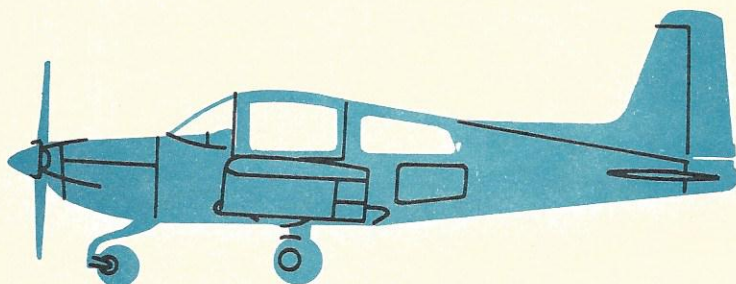
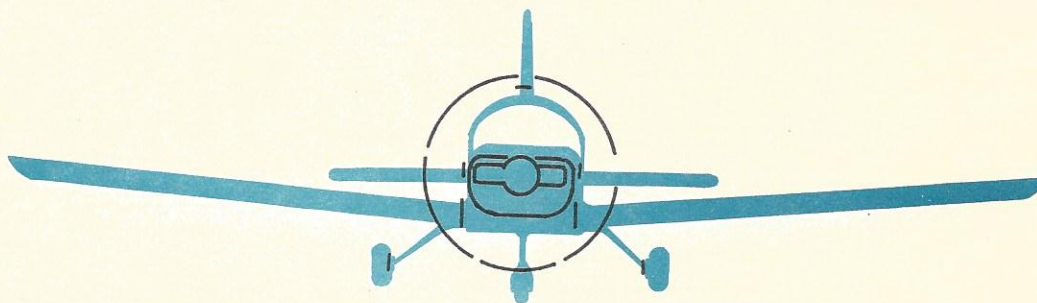


# SINGLE ENGINE AIRCRAFT SERVICE KIT NO. 146

**SUBJECT:** FLIGHT CONTROLS (ATA NO. 27) IMPROVED FLAP ACTUATOR, INSTALLATION OF



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22 NOVEMBER 1978



Gulfstream American



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**PILOT'S INFORMATION SHEET**  
**SINGLE ENGINE AIRCRAFT SERVICE KIT NO. 146**  
**INSTALLATION OF IMPROVED FLAP ACTUATOR**

There will be no cockpit procedural changes due  
to the incorporation of this Service Kit.

GULFSTREAM AMERICAN SINGLE ENGINE AIRCRAFT SERVICE KIT NO. 146

SUBJECT: Flight Controls (ATA No. 27) Improved Flap Actuator, Installation of

PURPOSE/DISCUSSION: The purpose of this Aircraft Service Kit is to provide instructions and parts to install the 604070-501 Actuator Assembly. The 604062-9 Actuator Assembly is no longer available.

DESCRIPTION: This kit contains a 604070-501 Actuator Assembly and associated wiring for this installation.

SPECIAL TOOLS/  
EQUIPMENT REQUIRED: Flap Rigging Fixture DE-0003-501

EFFECTIVITY:	<u>MODEL</u>	<u>SERIAL NUMBER</u>
	AA1	0001 and Subsequent
	AA1A	0001 and Subsequent
	AA1B	0001 and Subsequent
	AA1C	0001 through 0153 and 155 through 187

WEIGHT AND BALANCE:	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
	+ .9 lbs.	92.5	+ 83.25

THIS IS A DESIGN IMPROVEMENT. NO PARTS OR LABOR CREDIT WILL BE GIVEN.

PRICE: Prices are subject to change without notice:

List Price (B)

\$ 247.20

The following instructions, in step by step form, are written as a guide to perform this installation or modification. Compliance with safe maintenance practices as recommended in the Maintenance Manual and FAA regulations is mandatory.

FAA (DER) approval of this Service Kit has been granted.

MODIFICATION INSTRUCTIONS:

- A. Prepare the aircraft for safe maintenance as follows:
- A-1 Insure Master Switch is OFF.
  - A-2 Aircraft grounded.
  - A-3 Observe all safety precautions.
  - A-4 Gain access to the flap actuator by removing both seats, center console cover and cover from old up switch.

B. The following steps are for all AA1 and AA1A Aircraft:

- B-1 Remove the flap switch. Retain the 604066-1 Flap Handle, AN315-3R Nut and AN936B10 Washer.
- B-2 Disconnect wires 1CC6 and 1CC8 from the flap switch. Cut wires 1CC6 and 1CC8 near connector and install GC860K2 Caps (2) and stow wires. See Figure 1.
- B-3 Remove ground wire 1CC9 at ground point on spar. Retain hardware.
- B-4 Disconnect red wire from flap motor at knife splice connection to wire 1CC2.
- B-5 Remove 604062-9 Flap Actuator Assembly. Remove 604060-1 Bracket. Discard flap actuator and mounting bracket. See Figure 2.
- B-6 At up limit switch disconnect wires 1CC6 and 1CC8. Cut wires and install GC860K2 Caps. See Figure 1. Stow wires and remove limit switch and mounting bracket. Seal holes where bracket was mounted with suitable sealant.
- B-7 Install 604070-501 Actuator Assembly using hardware supplied in kit. See Figure 2 and Figure 4.

NOTE

Lube all moving parts and bolts with MIL-G-7711 Grease.

- B-8 Install ASK Wire Bundle Assembly (see Figure 3) and flap handle retained in Step B1 (see Figure 2). Do not remove flap switch from wire bundle.

CAUTION

Do not remove flap switch from wire bundle.

- B-9 Connect plug on wire bundle to plug on flap actuator assembly. Using GS805A-2 Splice, splice wire 1CC14 and wire 1CC2 together. See Figure 3.
- B-10 At ground point of wire 1CC9, clean and burnish if necessary to insure proper ground. Install wire 1CC9 using hardware retained in Step B-3.
- B-11 Using TY-27M Ty-Rap secure wire bundle to spar.

- C. The following steps are for all AA1B aircraft and AA1C aircraft 0001 through 0153, and 0155 through 0187:
- C-1 Remove the flap switch. Retain 604066-1 Flap Handle, AN315-3R Nut and AN936B10 Washer.
  - C-2 Disconnect wires 1CC6 and 1CC8 from flap switch. Cut wires 1CC6 and 1CC8 near connector and install GC860K2 Caps (2) and stow wires. See Figure 1.
  - C-3 Remove ground wire 1CC9 at ground point on spar. Retain hardware.
  - C-4 Cut wire 1CC14 at convenient point near existing flap actuator. See Figure 1.
  - C-5 Remove 604062-9 Flap Acuator Assembly. Remove 604060-1 Bracket. Discard flap actuator and mounting bracket. See Figure 2.
  - C-6 At up limit switch disconnect wires 1CC6 and 1CC8. See Figure 1. Cut wires and install GC860K2 Caps (2). Stow wires and remove limit switch and mounting bracket. Seal holes where bracket was mounted with suitable sealant.
  - C-7 Install 604070-501 Actuator Assembly using hardware supplied in kit. See Figure 2 and Figure 4.

NOTE

Lubricate all moving parts and bolts with MIL-G-7711 Grease.

- C-8 Install ASK wire bundle assembly (see Figure 3) and flap handle retained in Step C1 (see Figure 2). Connect plug on wire bundle to plug on flap actuator assembly. See Figure 3. Do not remove flap switch from wire bundle.

CAUTION

Do not remove flap switch from wire bundle.

- C-9 Splice wire 1CC14 using GS805A2 Splice to wire 1CC14 cut in Step C-4. See Figure 3.
  - C-10 At ground point of wire 1CC9, clean and burnish if necessary to insure proper ground. Install wire 1CC9 using hardware retained in Step C-3.
  - C-11 Using TY-27M Ty-Rap secure wire bundle to spar.
- D. Rigging Instructions for all AA1, AA1A, AA1B aircraft and AA1C aircraft 0001 through 0153, and 0155 through 0187:
- D-1 Using Flap Rigging Fixture DE-0003-501 set down limit switch to  $30^{\circ} \pm 2^{\circ}$  by holding flap switch in down position. Flaps should be within  $1^{\circ}$  of each other. If required, loosen lock nuts and adjust rod ends to provide for equal extension. Tighten locknuts. Refer to Maintenance Manual if necessary for location of rod ends.
  - D-2 Using flap switch, bring flaps up to  $0^{\circ} \pm 2^{\circ}$  and set up limit switch at this setting.

NOTE

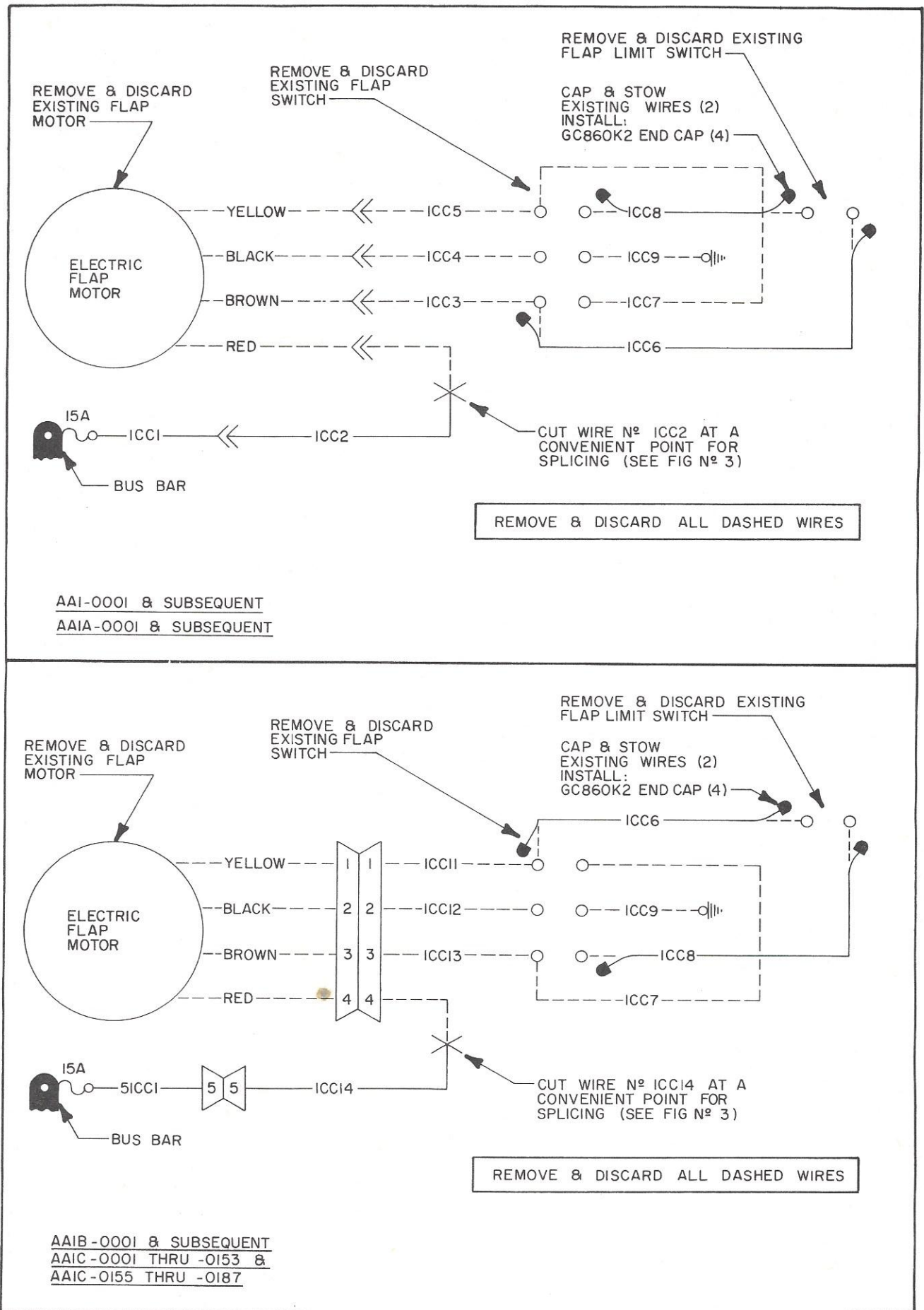
Flaps should be operated intermittently to the  $0^{\circ} \pm 2^{\circ}$  position.

- D-3 Cycle flaps from full up to full down several times. Recheck settings using Rigging Fixture DE-0003-501, insuring proper settings of limit switches and equal extension (1° of each other).
- D-4 With flaps in up position, set flap position indicator  $.08 \pm .06$  from forward end of the slot.
- E. Rework the Center Console as follows:
  - E-1 Using dimensions shown in Figure 2, cut a hole in the left side of the console to allow flap motor to protrude. Slot at top is for clearance of wiring. See Figure 2.
  - E-2 Reinstall cover over old up switch, center console and seats.
- F. Return aircraft to flight status.
- G. Record compliance in the aircraft's log book.

PARTS REQUIRED PER AIRCRAFT:

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
604070-501	Actuator	1
GS805A-2	Splice	1
LP221-11	Screw	2
AN960-10L	Washer	4
AN3-10A	Bolt	1
140604062-4	Bushing	1
AN364-1032	Nut	1
AN960-416	Washer	4
AN960-416L	Washer	2
GC860K2	Cap	4
ASK 146	Wire Bundle Assembly	1
TY-27M	Ty-Rap	1







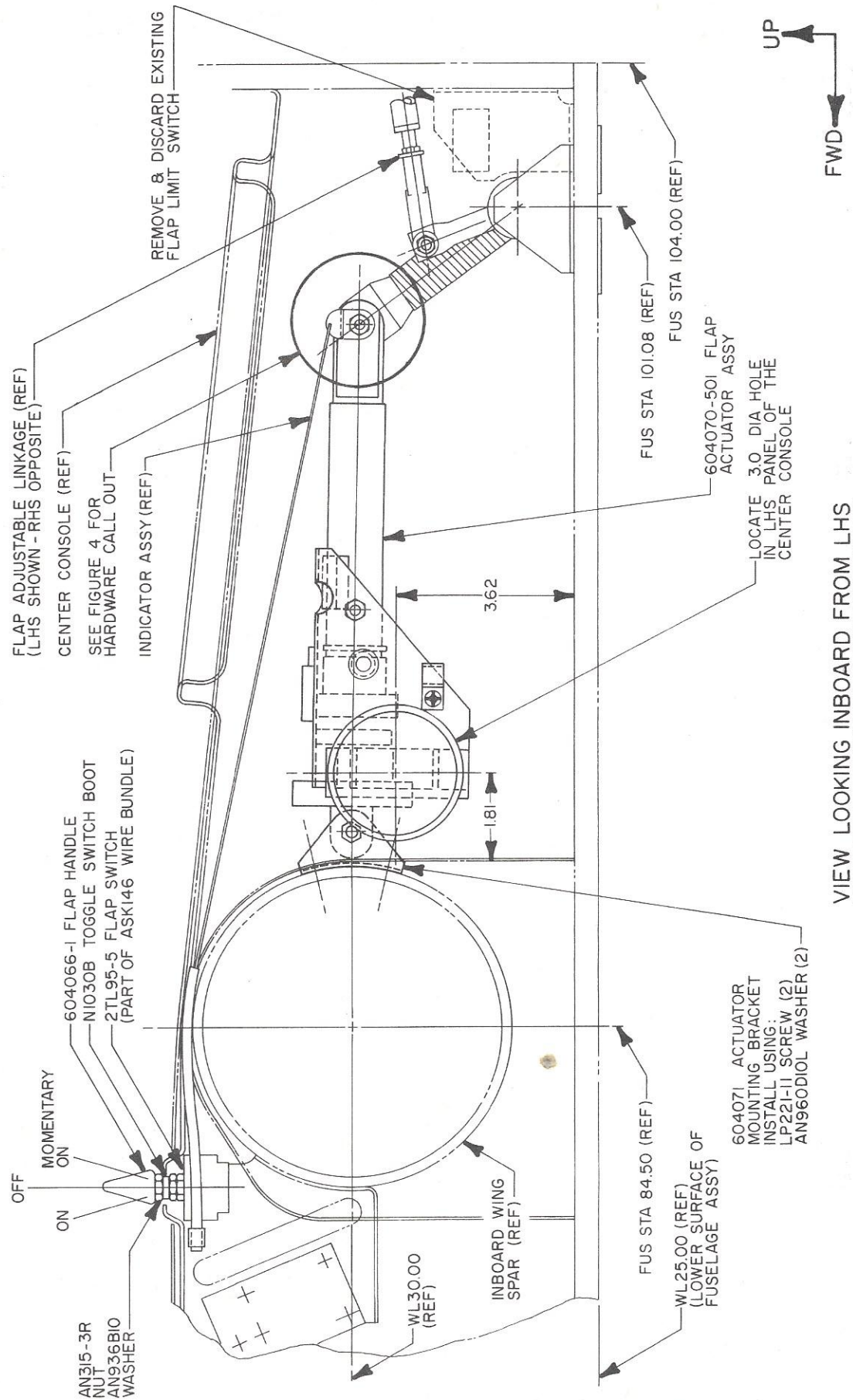


FIGURE 2

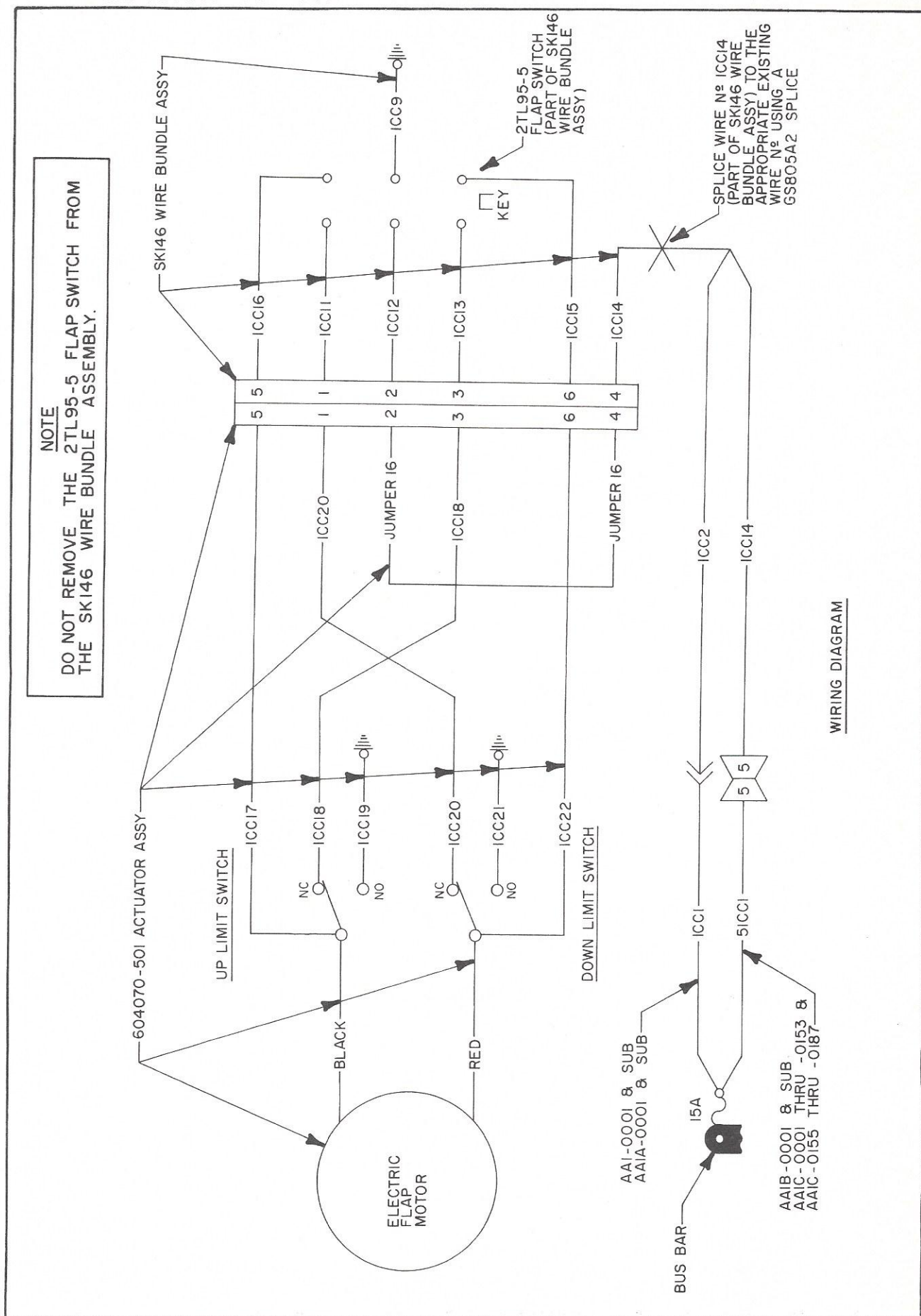
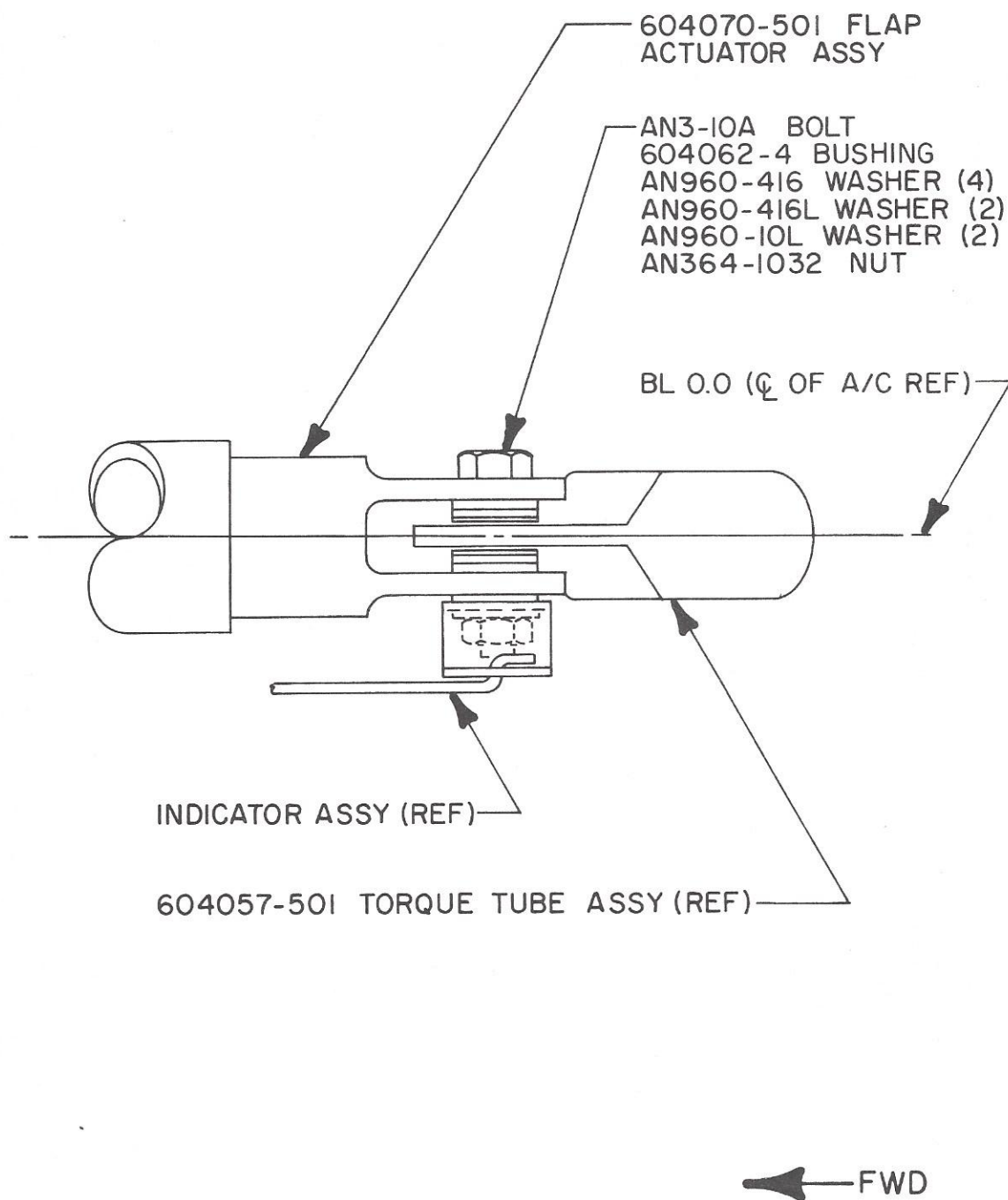


FIGURE 3



VIEW LOOKING DOWN

FIGURE 4