up the servo arm. Or just use a finger to back-up the servo arm. It will growl or buzz.

For some reason when a rudder servo is overloaded it doesn't make much noise

There is no real danger in most cases. The battery drain is high when a servo is stalled. For instance, the stalled sail servo draws more than one amp (1000 mA). Drum type servos used by other classes of model boats have overheated and failed when operated at stall for too long. I have never heard of an arm type servo failing from that.

Occasionally an owner will set up the sail servo arm so it contacts the brass keel pipe when sheeted in. That stalls the servo and if continued for a long time might do damage to the servo.

