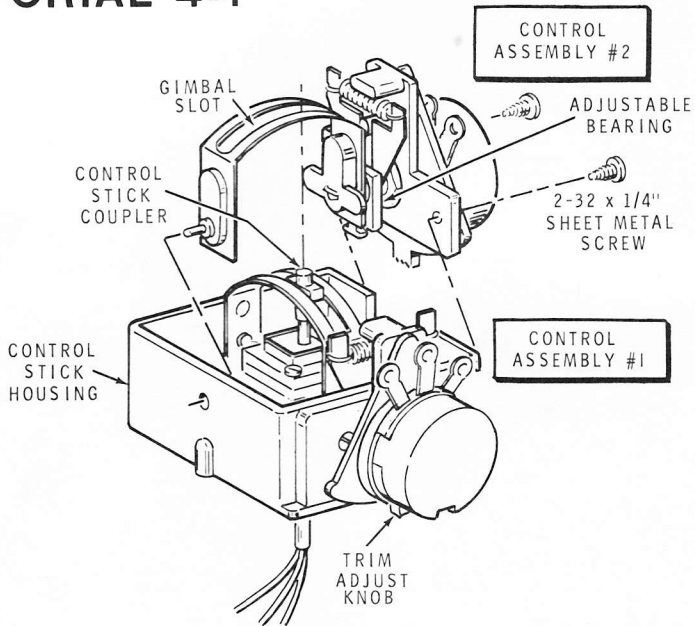


PICTORIAL 4-1



PICTORIAL 3-1



Refer to Pictorial 2-9 for the following steps.

Connect the wires from BO#6 as follows:

- () Gray wire to lug 3 of control BE (S-1).
- () Short black wire to lug 2 of control BE (S-1).
- () Either orange wire to lug 1 of terminal strip BD (S-1).
- () Other orange wire to lug 2 of terminal strip BD (S-1).
- () Remove the tape from the end of the black wire coming from BO#6. Then connect this wire to lug 4 of terminal strip BD (NS).
- () Prepare the end of the red wire coming from the battery. Then connect this wire to lug 4 of terminal strip BD (S-2).
- () Connect the violet wire coming from BO#11 to lug 1 of control BG (S-1).
- () Refer to the inset drawing on Pictorial 2-9 and connect either green wire coming from BO#10 to either indicated lug on switch BH (S-1).
- () Connect the other green wire coming from BO#10 to the other indicated lug on switch BH (S-1).

NOTE: The remaining wires will be connected later.

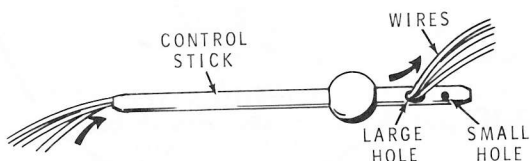
CONTROL STICK ASSEMBLY

Refer to Pictorial 3-1 (fold-out from Page 22) for an overall view of the control stick assembly as you perform the following steps.

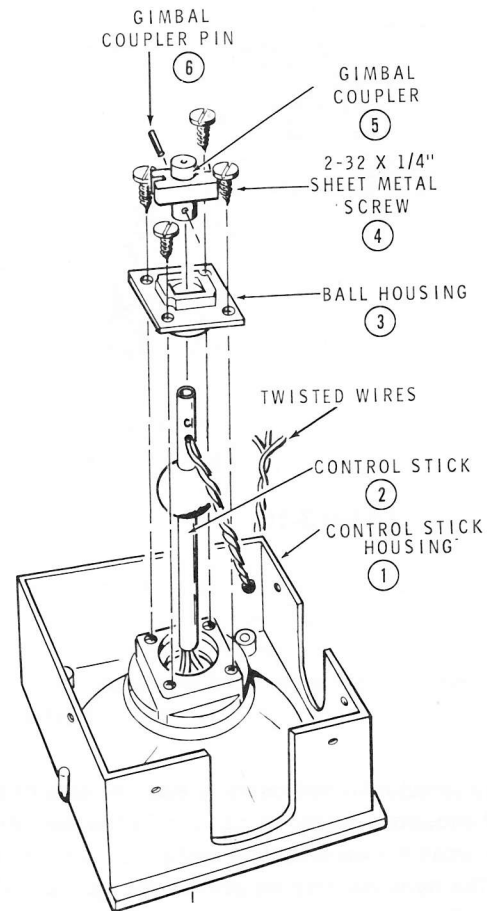
In the following steps you will put together the control stick assembly. Carefully assemble the parts as shown in each of the Details; be sure each part is in its proper place, and that nuts and screws are properly tightened. Before you perform each step, locate the necessary parts for that step.

- () Prepare the following wires:

7" small red 7" small black
7" small white



Detail 3-1A

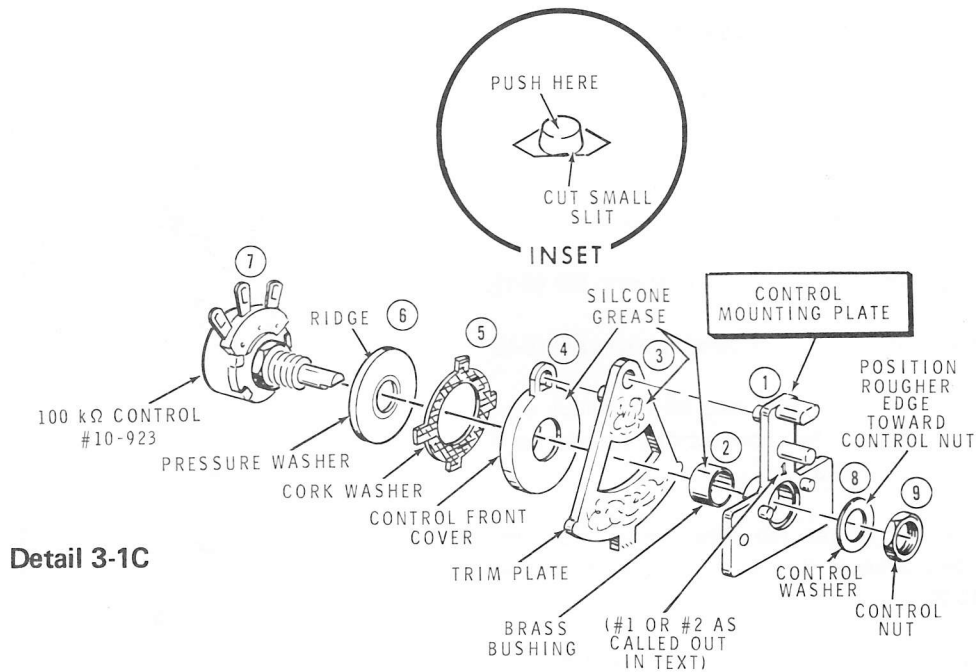


Detail 3-1B

- () Insert these wires through the control stick as shown in Detail 3-1A. Pull the wires through until equal lengths of wire are at either end of the stick.
- () Refer to Detail 3-1B and assemble a control stick assembly. Follow the numbered sequence.

NOTE: To operate properly, the control stick must move freely. Move the control stick knobs in a circular motion and loosen the ball housing screws if necessary.

- () Twist together the red, white, and black wires coming from the control stick. Then route these wires through the hole in the control stick housing.
- () Set the control stick housing aside until it is called for later.



Detail 3-1C

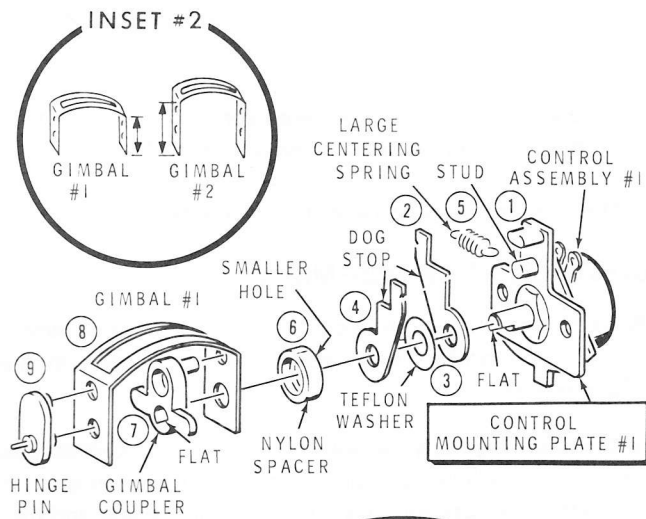
() Refer to Detail 3-1C and carefully examine each of the control mounting plates to be used in the next step. Note a small #1 on one plate and a #2 on the other plate (the numbers may be printed backwards). The #1 and #2 determines the number of the assembly. NOTE: Other parts may also have numbers on them, but these may be disregarded.

() Locate the container of silicone grease and open it as shown in the inset drawing on Detail 3-1C. Then as you assemble the control in the following steps, refer to the Detail and apply a thin layer of grease only where indicated. Be careful that you do not get silicone grease on anything else.

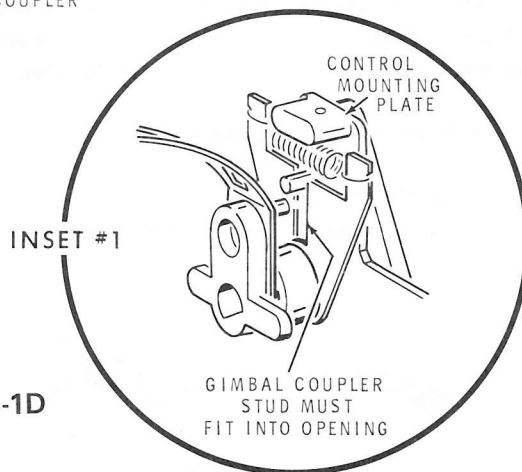
Refer to Detail 3-1C for the following steps.

() Assemble the #1 control assembly following the numbered sequence. Be sure to use silicone grease where indicated.

() Assemble the #2 control assembly following the same numbered sequence. Be sure to use silicone grease where indicated.

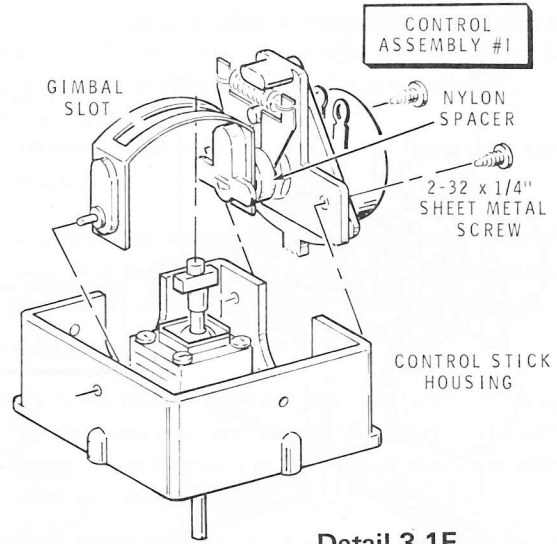


Detail 3-1D



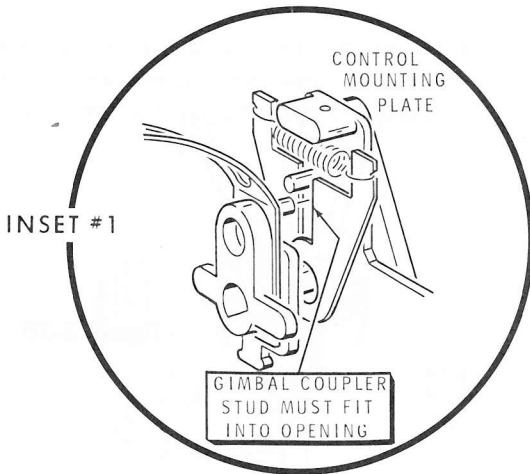
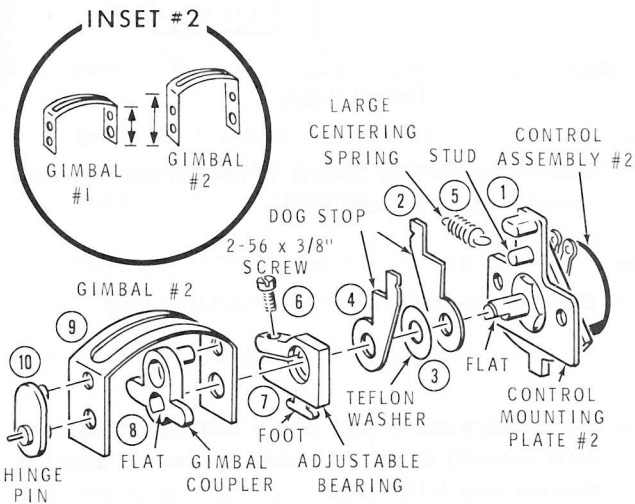
Refer to inset drawing #2 on Detail 3-1D and notice the difference between gimbals #1 and #2.

- () Assemble gimbal assembly #1 as shown in Detail 3-1D. It may be necessary to use some force to assemble the hinge pins and gimbal couplers to the gimbals in steps 7, 8, and 9.



Detail 3-1F

the control stick coupler into the gimbal slot, and fasten the control assembly with two 2-32 x 1/4" screws. The control mounting plate screw holes are made accessible by moving the trim plate knob one way or the other.

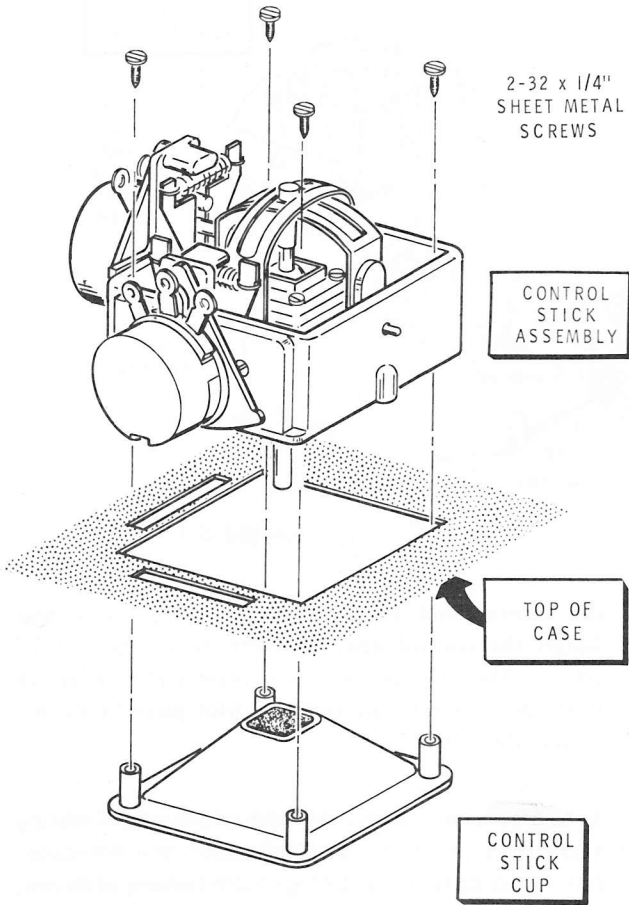


Detail 3-1E

- () Assemble a gimbal assembly #2 as shown in Detail 3-1E.
- () Refer to Detail 3-1F and mount the completed control assembly #1 with the nylon spacer (assembled in Detail 3-1D) in the following manner: Hook the hinge pin into its hole, position the rectangular portion of

- () Locate control assembly #2 with an adjustable bearing (assembled in Detail 3-1E). Position the adjustable bearing so its foot is pointing straight down, as shown, and tighten the adjustable bearing screw. The gimbal must now point straight up when the adjustable bearing foot points down as shown.
- () Loosen the adjustable bearing screw three complete turns. It may be necessary to pry the adjustable bearing apart with your screwdriver.
- () Mount the control assembly (assembly #2 with an adjustable bearing, assembled in Detail 3-1E) into the control stick housing position (#2). Position the remaining part of the control stick coupler into the gimbal slot and fasten the assembly with two 2-32 x 1/4" screws.

This completes the assembly of the control stick. When the control stick is moved to any position other than center and released, it should freely return to center. However, if the control stick binds or does not return to center, loosen the four ball-housing screws shown in Detail 3-1B. If this does not remedy the situation, make sure that #1 or #2 parts were used when they were called for. Also be sure the control stick coupler fits into the gimbal track properly as shown.



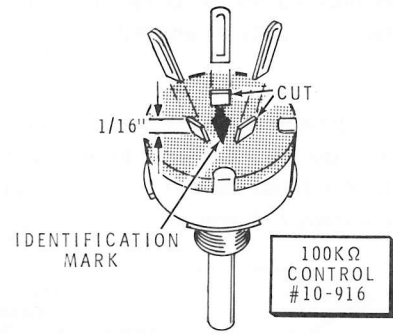
PICTORIAL 3-2

- () Refer to Pictorial 3-2 and install the control stick assembly in the case with a control stick cup and four 2-32 x 1/4" sheet metal screws.

Refer to Pictorial 3-3 for the following steps.

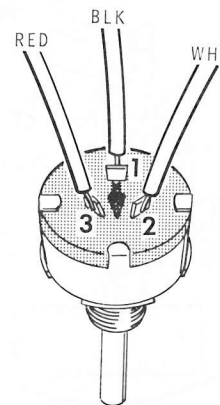
- () Start two 6-32 x 1/8" setscrews in the rudder control housing.
- () Slide the small end of the rudder control housing onto the control stick far enough so the lower setscrew can be tightened against the stick.
- () Move the control stick all the way to one corner. The bottom of the rudder control housing should be just above the cup. Readjust the rudder control housing up or down on the control stick if necessary.

Refer to Detail 3-3A for the following steps.



Detail 3-3A

- () Locate the 100 kΩ control (#10-916) and note the identification mark near lug 1.
- () Cut each lug on the control so it is 1/16" long.
- () Cut the bare end of each of the white, black, and red wires (coming out of the end of the control stick) so they are only 1/16" long.



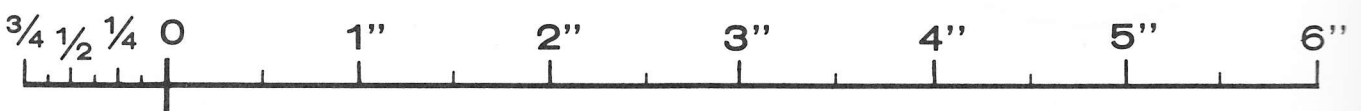
Detail 3-3B

Refer to Detail 3-3B and connect one end of the prepared wires to the 100 kΩ control as follows:

- () Black wire to lug 1 (S-1).
- () White wire to lug 2 (S-1).
- () Red wire to lug 3 (S-1).

Refer to Pictorial 3-3 for the following steps.

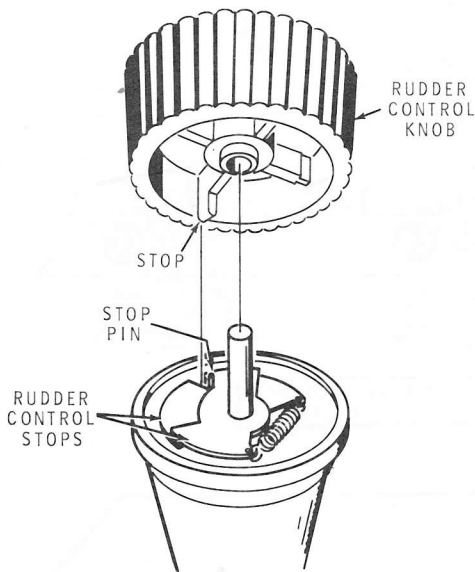
- () Install a steel spacer onto the control with a 1/4" nut.



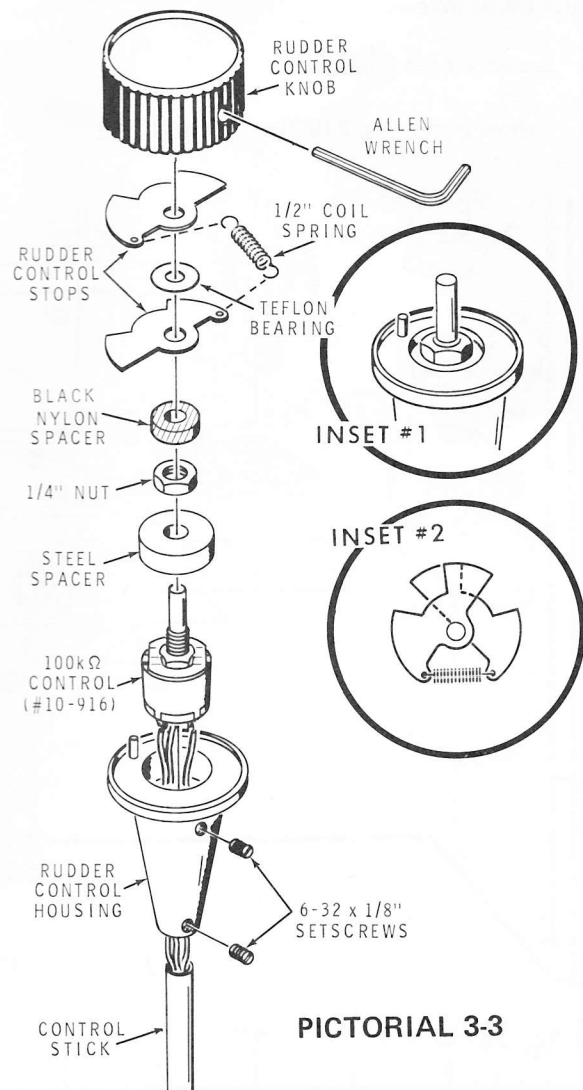
- () Slide the control into the rudder control housing while you gently pull the control wires through the stick from underneath.
- () Position the control all the way into the rudder control housing. See inset drawing #1 on Pictorial 3-3. Then tighten the setscrew.
- () Set the rudder control shaft to the center of its rotation.
- () Slide the black nylon spacer over the control shaft.
- () Locate both rudder control stops and the small coil spring. Attach each end of the spring in the small hole in each rudder control stop.
- () Place one of the rudder control stops over the control shaft.
- () Place the teflon bearing over the control shaft.
- () Place the other rudder control stop over the control shaft. Refer to inset drawing #2. This is the way the two stops should look.
- () Refer to Detail 3-3C and position the rudder control stops so they are on either side of the stop pin. In this position, the coil spring must be stretched.

NOTE: If the rudder control knob already has a setscrew in it, disregard the next step (and note that a 6-32 x 3/16" setscrew will be left over when the kit is completed).

- () Install a 6-32 x 3/16" setscrew in the rudder control knob.
- () Position the rudder control knob so its stop aligns with the stop pin in the rudder control housing, as shown. Then slide the knob down onto the control shaft.
- () Turn the rudder control knob back and forth slightly so the knob stop will seat between the rudder control stops. Then tighten the setscrew in the knob with the allen wrench supplied.
- () Turn the rudder control knob first one way and then the other way. You should feel a pull back to the center position as you turn it. If you do not feel this pull in both directions, repeat the previous three steps.



Detail 3-3C



PICTORIAL 3-3