

MANDATORY SERVICE BULLETIN**NUMBER:** SB14-05**REVISION:** 00**DATE:** June 12, 2014**SUBJECT:** FLAP ACTUATOR DRIVE CABLE NUT TORQUE**EFFECTIVITY:**

KODIAK® 100 Series Aircraft Serial Numbers: 100-0001 thru 100-0085

SUMMARY:

The accompanying Field Service Instruction provides guidance for inspecting the flap actuator drive cable nuts, replacing the flap actuator drive cable if damage is found, and re-torquing the drive cable nuts to the correct value.

COMPLIANCE:

This Mandatory Service Bulletin must be complied with during or before the next 100 Hour Inspection or Annual Inspection, whichever comes first.

ATTACHED DOCUMENTS:

Document #:	Document Title:
FSI-059	FLAP ACTUATOR DRIVE CABLE NUT TORQUE

FAA APPROVAL STATUS:

The instructions attached to this Service Bulletin have demonstrated compliance with all applicable Federal Aviation Regulations and are approved by the Federal Aviation Administration.

CREDIT AND WARRANTY INFORMATION:

Quest will reimburse up to 1.5 hours of labor costs associated with the inspection portion of this bulletin. Refer to Quest's web site for information on submitting invoices for reimbursement.

If damage is found, refer to the SPECIAL INSTRUCTIONS section of this bulletin.

Quest Customer Service**Service Bulletin: SB14-05****Phone: (208)263-1111 Toll Free: 1(866)263-1112****Email: Customerservice@questaircraft.com****SPECIAL INSTRUCTIONS:**

If damage requiring replacement of flap actuator drive cable is found, Quest will supply qty. (1) PN 100-621-0101 and/or qty. (1) PN 100-621-0106 per aircraft, at no cost to owner, and reimburse up to 2 hours of labor costs associated with the cable replacement portion of this bulletin. Contact Quest Customer Service to place order, and refer to Quest's web site for information on submitting invoices for reimbursement.



FIELD SERVICE INSTRUCTION

TITLE: Flap Actuator Drive Cable Nut Torque
SERIAL RANGE: 100-001 thru 100-0085
JASC CODE: 2750

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SUBJECT

This Field Service Instruction provides guidance for inspecting the flap actuator drive cable nuts, replacing the flap actuator drive cable if damage is found, and re-torquing the drive cable nuts to the correct value.

AFFECTED MANUALS AND PUBLICATIONS

None.

INDUSTRY REFERENCES

None.

WEIGHT AND BALANCE

None.

MANPOWER

The estimated man-hours and minimum number of persons required to perform this Field Service Instruction are listed below. The "Minimum Persons" refers only to maintenance personnel or installers, and unless otherwise specified within this instruction does not include additional personnel that may be needed solely to comply with safety requirements (for example, safety observers that are not performing tasks within this instruction). It is the responsibility of maintenance personnel to comply with safety requirements, including having a safety observer available as needed.

Estimated Man-hours

Inspection only: 1.5 hours

Inspection and cable replacement: 3.5 hours

Minimum Persons

1 person

If more than the minimum personnel perform this instruction, the actual man-hours required may be reduced due to increased efficiencies. As appropriate, Quest encourages the use of additional personnel; man-hour estimates are based on the minimum personnel required.

RECORD OF COMPLETION

Update the KODIAK 100 Aircraft Maintenance Log Books.

QUEST Aircraft Company, LLC
1200 Turbine Drive
Sandpoint, ID 83864



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REVISION RECORD

REV	PAGE	CHANGE DESCRIPTION
00	All	Initial Release



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1. Special Safety Instructions

1.1 Warnings

Failure to comply with “Warnings” contained in this instruction may result in financial loss, significant delay in the completion time, and/or serious injury to personnel.

1.2 Cautions

Failure to comply with “Cautions” contained in this instruction may result in the destruction of components, unnecessary complications, the need to reverse completed work, and/or delays in the completion time.

1.3 Notes

“Notes” are provided when additional information may lead to an increase in efficiency.

2. Parts, Tools, and Equipment

The following tables describe the parts, tools, and equipment necessary to successfully complete this instruction. Where applicable, reference to drawings provided with this instruction is provided.

Table 2-1: Parts and Tools Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
N/A	N/A	N/A	N/A	N/A	N/A

Table 2-2: Consumables Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
N/A	N/A	N/A	N/A	N/A	N/A

Table 2-3: Serial-Number-Specific Parts Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
N/A	N/A	N/A	N/A	N/A	N/A

Table 2-4: Parts and Tools NOT Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-1-1	100-621-0101	1	Left Inboard Drive Cable	N/A	N/A
2-1-2	100-621-0106	1	Right Inboard Drive Cable	N/A	N/A
2-1-3	Commercially Available	N/A	Zip Ties	N/A	N/A

3. General

The flap actuator drive cable nuts at the gearbox controller must be inspected on both sides of the aircraft to verify that the nuts have not been damaged by over-torquing during installation or maintenance. This inspection should be completed at the next annual inspection or if maintenance is performed on the flap actuation system prior to the annual inspection.

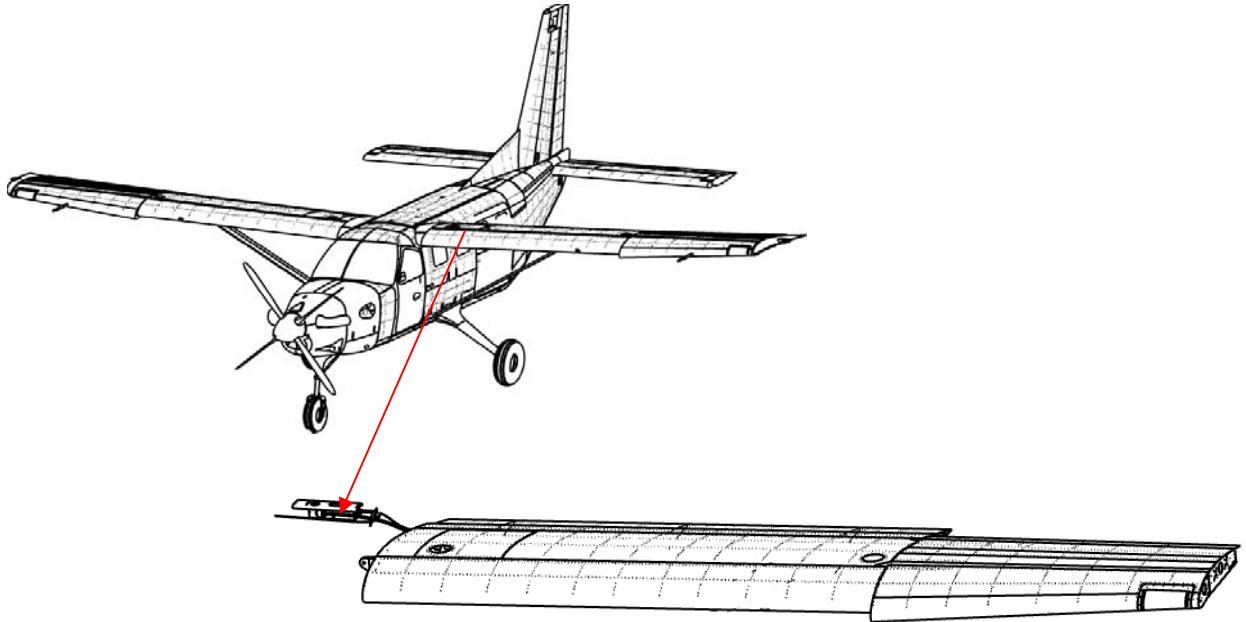


Figure 3-1: Overview

4. Preparation

1. Remove the main cabin ceiling access panel to access the flap gearbox controller in the cabin ceiling.
2. Turn the master power switch to the ON position.
3. Move the flaps to the 35° position.
4. Turn the master power switch to the OFF position.

5. Instructions

5.1 Inspect Drive Cable Nuts

1. Remove the safety wire at the flap actuator drive cable nut.
2. Disconnect the flap actuator drive cable nut at the flap gearbox controller (**Figure 5-1**).

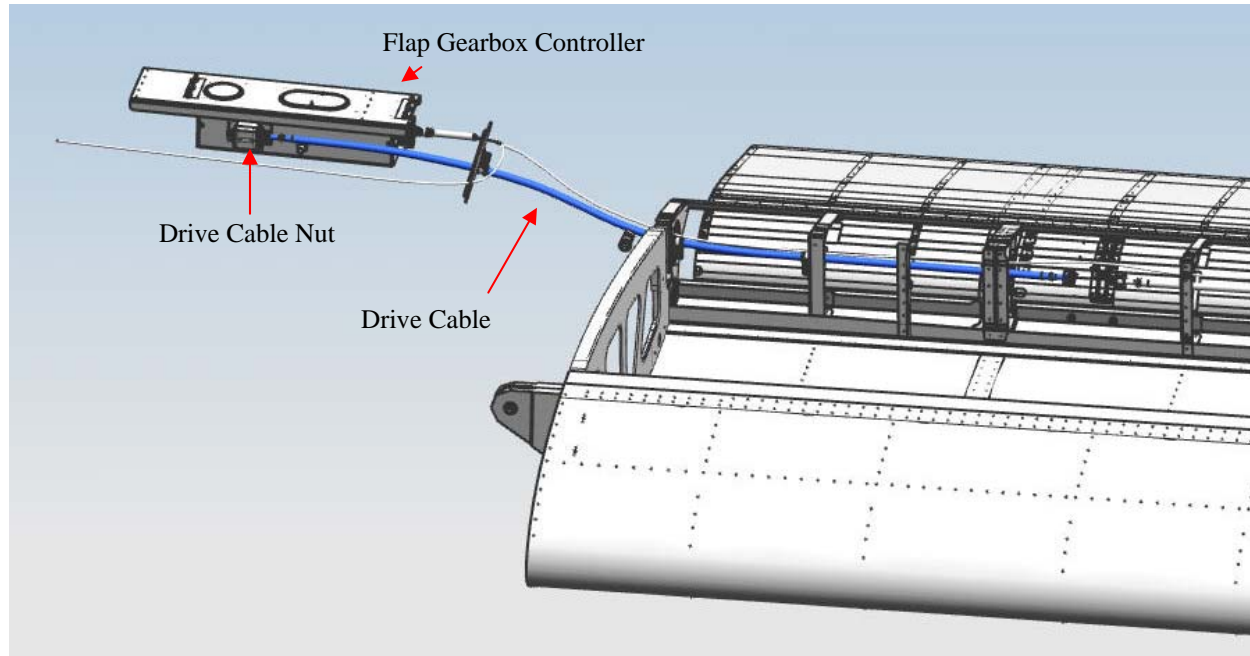
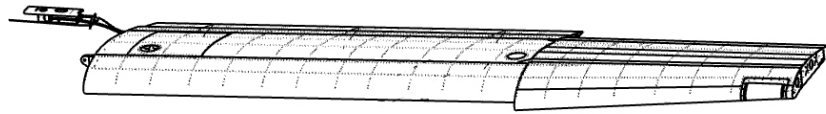


Figure 5-1: Flap Gearbox Controller, Drive Cable, and Drive Cable Nut

3. Inspect the drive cable nut, noting any cracks, bulges, or yielding (**Figure 5-2**).
4. Verify that the back of the nut is flat by placing a small square across the back of the nut (**Figure 5-2**).
5. Repeat steps 1 through 4 on the opposite side of the aircraft.

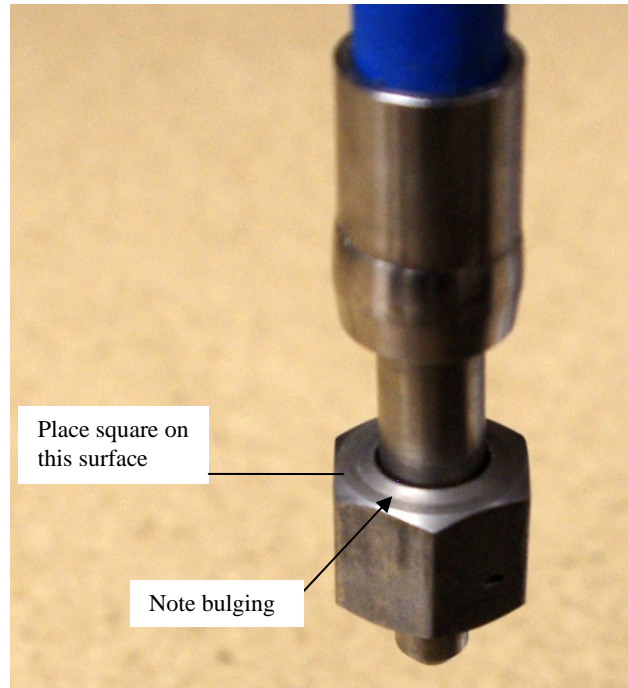


Figure 5-2: Yielded or Bulging Drive Cable Nut

- If damage is found:
 1. Contact Quest Customer Service for product replacement information.
 2. Proceed to Section 5.2.
- If no damage is found:
 1. Reconnect the drive cable nut and torque to 47 – 53 in-lb.
 2. Re-install the safety wire.
 3. Proceed to Section 5.3.

5.2 Replace the Drive Cable

1. Remove the headliner in accordance with the *KODIAK 100 Airplane Maintenance Manual*, Chapter 25.
2. Remove the safety wire at the inboard flap actuator (**Figure 5-3**).
3. Disconnect the flap actuator drive cable nut at the at the inboard flap actuator (**Figure 5-3**).

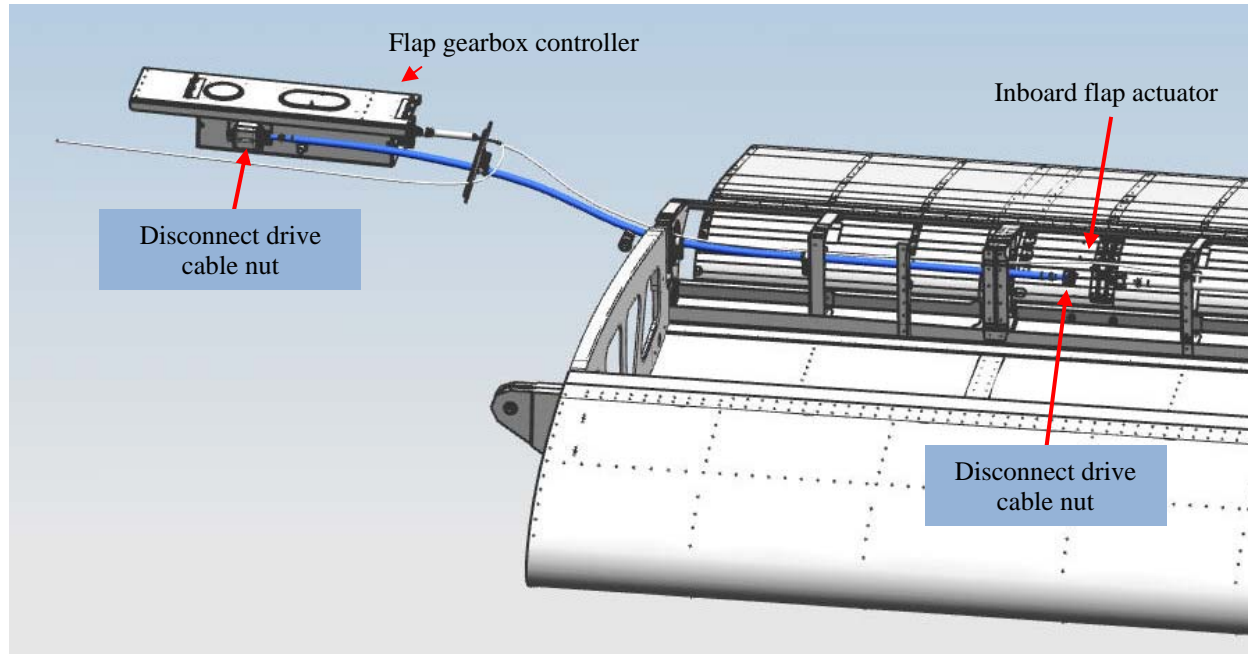
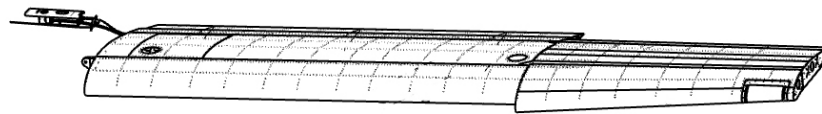


Figure 5-3: Disconnection Points for Drive Cable Nuts

4. Remove the cushion loop clamps and zip ties that fasten the drive cable to the frame.
5. Remove and discard the damaged drive cable(s).
6. Install the replacement drive cable(s):

Left side of aircraft: P/N 100-621-0101

Right side of aircraft: P/N 100-621-0106

7. Torque the cable nut at the gearbox controller to 47 – 53 in-lb, and the cable nut at the inboard flap actuator to 160 – 170 in-lb.

⚠ CAUTION ⚠

The drive cable nuts at each end of the cable are different sizes and require different torque values.

8. Reattach the safety wire, cushion loop clamps, and zip ties.



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5.3 Check Flaps

1. Turn the master power switch to the ON position.
2. Verify correct flap operation by cycling the flaps from 0° to 35° several times.
3. Turn the master power switch to the OFF position.

6. Completion

1. If the headliner was removed, reinstall the headliner in accordance with the *KODIAK 100 Airplane Maintenance Manual*, Chapter 25.
2. Reinstall the cabin interior panel.
3. Record all work performed in the appropriate KODIAK maintenance records.

---END---