

Propellers - Variable Pitch - Hamilton Standard

**AD/PHS/15
Amdt 5**

Servo Ballscrew Internal Spline Wear

2/96

Applicability: All 14RF-9, -19, -21, -23, 247F-1, 14SF-5, -7, -11, -15, -17, -19, -23, 14SFL11 and 6/5500/F propellers installed on but not limited to Embraer EMB-120, EMB-120RT, SAAB-SCANIA SF340B, Aerospatiale ATR42-100, -300, -320, ATR72, -210, De Havilland DHC-8-100 series, -300, Construcciones Aeronauticas SA (CASA) CN-235, CN-235-100, Canadair CL215T, CL415 and British Aerospace ATP aircraft.

Requirement: Action in accordance with paragraphs (a) to (d) and (g) of FAA AD 95-22-12 Amdt 39-9420.

Note 1: FAA AD 95-22-12 amdt 39-9420 supersedes FAA AD 94-22-12 Amdt 39-9062, FAA AD 93-16-02 amdt 39-8659 and FAA AD 92-08-03 amdt 39-8214.

Note 2: Brazilian Telegraphic AD No T903-03 R1 and BLA AD 94-156 (AB) refer to Amdt 4 of this Directive.

Compliance: As specified in the Requirement Document with a revised effective date of 5 February 1996.

Background: The manufacturer has received reports that excessive wear has been observed in the servo ballscrew splines of the propeller control unit (PCU). This wear, if not corrected, could affect the aircraft airworthiness.

Amendment 1 was raised after receipt of advice that a Dash 8 lost control of a propeller after landing. During the subsequent investigation extreme wear was discovered on the internal splines of the PCU. These splines had previously been inspected some 750 hours prior to the incident.

Amendment 2 clarified the inspection requirements for PCU's that had operated more than 1800 hours time in service.

Amendment 3 mandated inspection of the same type design propellers and reduced the reinspection interval to 500 hours time in service.

Amendment 4 extended the reinspection period from 500 to 1500 hours time in service for those PCU's which have the ballscrew quill damper installed.

Amendment 5 is being raised to increase the repetitive PCU servo ballscrew internal spline (BIS) teeth inspection interval from 1500 to 2500 hours TIS for propellers that have a ballscrew quill damper installed, to mandate installation of the secondary drive quill (SDQ) by 30 June 1998 and to introduce an initial and repetitive torque check inspection of the primary ballscrew quill once a secondary drive quill has been installed.