

# SERVICE LETTER

**SUBJECT: PRATT & WHITNEY (CANADA) CORP. SIL PT6A-128**

To all Customers and Operators:

Date: Sep 23/04

This Service Letter is issued to draw attention to the following vendor information:

**PRATT & WHITNEY (CANADA) CORP. SERVICE INFORMATION LETTER (SIL) PT6A-128, PT6A-67B  
Engine - In-flight Shut-down following the Malfunctioning of the Fuel Control Bellows**

PRATT & WHITNEY (Canada) Corp. SIL PT6A-128 provides information on the investigation following the Power Roll back during the climb phase of a PC12 and PC-12/45 aircraft, powered by a PT6A-67B engine. Refer to the PRATT & WHITNEY (Canada) Corp. SIL for further information.

In addition, a Temporary Revision has been issued to the PILATUS PC-12 and PC-12/45 Pilots Operating Handbooks and the FOCA approved, Airplane Flight Manual which give an improved procedure to adopt in the event of engine power loss in flight when using the Manual Override Lever.

Pilatus fully supports the content of the PRATT & WHITNEY (Canada) Corp. SIL PT6A-128. The Manual Override system is a proven means of recovering sufficient engine power in the event of bellows leakage for continued safe flight and landing.

Operators are requested to make sure that this Service Letter is brought to the attention of their aircrew.

Operators requiring further information on this subject, please contact one of the addresses given below:

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CUSTOMER SUPPORT MANAGER,  
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PILATUS BUSINESS AIRCRAFT LTD.,  
PRODUCT SUPPORT DEPARTMENT,  
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PILATUS AUSTRALIA (Pty.) LTD.,  
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**Attachments:** Pratt & Whitney (Canada) Corp, Service Information Letter PT6A-128.





## SERVICE INFORMATION LETTER

**Subject** PT6A-67B In-Flight Shut-Down Event following malfunctioning Fuel Control Bellows

**Applicability** PT6A-67B Engines

Pratt & Whitney Canada Corp (PWC) is issuing this Service Information Letter (SIL) in conjunction with Pilatus Service Letter No. 81.

In July 2004 a PC12 aircraft, powered by a PT6A-67B engine, experienced a Power Roll Back during climb. The pilot elected to secure the engine and made a successful emergency landing. Investigation of the engine identified the root cause of this event as a loss of Fuel Control Unit (FCU) authority caused by leakage of the FCU bellows. The subject FCU had accumulated five hundred and fifteen (515) hours of operation since new.

The investigation revealed that the cause of the leak was due to an "inclusion" in the parent material, which led to the perforation of the bellows. Although the bellows design is shared amongst all large PT6A engine models, single engine installation bellows material is unique to accommodate the Manual Override design feature.

Nine hundred and seventy-five (975) large single engine PT6As are currently operating having accumulated an estimated 1.5 million hours of operation.

In addition to the above event, PWC has identified four (4) additional engine events with similar bellows malfunctions since its introduction in service:

- 2 events of Power Roll back in flight. In both cases engine power was fully recovered by use of the Manual Override system.

- 2 events occurred on the ground.

P&WC is working with Woodward Governor Company (the Fuel Control supplier) to define an improved bellows assembly to address the cause of the above events. P&WC expects the new design to be released for the end of the 1<sup>st</sup> Quarter of 2005, and PWC will be defining a field implementation plan prior to release of the improved bellows design.

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This Service Information Letter is valid until superseded or cancelled by revision.

ISSUED: 22 September 2004

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The Manual Override system is a proven means of recovering full engine power in the event of bellows leakage. P&WC strongly recommends pilots ensure they are fully familiar with the procedures for using the Manual Override as defined in the aircraft Pilot's Operating Handbook (POH).

Yours truly,

PRATT & WHITNEY CANADA CORP.



Giovanni Mulas  
General Manager, Small Turboprops  
Customer Support