

Advisory Wire

REFERENCE NO:	AW300-27-0285 Rev 2	INFORMATION TYPE:	Maintenance Operational
ATA:	27-11	EFFECTIVITY:	Challenger 350 (20603, 20606, 20609, 20612, 20614 to 20672, 20674 to 20679 and 20682 to 20688)
SUBJECT:	Replacement of the Rivets on the Trailing Edge of the Aileron		

1. REFERENCES:

1.1. Service Bulletin and Pilot Information Sheet 350-27-005 Rev 2 Rework – Aileron Control System – Replacement of the Rivets on the Trailing Edge of the Aileron.

2. INTRODUCTION:

The revision to this Advisory Wire is to advise Operators and Maintenance personnel of new steps in the section 2 B modification in the reference 1.1 Service Bulletin (SB), it also includes a retroactive action for those that have already incorporated this SB.

3. DESCRIPTION:

The reference 1.1 SB has introduced new steps to inspect the trailing edge of the reworked aileron for gaps between the wedge and the upper and lower skin.

4. ACTION:

Gaps of .030” or less can be filled with aerodynamic sealing. For a gap over .030” an SRPSA should be raised for an approved disposition. The retroactive action (page 1 of the SB) is recommended for aircraft on which the basic issue or revision 1 of the reference 1.1 was done.

- 1- Operators should be aware that the reference 1.1 SB was released Oct 6, 2017.
The recommended SB has a specified time compliance and is covered by a dedicated schedule.

A/C Flight Hours	Compliance Time
Less than 500 Flight hours	Up to 900 Flight hours or within 18 calendar months, whichever comes first
More than 500 Flight Hours, but less than 900 Flight Hours	Within 400 Flight Hours, but no more than 1200 Flight Hours and within 12 calendar months
More than 900 Flight Hours	Within 300 Flight Hours

- 2- Flight crews should be familiar with the reference 1.1 Pilot Information Sheet, details below.

The failure of some or all of the affected rivets may lead to the deformation of the aileron trailing edge, and/or the trailing edges of the tabs on the aileron, and/or loss of the bent (fixed) tab. The recommended rectifications times have been provided to minimize the probability of such an event, and the following information and guidance are provided to mitigate it should occur.

As the aircraft has a manual cable-operated aileron system, the forces felt by the pilot at the control wheel are directly related to the aerodynamic forces on the aileron. Deformation or loss of the affected parts could result in a very significant change to the forces on the aileron. In extreme circumstances, this can lead to a sudden displacement of the aileron felt through the control wheel as a very large, abrupt and unexpected change in the control wheel forces. This force could prove difficult to overcome, leading to severe degradation and possibly effective loss of control in the roll axis until appropriate action is taken.

In the event of such a failure and high force levels are felt at the control wheel, it will almost certainly be necessary to pull the ROLL DISC lever and control the aircraft from the left control wheel using the roll spoilers as the primary means of roll control. Then, if the copilot is able to partially overcome the force levels, it may be possible to reduce the aileron asymmetry by centering the copilot control wheel. This will also reduce the amount of input required from the left control wheel and provide a more effective roll control.

Pilot should be familiar with AFM emergency and abnormal procedure related to the roll control system. Particular attention should be paid to “Roll Control Jam” Emergency procedure. Also during the pre-flight walk around, the crew should pay particular attention to the top and bottom of the ailerons and all trim/geared tabs for the general condition of the ailerons and tabs in order to identify any evidence of damage such as delamination of the skin, missing or protruding rivets, and/or paint cracking on or around the rivets.

The AP HOLDING LWD and AP HOLDING RWD caution messages may be indicative of an aileron problem. In such case, follow the AFM/QRH related caution procedures guidance being aware that an abrupt change in control force, or an out of trim situation may be experienced when disconnecting the autopilot.

These operating recommendations do not constitute an authorization to deviate from required AFM procedures and limitations. In case of conflict, the AFM takes precedence and must be respected.

Should your specific conditions not be addressed after reviewing the operating recommendations above, (CRC) for further clarification prior to commencing flight:

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