

MANDATORY SERVICE BULLETIN

NUMBER: SB11-17

REVISION: 00

DATE: NOVEMBER 1, 2011

SUBJECT: INERTIAL PARTICLE SEPARATOR BOLT REPLACEMENT

EFFECTIVITY:

KODIAK 100 Series Aircraft Serial Numbers: 100-0001 through 100-0056

SUMMARY:


The accompanying Field Service Instruction provides guidance for replacing two bolts in the Inertial Particle Separator assembly

COMPLIANCE:

 **WARNING:** Failure to comply with this Mandatory Service Bulletin could cause the inertial particle separator to be rendered inoperative, which could result in engine failure, serious injury, and/or death.

Section 5.2 or Section 5.3 of the attached Field Service Instruction must be complied with IMMEDIATELY upon receipt of this Service Bulletin.

If it is opted to comply with Section 5.2, Section 5.3 MUST be complied with within 15 flight hours.

 **NOTE:** It is permissible to fly the aircraft to a location where maintenance procedures may be completed.

ATTACHED DOCUMENTS:

Document #:	Revision:	Document Title:
FSI-028	02	INERTIAL PARTICLE SEPARATOR BOLT REPLACEMENT

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 Aircraft Company will reimburse for the cost of compliance with this Service Bulletin up to \$85.00. For reimbursement, send Quest Aircraft Company a copy of the maintenance record, completed KODIAK 100 Warranty Claim Form, and an invoice that does not exceed the amount listed above.

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Service Bulletin SB11-17
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SPECIAL INSTRUCTIONS:

None

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FIELD SERVICE INSTRUCTION

TITLE:

Inertial Particle Separator Bolt Replacement

SERIAL RANGE:

100-0001 through 100-0056

JASC CODE: 7160

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REPORT NO.:

FSI-028

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02

SUBJECT

This Field Service Instruction provides guidance for changing two bolts in the Inertial Particle Separator assembly.

AFFECTED MANUALS AND PUBLICATIONS

None

INDUSTRY REFERENCES

None.

WEIGHT AND BALANCE

Negligible.

MANPOWER

The estimated manhours 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 Manhours: 1 hour

Minimum Persons: 1 person

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

RECORD OF COMPLETION

Update the *KODIAK 100 Maintenance Log Books*.

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



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REVISION RECORD

REV	PAGE	CHANGE DESCRIPTION
02	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 #
2-1-1	AN4H4A	1	Bolt	N/A	N/A
2-1-2	AN4H5A	1	Bolt	N/A	N/A

Table 2-2: Consumables Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-2-1	LOCTITE-242-0.5ML	1	Loctite 242 Blue Threadlocking Compound	N/A	N/A

1: Consumables may be shipped separately from the primary kit.

Table 2-3: Parts and Tools NOT Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-3-1	Commercially Available	1	0.032" to 0.041" diameter Safety Wire	N/A	N/A
2-3-2	Commercially Available	1	Inspection Mirror	N/A	N/A
2-3-3	Commercially Available	1	Torque Wrench	N/A	N/A
2-3-4	Commercially Available	1	Hand tools for 7/16" hex head	N/A	N/A

3. General

The following information provides instruction for replacing two bolts on the Inertial Particle Separator assembly.

4. Preparation

None required.

5. Instructions

5.1 Bolt Identification

Open the right cowl door. Locate the two bolts (P/N AN4-4A and AN4-5A) indicated in **Figure 5-1**.

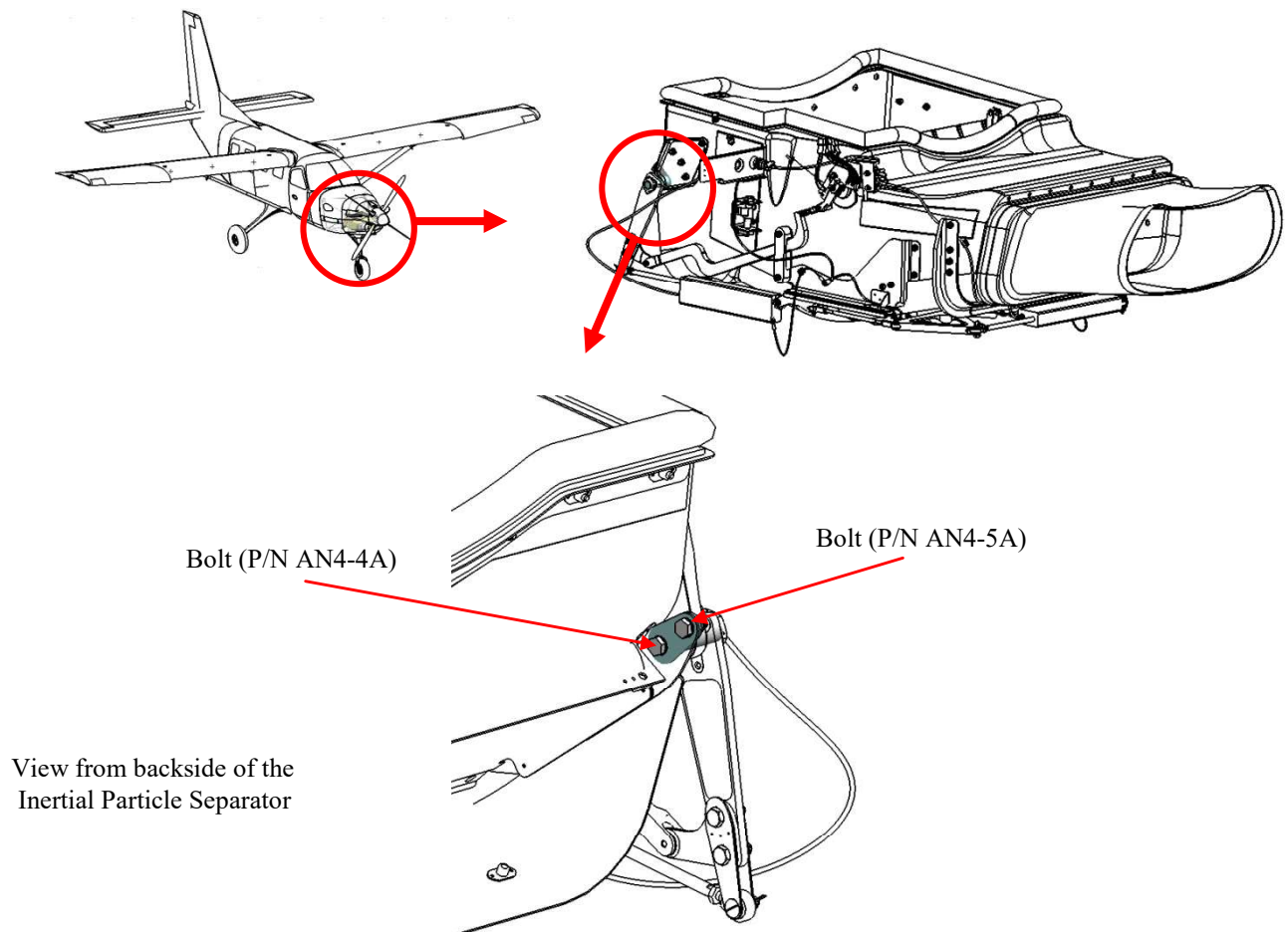


Figure 5-1: Inertial Particle Separator Bolt Replacement Location

5.2 Bolt Inspection and Re-torque

▲ NOTE ▲

If complying IMMEDIATELY with **Section 5.3** of this document, this section may be disregarded.

Using an inspection mirror and a torque wrench, verify that the AN4-4A bolt (shown in magenta color in **Figure 5-2**) is torqued between 50 to 70 in-lb.

5.3 Bolt Replacement

5.3.1 Replacing the First Bolt

Reference **Figure 5-2**. Remove the first bolt (P/N AN4-4A) and washer (P/N NAS1149F0432P). Apply Loctite 242 to the internal threads of the actuating shaft (P/N 100-172-2116), then immediately install the new bolt (P/N AN4H4A) with the washer, and torque to 50 to 70 in-lb.

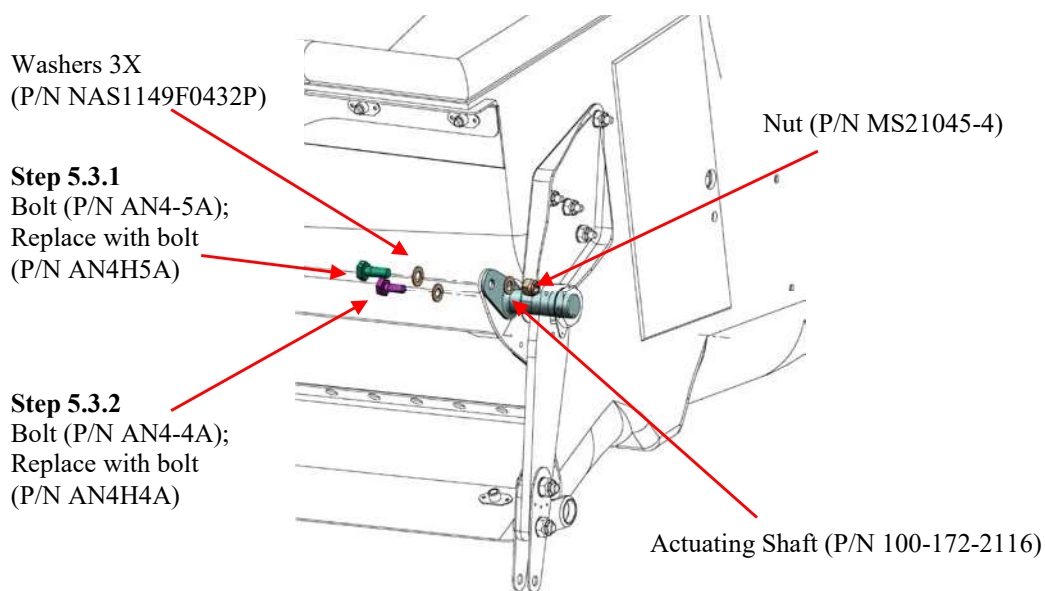


Figure 5-2: Inertial Particle Separator Bolt Break-Out

5.3.2 Replacing the Second Bolt

Reference **Figure 5-2**. Remove the nut (P/N MS21045-4) and washer (P/N NAS1149F0432P). Replace the second bolt (P/N AN4-5A) with the new bolt (P/N AN4H5A), reinstalling the washers and nut. Torque the nut to 50 to 70 in-lb.



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5.3.3 Installing Safety Wire

Secure the two bolts using 0.032" or greater safety wire, as shown in **Figure 5-3**.



Figure 5-3: Safety Wire Installation

5.3.4 Final Inspection

Perform an operation check of the inertial particle separator in accordance with the *KODIAK 100 Maintenance Manual, Chapter 71 "Powerplant."*

6. Completion

Upon completion, record all work performed in the appropriate *KODIAK 100 Maintenance Log Book*.

---END---