Assembly of 2x standard servo Tray W/Self Adjusting Bellcrank

1) Assembly the servo tray outside the airplane and Loctite all metal screws !!!!

2) Install #1 servo using 2/56 X 1/2” Shcs with #2 washers.

3) Install #2 servo using 2/56 X 3/4” Shcs with #2 washers and using 3/16 spacers between the servo and the servo tray.

4) For servo arm on #2 servo assemble the 2-pulley assemblies on the bottom of a 1-1/4” full arm (Use the outside hole). Place the pulley on the pulley pivot then put a #4 FW on the 4/40 X 1/2 button head, place screw assembly thru the pulley assembly and tighten to the bottom of the servo arm using loctite. (Be very careful not to get loctite between the pulley and pulley pivot). Then use a lock nut on the top of the arm. (Fig. #1)

5) Assemble a pair of WT’s (short turnbuckle). Remember to engage a ¼” of thread in both the ball link and the wire adapter.

6) Loop wire (9”ea.) through the wire adapter and crimp one end as close as possible, letting (1/8”) of wire rope hang out of the end of the crimp. (make 2 assemblies).

7) For servo arm on #1 servo use a 4/40 x 3/4” Shcs to secure the WT assembly on the bottom of the full arm. Using a 5/16” spacer to the 1-1/4” full arm (Use the outside hole). Then use a lock nut on the top of the full arm. (fig.#1)

8) Assembly the other 2 pulleys to the bellcrank (1-1/4” out from center) by placing the pulley on the pulley pivot then put a #4 FW on the 4/40 X 1/2” SHCS, place screw assembly thru the pulley assembly and tighten to the top of the Bellcrank using loctite. (Be very careful not to get loctite between the pulley and pulley pivot). Then use a lock nut on the bottom of the bellcrank. (Fig. #1). Also tighten the 10/32 lock nut on the bottom of the bellcrank pivot.

9) Y-harness the servos together and energize them (ZERO TRIM & SUB TRIM). Install the full arm with the pulleys on the bottom to #2 servo, Keeping the arm as close to 90 degrees to the tray as possible. Remember to position the arm 180 degrees to get the best possible alignment.

10) Install the full arm with the wire tensioners to #1 servo again as close to 90 degrees to the servo tray as possible.

11) Take a piece of scrape wood (pine) about ¾” thick and make a block that looks like the piece shown in Fig#2. Place it on the top of the tray and clamp it to the tray and against the Bellcrank position 90 degrees to the tray as shown in Fig.#2.

12) With the servo’s still energized wrap the wire rope around the outsides of the pulleys on the bellcrank than back around the pulleys on servo #2 and crimp of the ends as shown in fig.#2. Tighten up the cables just to get the sag out.

13) The wire tensioners (WT’s) going to the rudder are installed on the Top of the bellcrank.

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