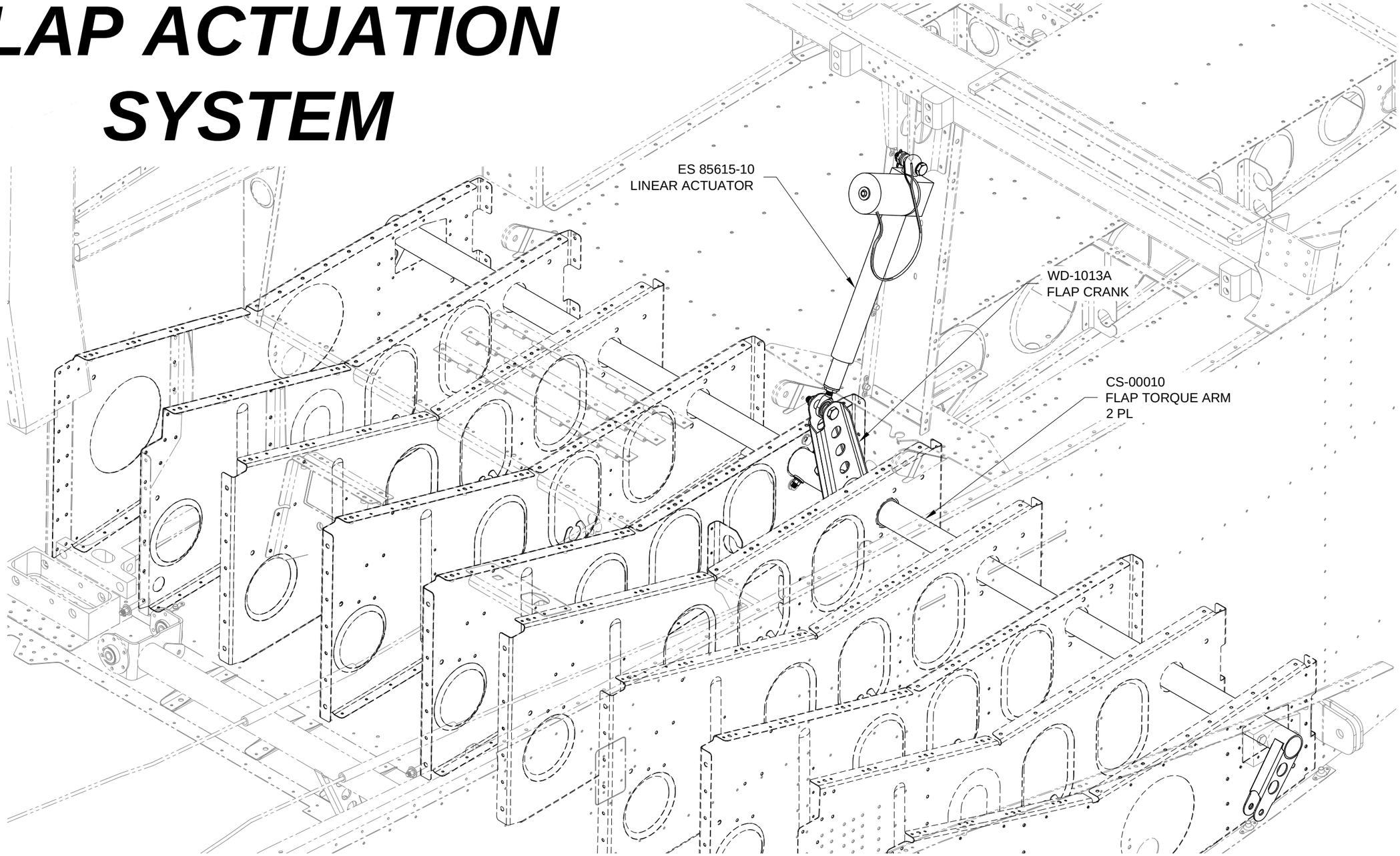
SECTION 34:
FLAP ACTUATION SYSTEM



NOTE: See Section 5 for additional construction process information.

Step 1: Drill 1/4 through the attachment points on the WD-1013A Flap Crank and the CS-00010 Flap Torque Arm to clear excess powder coat. File the ends of the flap crank tubes to smooth edges of powder coating. See Figure 1.

Step 2: Clamp the WD-1013A Flap Crank to a flat surface as shown in Figure 1.

Step 3: Insert the CS-00010 Flap Torque Arm into the W-00026 Alignment Template. Secure the flap torque arm to the alignment template using the hardware called out in Figure 1.

Step 4: Insert the CS-00010 Flap Torque Arm into the WD-1013A Flap Crank and position the W-00026 Alignment Template with the bottom edge flush against the flat surface as shown in Figure 1.

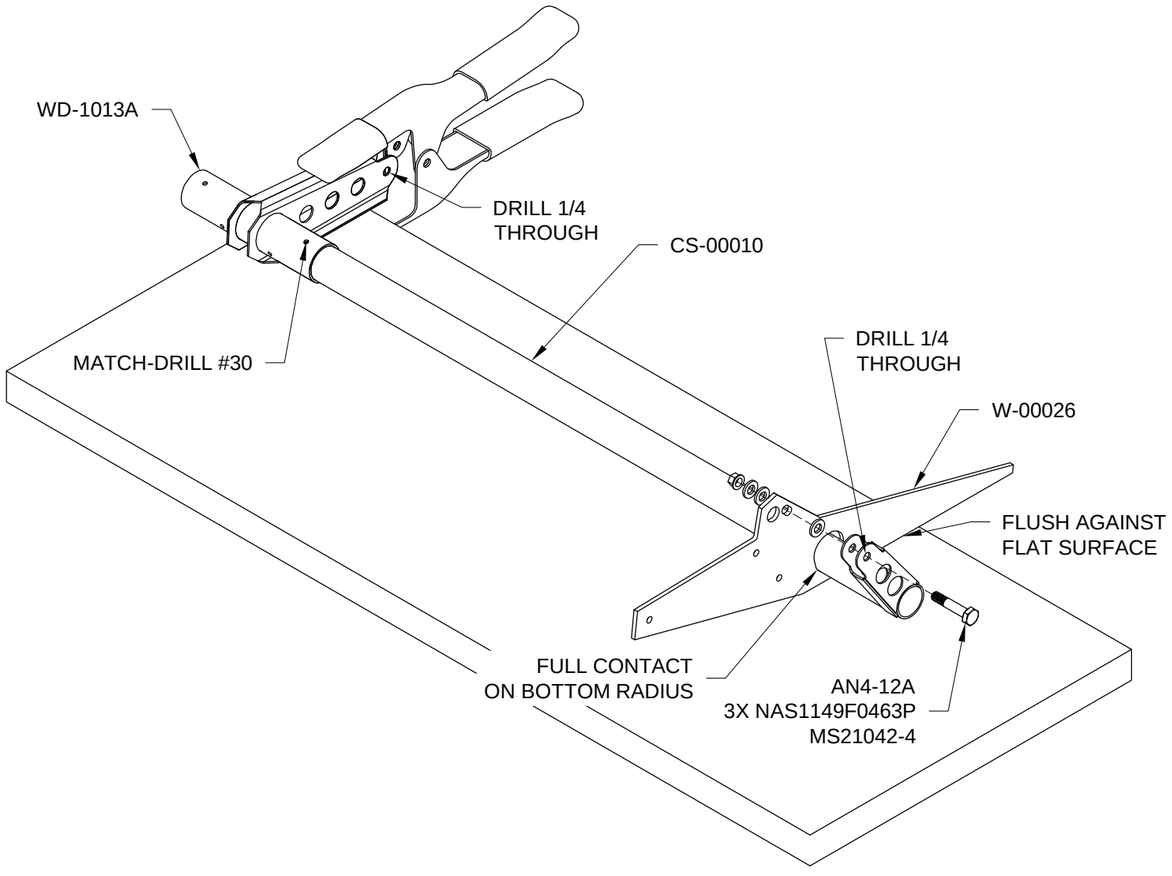


FIGURE 1: MATCH-DRILL FLAP TORQUE ARM
(LEFT SHOWN)

Step 5 Position the CS-00010 Flap Torque Arm laterally from the WD-1013A Flap Crank using the dimension provided in Figure 2.

Clamp the flap torque arm to the flat surface. Place the clamp as close to the W-00026 Alignment Template (shown in Figure 1) as possible, and secure the torque arm in the position indicated.

Step 6: Match-Drill #30 the WD-1013A Flap Crank into the CS-00010 Flap Torque Arm as indicated in Figure 1.

Step 7: Insert a cleco in the match-drilled hole in the WD-1013A Flap Crank and the CS-00010 Flap Torque Arm.

Match-Drill #30 the hole on the opposite side of the assembly as shown in Figure 3. Insert a cleco in the second hole and remove the clamp. See Figure 3.

Step 8: Match-Drill #30 the other two holes in the WD-1013A Flap Crank and CS-00010 Flap Torque Arm.

Step 9: Final-Drill #12 all the way through the holes on both sides of the WD-1013A Flap Crank and CS-00010 Flap Torque Arm as shown in Figure 3.

Step 10: Insert the hardware called out in Figure 4 into the WD-1013A Flap Crank and CS-00010 Flap Torque Arm.

Step 11: Remove the clecos from the WD-1013A Flap Crank and CS-00010 Flap Torque Arm. Final-Drill #12 all the way through both parts the holes indicated in Figure 4.

Disassemble and deburr parts.

Mark the drilled flap torque arm. Hereafter refer to this as the CS-00010-L Left Flap Torque Arm.

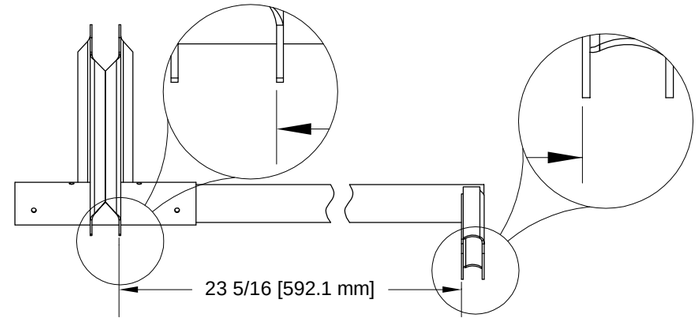


FIGURE 2: DISTANCE FLAP CRANK TO TORQUE ARM

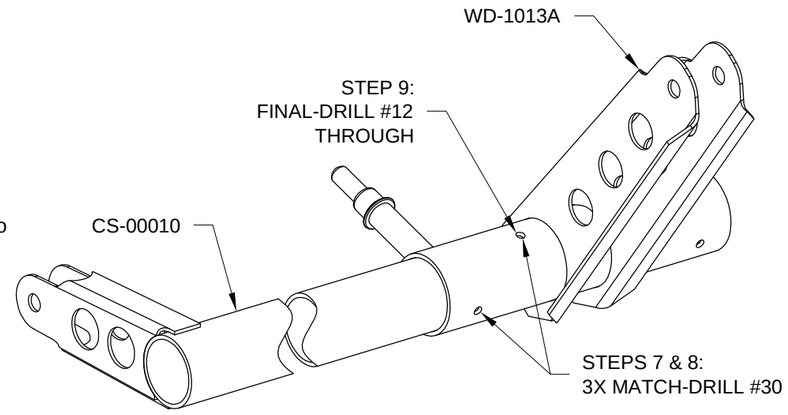


FIGURE 3: DRILLING FLAP CRANK AND TORQUE ARM
(LEFT SHOWN)

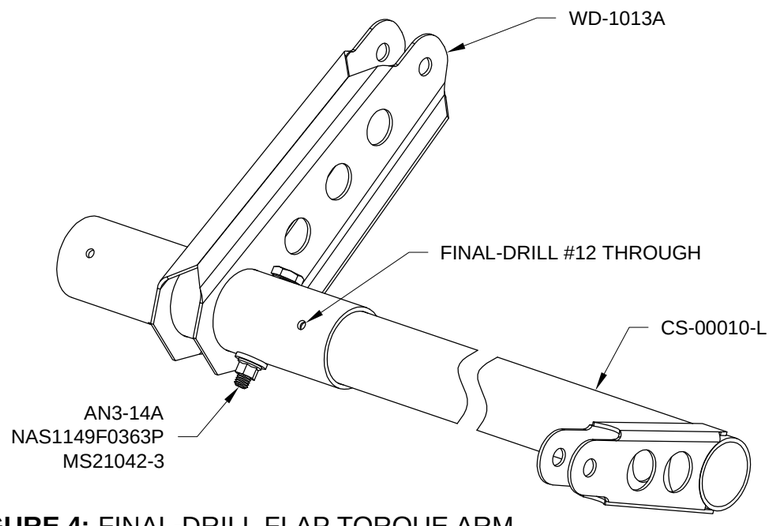


FIGURE 4: FINAL-DRILL FLAP TORQUE ARM

NOTE: The CS-00010-R Right Flap Torque Arm is a mirror image of the CS-00010-L Left Flap Torque Arm.

Step 1: Repeat the steps outlined on Page 34-02 on the opposite side of the WD-1013A Flap Crank for the second CS-00010 Flap Torque Arm. When complete refer to it as the CS-00010-R Right Flap Torque Arm. See Figure 1.

Step 2: Prime the inside of CS-00010-L & -R Flap Torque Arm tubes. See Section 5.1 for details on priming tubes.

Step 3: Sand off any burrs on the inboard end of the CS-00010-L & -R Torque Arm tubes and smooth down the edges of the powdercoat as shown in Figure 2.

Step 4: Apply wheel bearing grease to the CS-0010-L & -R Torque Arm tubes in the areas that are not powder coated. See Figure 2.

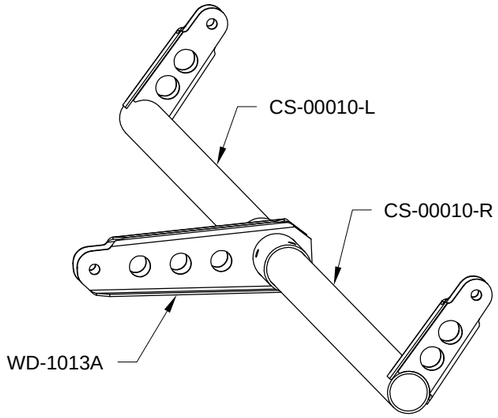


FIGURE 1:
FLAP ACTUATION ASSEMBLY
SHOWN UPSIDE DOWN

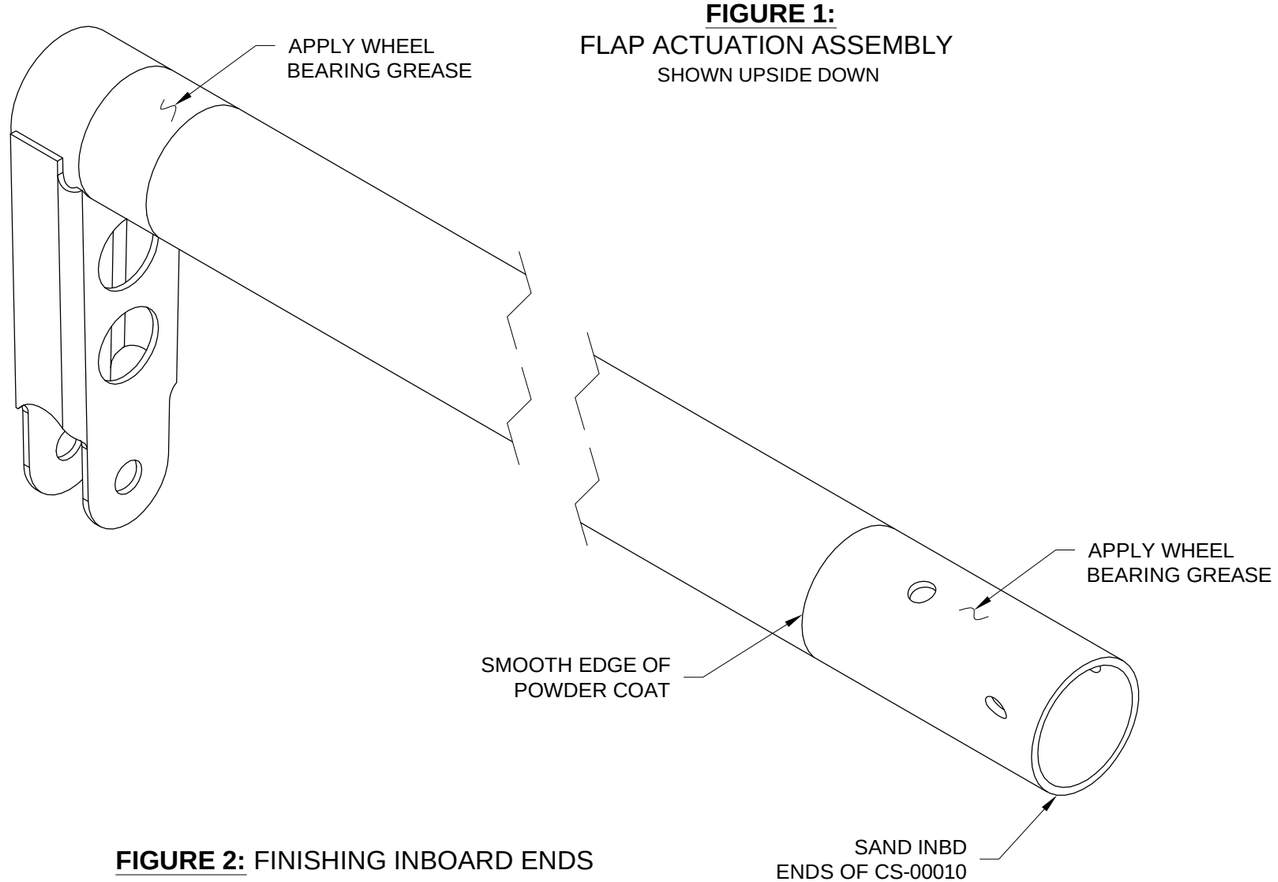


FIGURE 2: FINISHING INBOARD ENDS

Step 5: Slide the CS-00010-L Left Flap Torque Arm into the F-1030 OUTBD Bushing as shown in Figure 3.

Continue sliding the left flap torque arm inboard through the F-1030 INBD Bushing until it is flush with the inbd bushing's inbd face.

The CS-00014 Rudder Cable passes above the CS-00010-L Left Flap Torque Arm as shown in Figure 4.

Step 6: Repeat Step 5 for the CS-00010-R Right Flap Torque Arm on the other side of the fuselage.

The CS-00014 Rudder Cable passes above the CS-00010-R Right Flap Torque Arm as shown in Figure 4.

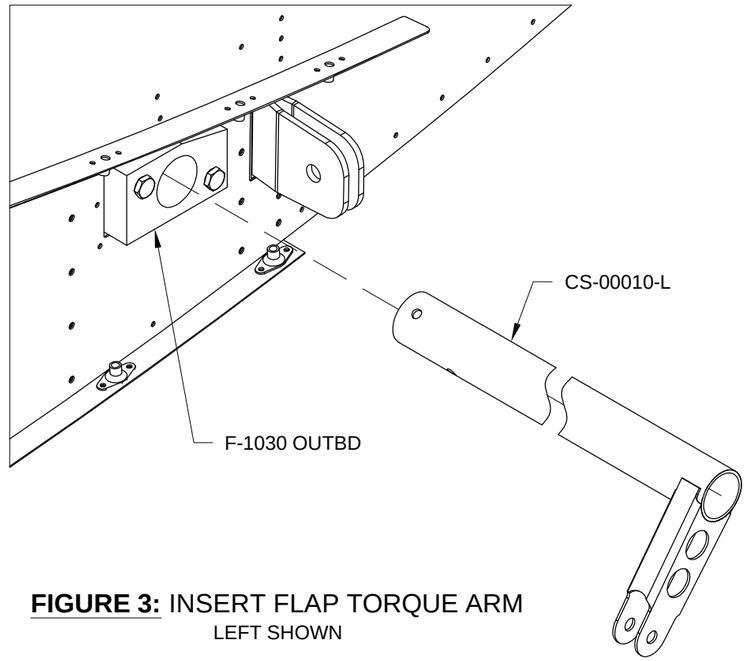


FIGURE 3: INSERT FLAP TORQUE ARM
LEFT SHOWN

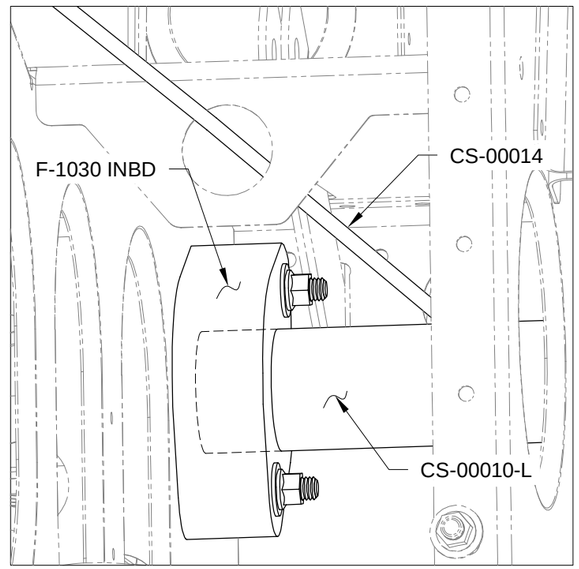


FIGURE 4: INSERT FLAP TORQUE ARM INBD
LEFT SHOWN

Step 1: Insert the WD-1013A Flap Crank into the tunnel in line with the axis of the two CS-00010-L & -R Flap Torque Arms and push the flap torque arms into the flap crank tube. See Figure 1.

Step 2: Align the bolt holes and insert the hardware called out in Figure 1 into the WD-1013 Flap Crank.

Test the installed flap control mechanism for smooth operation. It may resist movement but must not bind.

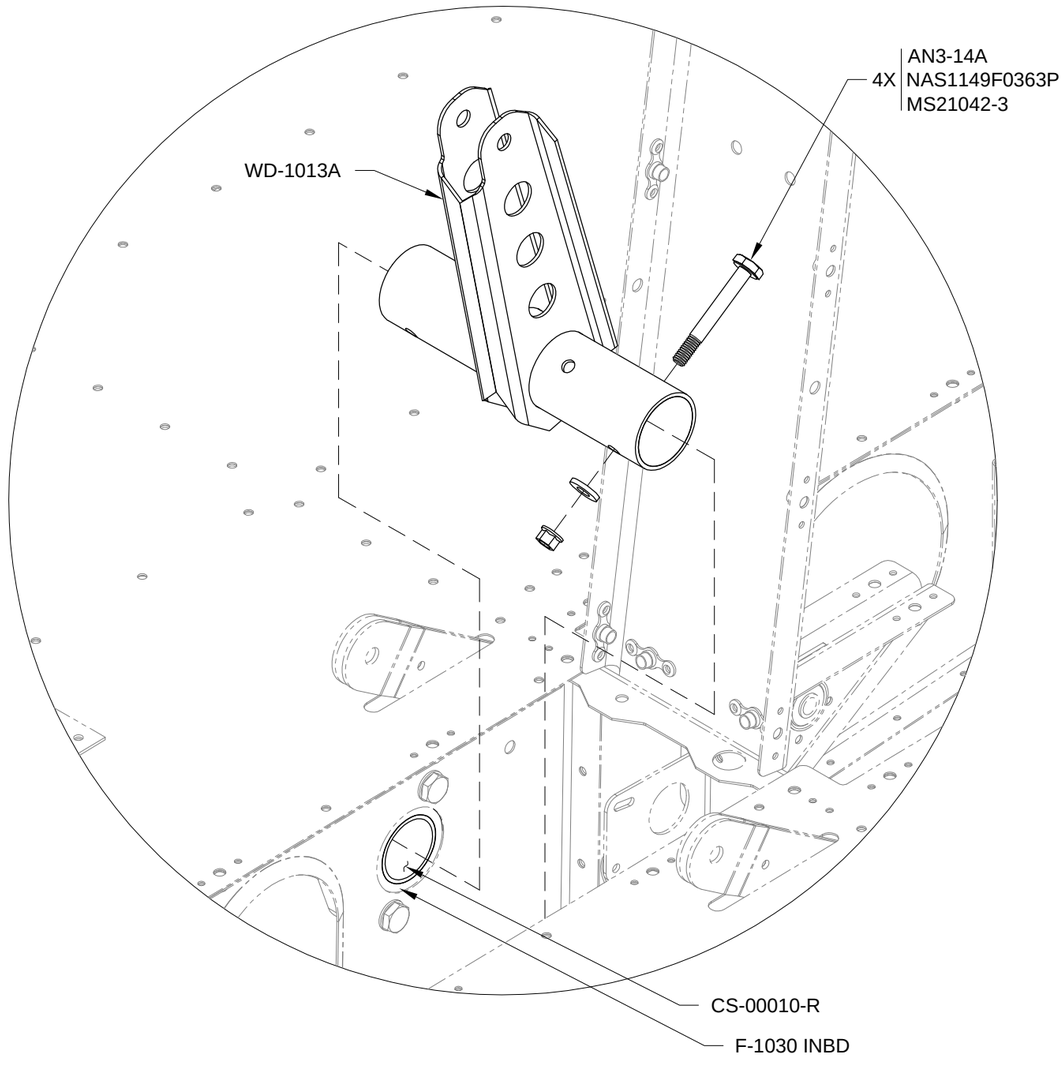


FIGURE 1: FLAP CONTROL HARDWARE

NOTE: Avoid removal of the ES 85615-10 Linear Actuator jam-nut and rod end since the length of the assembly has been set at the factory.

Step 3: Start with the drill bit perpendicular to the surface then tilt to the proper angle and drill 1/16 through the upper lip of the ES 85615-10 Linear Actuator extension shaft as shown in Figure 2. This hole should exit outside the profile of the jam-nut but within its outside diameter.

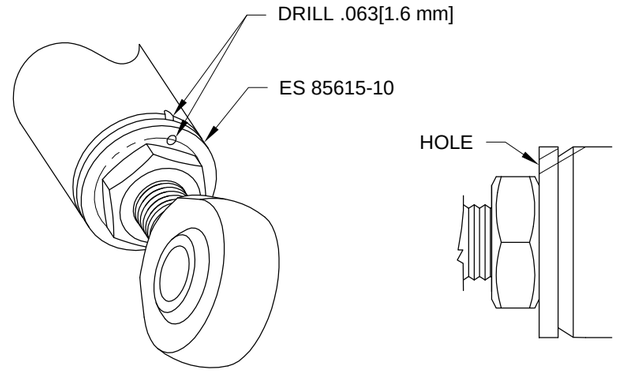


FIGURE 2: DRILLING ACTUATOR SHAFT

Step 4: Apply a small amount of wheel bearing grease to the bolt shown in Figure 3. Bolt the ES 85615-10 Linear Actuator lug to the F-01466-L & -R Flap Motor Brackets using the hardware called out in Figure 3. Do not over-tighten as the actuator must rotate freely.

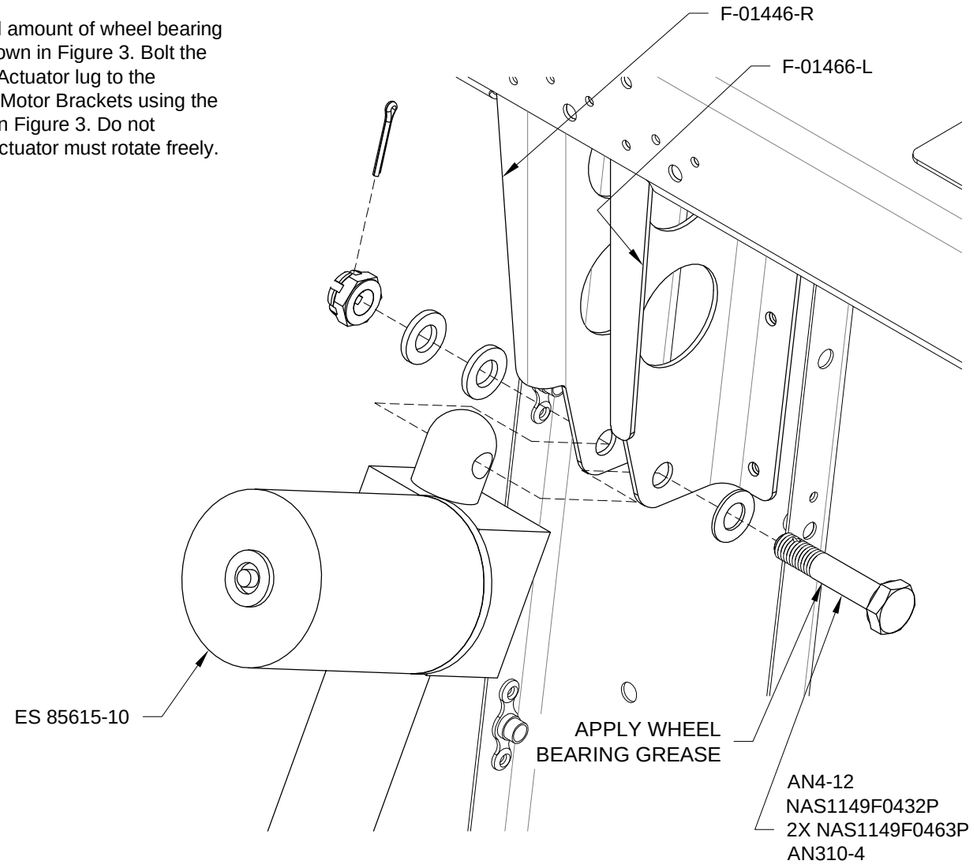


FIGURE 3: INSTALL ACTUATOR

Step 1: Bolt the ES 85615-10 Linear Actuator to the WD-1013A Flap Crank using the hardware called out in Figure 1.

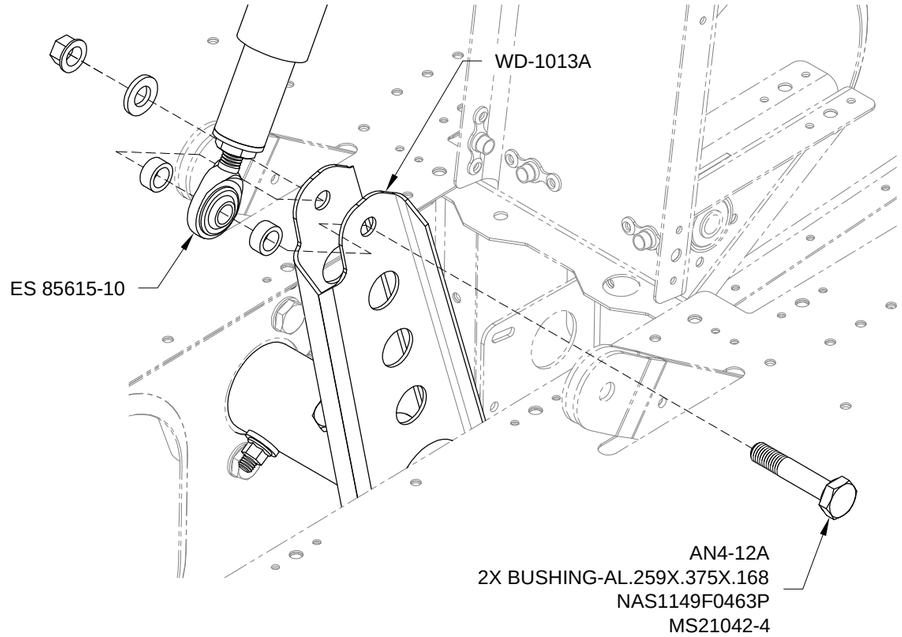


FIGURE 1: LOWER ACTUATOR ATTACHMENT

Step 2: Route safety wire through the .063[1.6 mm] hole in the ES 85615-10 Linear Actuator shaft, around the BUSHING-AL.259X.375X.168 and back to the actuator shaft, winding it securely as shown in Figure 2.

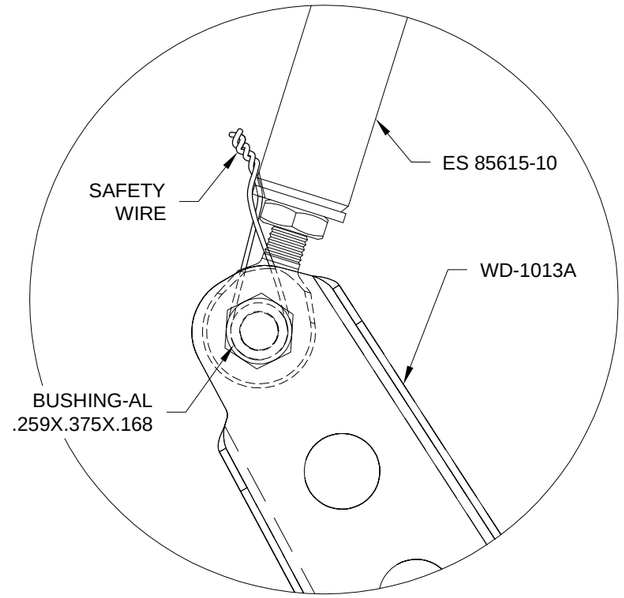


FIGURE 2: SAFETY WIRE LINEAR ACTUATOR

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