

SERVICE LETTER



DHC3-SL-27-001

ATA: 2742

DATE: October 25, 2022

ISSUE: 1

SUBJECT: DHC-3 Stabilizer Actuator Lock Ring – Special Inspection

MODEL: DHC-3 Otter

APPLICABILITY: All Series

REF: PSM 1-3-2, PSM 1-3-4, and PSM 1-3-5

PURPOSE:

It was recently brought to the attention of Viking Air Limited (Viking) that upon visual inspection of a DHC-3 Otter Stabilizer Actuator, the Lock Ring was found to be missing. This Service Letter (SL) is issued by Viking to recommend that DHC-3 aircraft operators and maintainers inspect the stabilizer actuator and verify that the lock ring is present and correctly installed.

DISCUSSION:

A lock ring is installed on the stabilizer actuator to help prevent unintended loosening of the clamp nut. The stabilizer actuator maintenance instructions and assembly configuration are detailed in PSM 1-3-2 Maintenance Manual Revision 5 dated July 23, 2018, Part 2, Section 2.27 and Figure 2-18. The PSM 1-3-2 Maintenance Manual instructions are also referenced in PSM 1-3-5 Revision IR, Inspection Item C27-40-02.

Note: PSM 1-3-5 has been mandated by Transport Canada Airworthiness Directive (AD) Number CF-2018-04 dated 02 February 2018. Other regulatory authorities may take similar action.

OPERATOR ACTION:

Viking recommends that all DHC-3 operators visually confirm that the stabilizer actuator lock ring is present, correctly seated in the groove in the upper housing (Figure 2) and the lock ring tang is engaged in the clamp nut (item 25 of Figure 1 and Figure 4) on all DHC-3 aircraft in their fleet upon receiving this SL, regardless of when the most recent maintenance was completed.

Inspection for Lock Ring:

A missing lock ring (Item 25 in Figure 1 of this SL and PSM 1-3-2 Figure 2-18) would be identifiable from an external visual inspection (see Figure 2) by removing the stabilizer fairings. To check for full engagement of the lock ring tang (Figure 3) in the upper housing barrel and clamp nut, it may be necessary to rotate the stabilizer actuator to a suitable position using the handwheel in the cockpit.

If the lock ring is missing or not correctly installed, it is recommended that a full inspection and servicing of the stabilizer actuator be completed before further flight in accordance with PSM 1-3-5 task card C27-40-02 and PSM 1-3-2 Section 2.27, including full disassembly, cleaning, inspection, lubrication, reassembly, and installation/rigging. The lock ring part number is AN996-28 (Item 52 in PSM 1-3-4

VERSATILITY THAT WORKS

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VIKING is the manufacturer of the Twin Otter Series 400 aircraft, and provides complete support for the de Havilland legacy fleet.



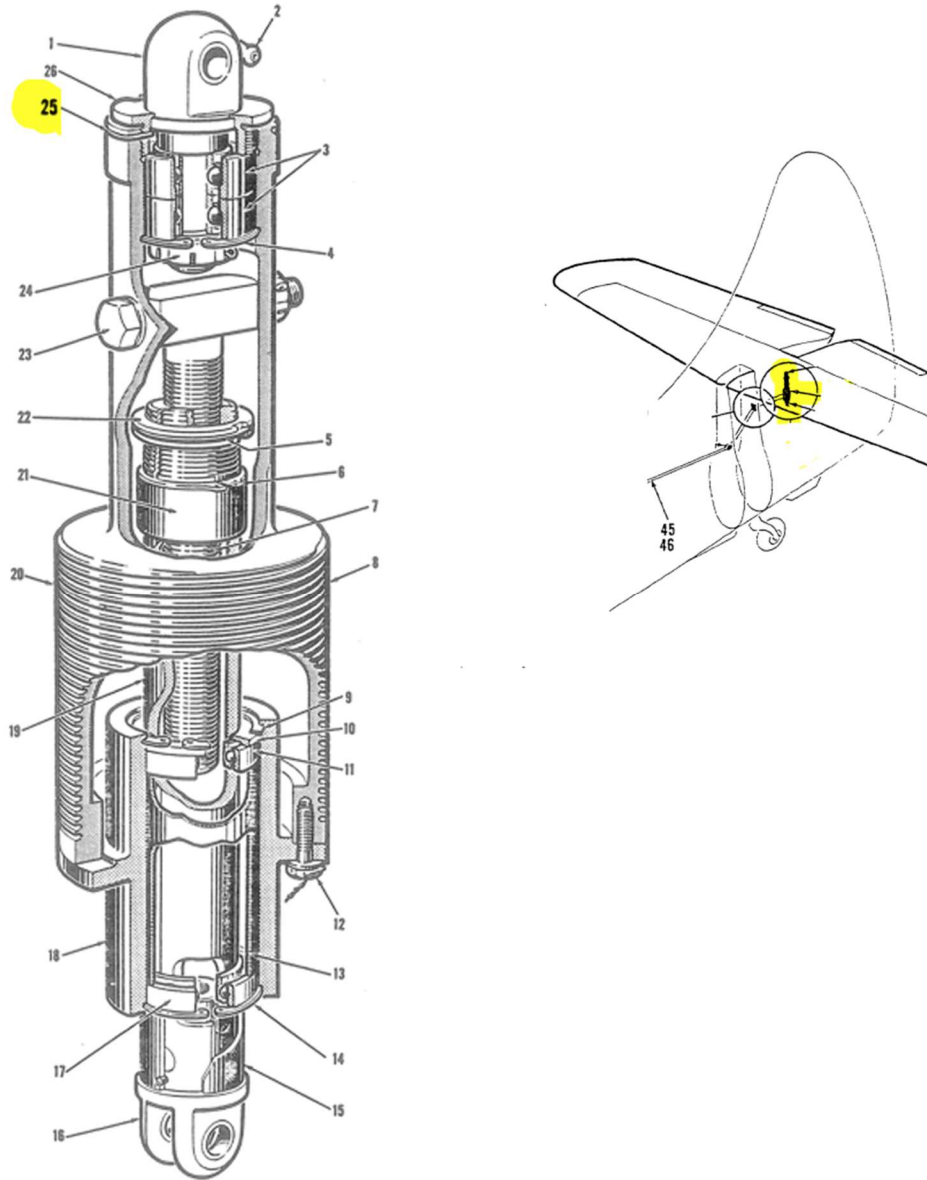
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Illustrated Parts Catalog Figure 44 – Controls Installation – Elevator Trim).

Upon completion of the lock ring inspection, please complete the attached Stabilizer Actuator – Lock Ring Inspection Report and return it to Viking Air Technical Support.

Figure 1 – Stabilizer Actuator



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Figure 2 – Stabilizer Actuator – Upper Attachment to Stabilizer (External)



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Figure 3 – Correct and Incorrect Installation of Lock Ring



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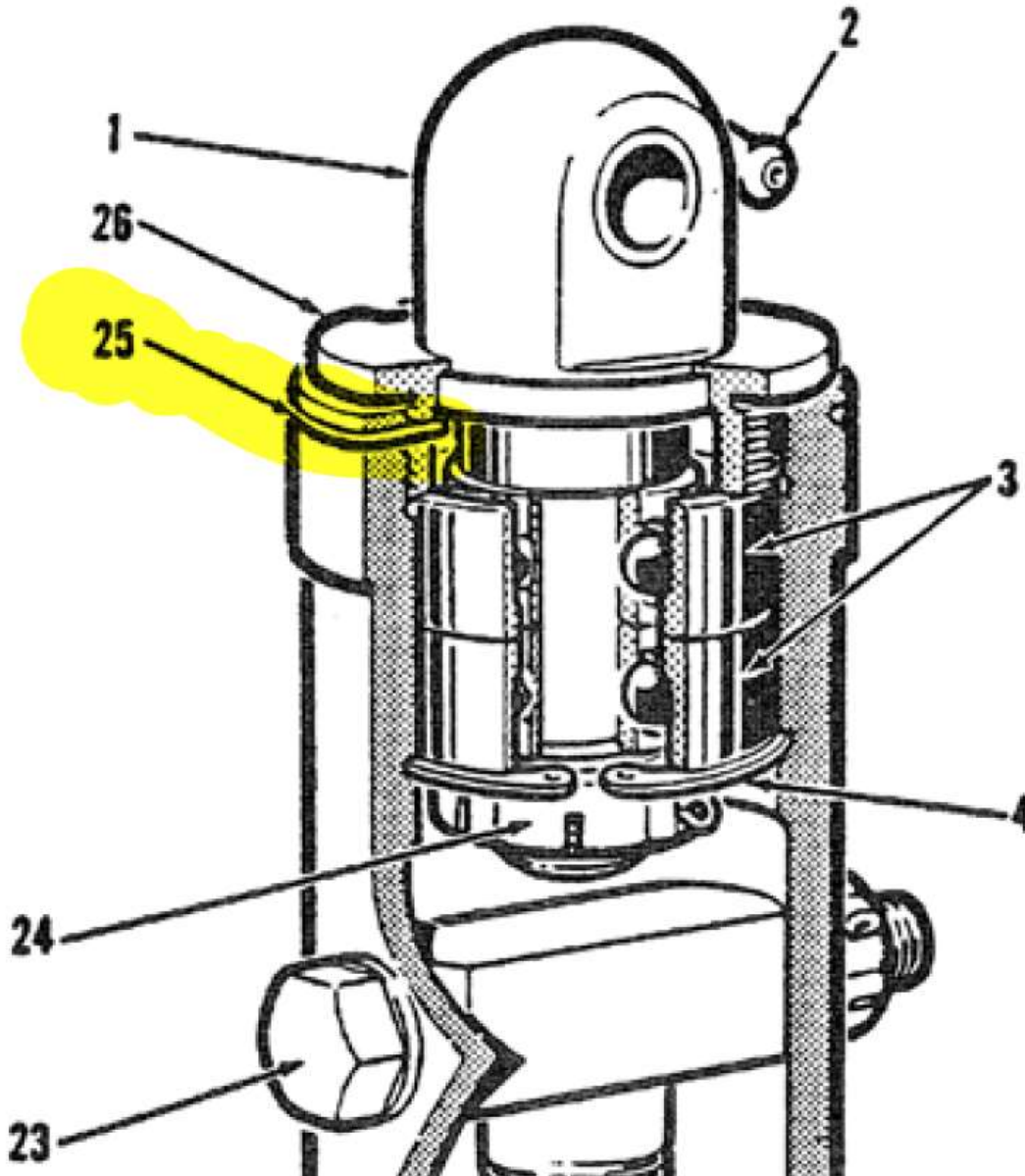
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Figure 4 – Stabilizer Actuator – Detail of Lock Ring Tang Engagement



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STABILIZER ACTUATOR – LOCK RING INSPECTION REPORT

OPERATOR:		DATE OF INSPECTION:				
SERIAL NO.:		REGISTRATION NO.:				
CONTACT PERSON (PHONE/EMAIL):						
AIRCRAFT GROSS WEIGHT:		STC ASSOCIATED WITH THE GROSS WEIGHT (if applicable):				
ENGINE:		PROPELLER:				
FLIGHT HOURS (FH):		PART NO.:				
FLIGHT CYCLES (FC):		PREVIOUS INSPECTION DATE AND FH/FC:				
JASC: 2742		IPC FIGURE & INDEX NO. (DESCRIBE IF NONE):				
OPERATING ENVIRONMENT (Check applicable boxes):	<input type="checkbox"/>	Temperate	<input type="checkbox"/>	Marine land	<input type="checkbox"/>	Severe
	<input type="checkbox"/>	Tropical	<input type="checkbox"/>	Marine float	<input type="checkbox"/>	Moderate
	<input type="checkbox"/>	Desert	<input type="checkbox"/>	Freshwater float	<input type="checkbox"/>	Mild
	<input type="checkbox"/>	Arctic	Other: _____			
RESULTS OF LOCK RING INSPECTION	<input type="checkbox"/>	Missing lock ring	<input type="checkbox"/>	Lock ring present but tang not engaged properly in clamp nut	<input type="checkbox"/>	Lock ring present and tang fully engaged in clamp nut
	ADDITIONAL COMMENTS (USE ADDITIONAL PAGES AND PHOTOS AS REQUIRED):					

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Should operators have any questions with any aspects of the inspection, maintenance instructions of task card C27-40-02, or maintenance manual PSM 1-3-2 Section 2.27, including any issues with accessibility, please contact Viking Air Technical Support at your earliest convenience.

Email: DH_technical.support@dehavilland.com,

Phone: (587) 430-0572 or 1-800-663-8444

Fax: +1.403.295.8888

Regards,

Heather Wilson

Heather Wilson
Director, Customer Care
Viking Air Limited

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