

**Aviation Safety Investigation Report  
199503040**

**Fairchild Industries Inc  
Metro 23**

**11 September 1995**

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**NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at [www.atsb.gov.au](http://www.atsb.gov.au).**

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

<b>Occurrence Number:</b>	199503040	<b>Occurrence Type:</b>	Incident
<b>Location:</b>	Portland, Aerodrome		
<b>State:</b>	VIC	<b>Inv Category:</b>	4
<b>Date:</b>	Monday 11 September 1995		
<b>Time:</b>	0945 hours	<b>Time Zone</b>	EST
<b>Highest Injury Level:</b>	None		

<b>Aircraft Manufacturer:</b>	Fairchild Industries Inc	
<b>Aircraft Model:</b>	SA227-DC	
<b>Aircraft Registration:</b>	VH-KED	<b>Serial Number:</b>
<b>Type of Operation:</b>	Air Transport Domestic Low Capacity Passenger	
<b>Damage to Aircraft:</b>	Nil	
<b>Departure Point:</b>	Melbourne VIC	
<b>Departure Time:</b>	0858 EST	
<b>Destination:</b>	Portland VIC	

**Approved for Release:** Friday, October 25, 1996

On base leg for runway 26 at Portland the left engine failed without any prior warning. The crew secured the engine and a successful single engine landing was accomplished.

The engine was removed and transported to the operator's maintenance facility for investigation. During disassembly of the accessory gear drive it was found that the first idler bearing had collapsed. The bearing supported the accessory gear assembly, part number 3103601-6.

When the bearing collapsed the gear moved about the shaft axis and disengaged from the fuel pump spur gear, part number 3102268-2. With the spur gear disengaged, the fuel pump was not able to supply fuel to the engine which shut down without warning, as reported by the crew.

The failed bearing was returned to the manufacturer for investigation, however the factors surrounding the failure have not been advised.

The manufacturer did advise that they have initiated a program to improve the reliability of the first idler bearing by:

- changing from a ball to a roller type bearing,
- changing the idler housing material, and
- improving the retention of the housing thereby improving support and changing the natural frequency.

The program is now at the implementation stage. The operator has determined to retrofit the improved first idler assembly in accordance with the manufacturer's recommendations.

