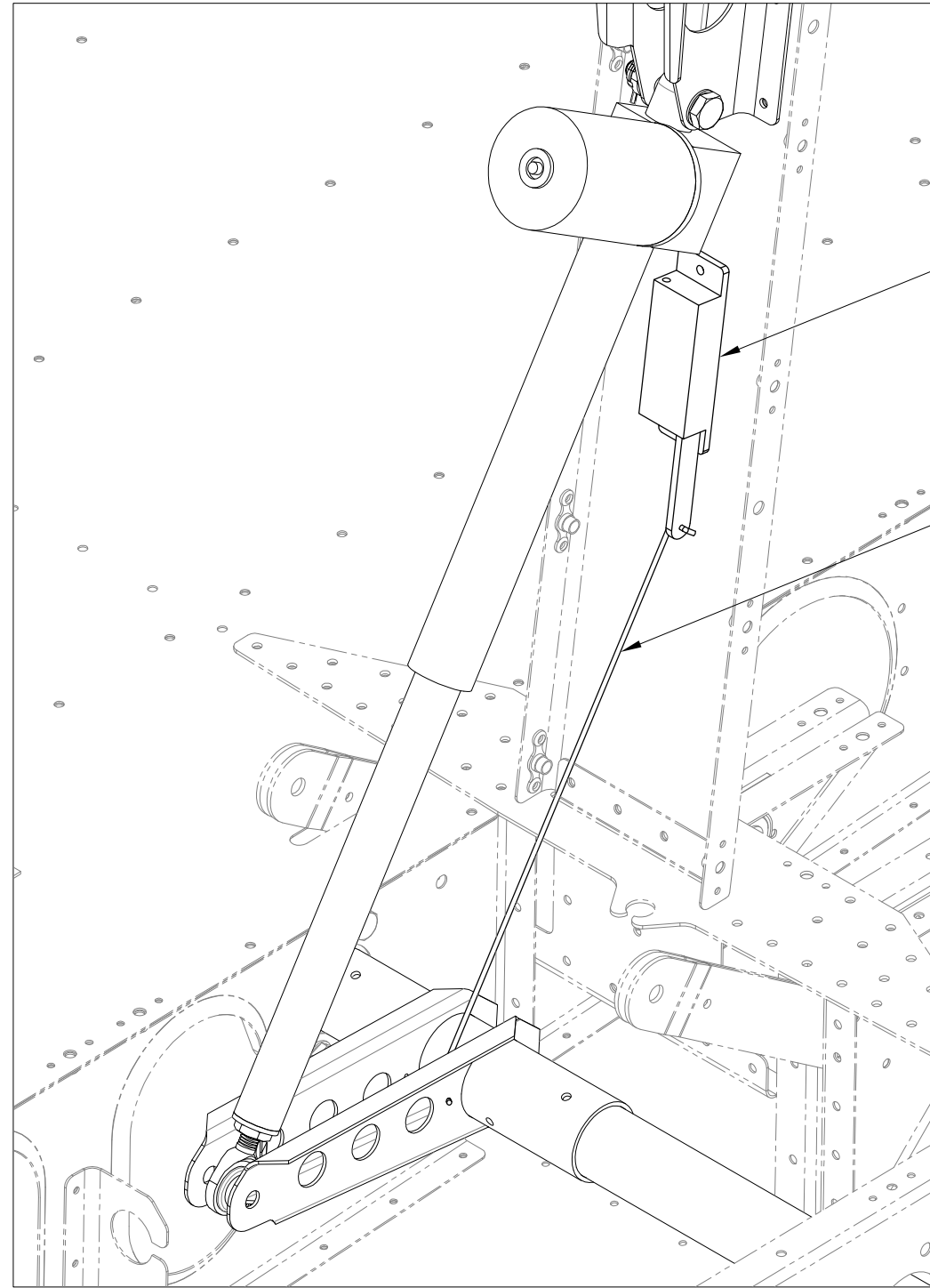


SECTION 54:

FLAP POSITION

SENSOR



ES MSTs POS-12
FLAP POSITION SENSOR

F-14127
FLAP POSITION PUSHROD



NOTE: There may be a 'dead spot' (at full retraction) in the flap position sensor resulting in 1.1 inches of travel vs. the advertised 1.2 in. However, only 1.0 inches of travel is required for this installation. As long as the sensor is installed per the plans there should be no effect on the resulting performance.

See Section 34 for information regarding the removal and re-installation of the WD-1013A Flap Crank and the Linear Actuator as required in this section.

Step 1: Detach the flap motor from the WD-1013A Flap Crank if necessary. Remove the four bolts attaching the flap crank to the torque tubes. Slide the torque tubes outward and remove the flap crank.

Step 2: Fabricate the F-14127 Flap Position Pushrod from the supplied SSP-063 pin using the dimensions called out in Figure 1.

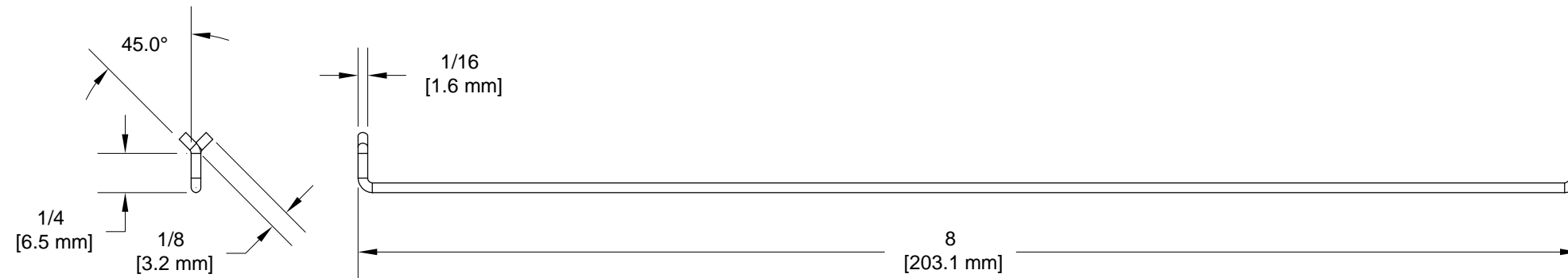


FIGURE 1: FLAP POSITION PUSHROD

Step 3: Drill one hole on the left side of the WD-1013A Flap Crank as shown in Figures 2 and 3.

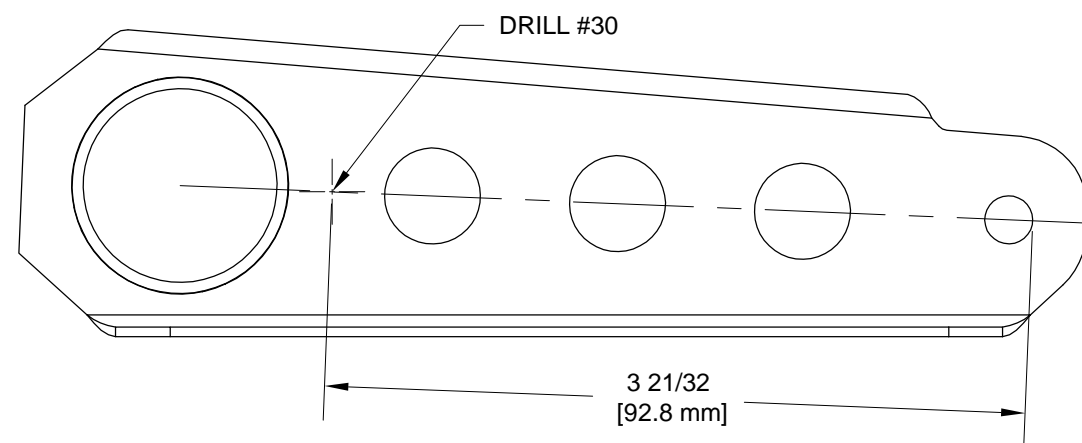


FIGURE 2: DRILL HOLE IN FLAP CRANK

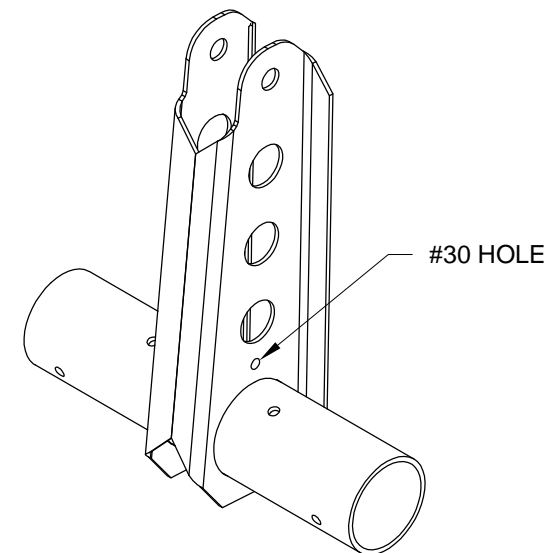


FIGURE 3: COMPLETED HOLE



NOTE: See Section 5.21 detailed information on molex connections and open barreled crimps before proceeding with this page. If inserted incorrectly Micro-Fit pins and sockets may be removed by using the TOOL-00001 Micro-Fit Extractor.

Step 1: Crimp ES-00047 Molex Micro-Fit Pins (20-24) onto the ends of the wires coming out of the ES MSTS POS-12 Flap Position Sensor.

Twist all the wires together coming from the sensor.

Step 2: Insert the pins into a ES-00144 Molex Plug, 3 Position Micro-Fit as shown in Figure 1 and Figure 2.

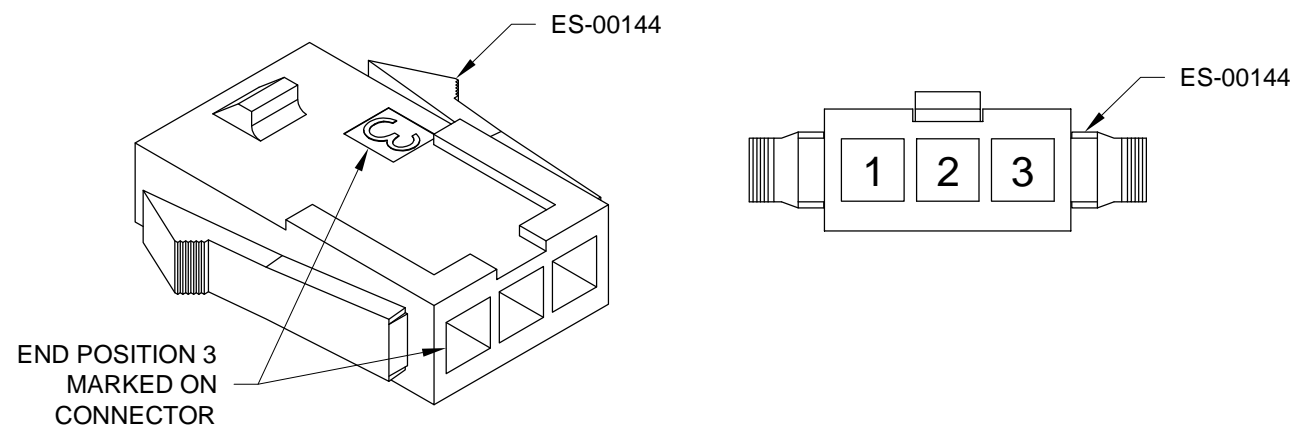
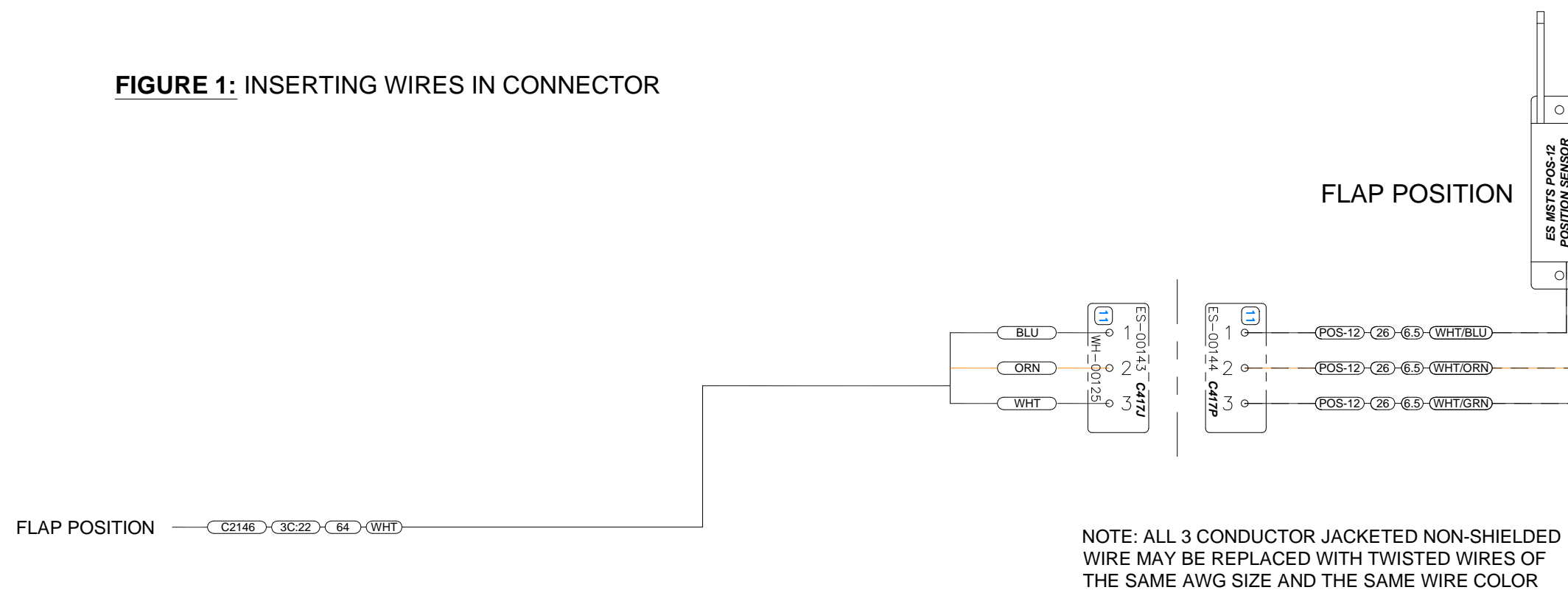


FIGURE 1: INSERTING WIRES IN CONNECTOR



NOTE: ALL 3 CONDUCTOR JACKETED NON-SHIELDED WIRE MAY BE REPLACED WITH TWISTED WIRES OF THE SAME AWG SIZE AND THE SAME WIRE COLOR

FIGURE 2: WIRE ROUTING FLAP POSITION SENSOR



Step 1: Install a 1/4 [3.2 mm] length of PT-PU-.066X.125 Flexible Plastic Tubing into the #30 hole in the WD-1013A Flap Crank to act as a bushing. See Figure 1.

Step 2: Insert the F-14127 Flap Position Pushrod through the plastic tubing in the flap crank as shown in Figure 1.

Step 3: Reinstall the flap crank to the fuselage and tighten the bolts.

Step 4: Run the linear actuator to the fully extended position as shown in Figure 2.

Step 5: Bolt the flap crank to the flap actuator rod end.

Step 6: Extend the ES MSTs POS-12 Position Sensor arm fully by hand as shown in Figure 2.

Step 7: Connect the position sensor arm to the free end of the flap position pushrod.

Step 8: Install the flap position sensor to the F-01405G Flap Motor Channel at the slotted holes using the hardware called out in Figure 2. When properly positioned the flap sensor arm is extended without any added tension on the arm from the pushrod.

Step 9: Attach the flap position sensor wires to the fuselage harness. See Figure 3.

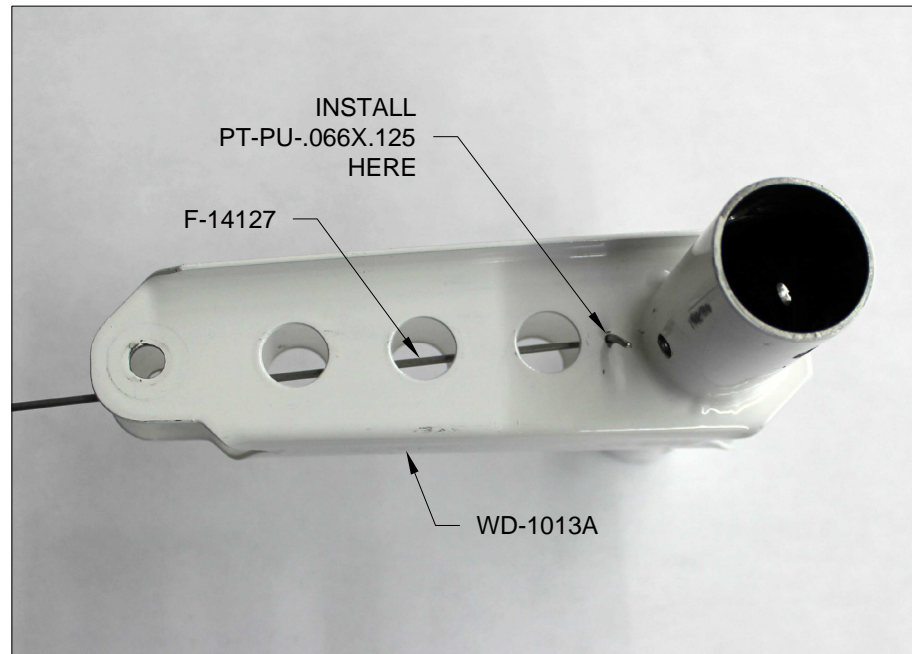


FIGURE 1: FLAP POSITION PUSHROD

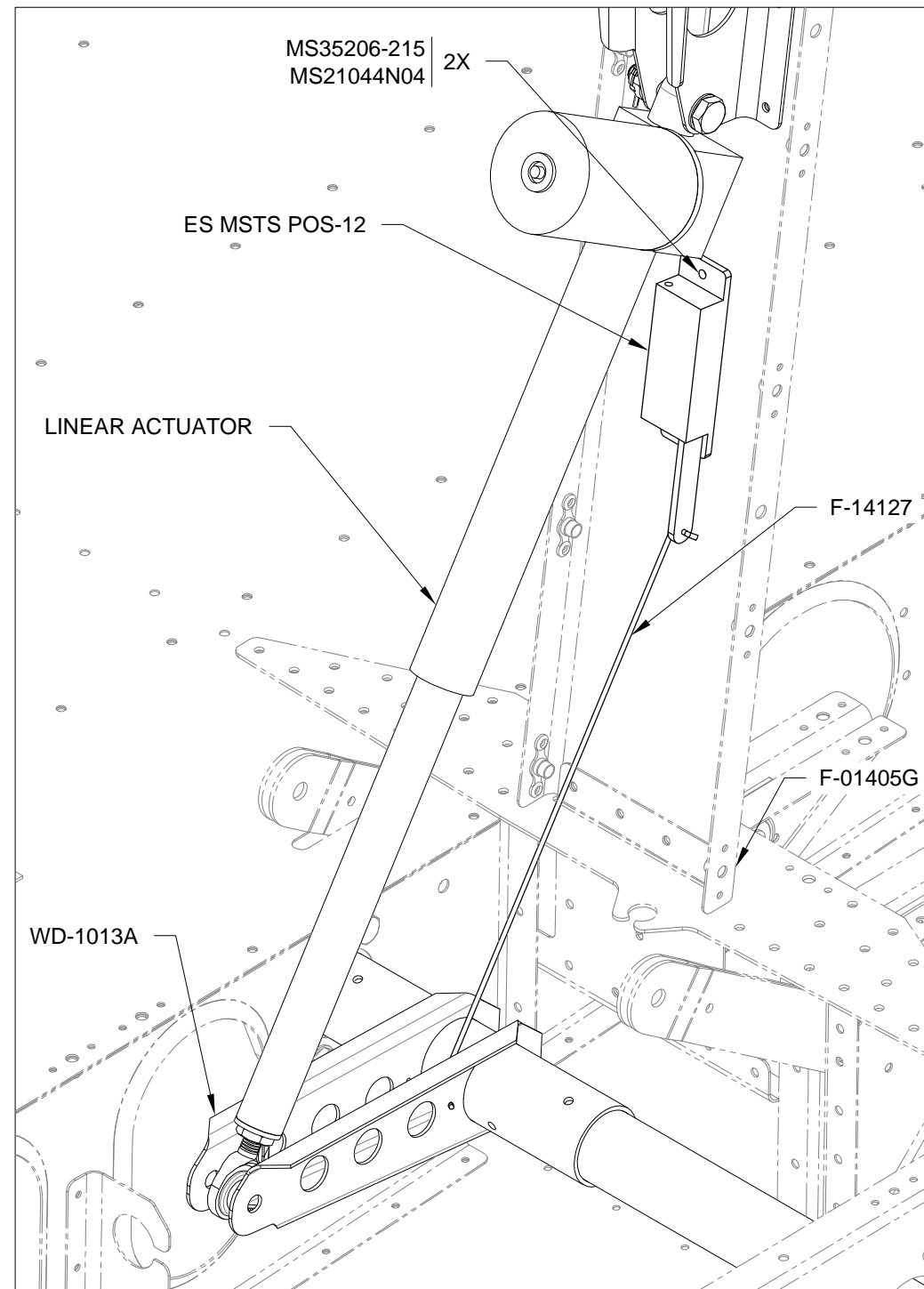


FIGURE 2: FLAP POSITION SENSOR INSTALLATION

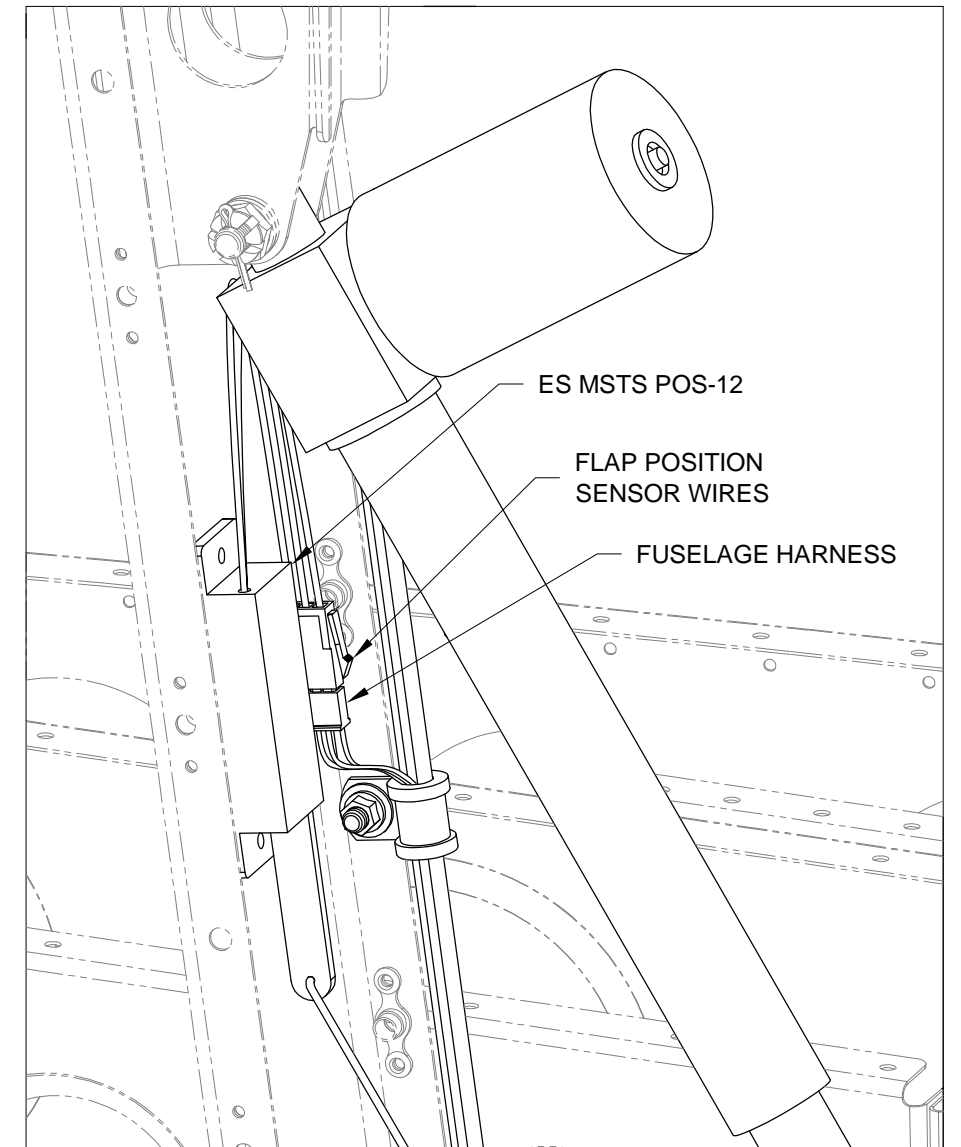


FIGURE 3: WIRE HARNESS ATTACH