

Safety Communique

January, 2012

TO: ALL OWNERS AND OPERATORS, HAWKER BEECHCRAFT SERVICES, CHIEF PILOTS, DIRECTORS OF OPERATIONS, DIRECTORS OF MAINTENANCE, ALL HAWKER BEECHCRAFT AUTHORIZED SERVICE CENTERS, AND INTERNATIONAL DISTRIBUTORS AND DEALERS.

**MODELS: PISTON, ALL MODELS, ALL SERIALS;
KING AIR, ALL MODELS, ALL SERIALS;
AIRLINERS, ALL MODELS, ALL SERIALS**

SUBJECT: FLIGHT CONTROL CABLE SYSTEM INSPECTIONS

Hawker Beechcraft Corporation (HBC) is issuing this Safety Communiqué to remind owners/operators of the importance of adhering to existing inspection procedures in the applicable Maintenance or Shop Manuals. Improper flight control cable system inspection for the airplanes defined in the MODELS section may result in undetected wear of the flight control cables.

On December 4, 2011, HBC received a field condition report (FCR) from the owner/operator of a 1968 Bonanza Model E33 airplane with 4610 flight hours. A part number (P/N) 33-524000-63 forward elevator cable assembly was reported to have frayed to the point that only a few strands of cable remained intact. This discovery occurred just prior to takeoff. Figure 1 shows the frayed cable that was removed.

On January 13, 2012, the Australian Civil Aviation Safety Authority (CASA) issued the following Airworthiness Directives (AD) titled **BEECHCRAFT FORWARD ELEVATOR CABLE – REPLACEMENT**:

- AD/BEECH 33/48
- AD/BEECH 35/74
- AD/BEECH 36/54
- AD/BEECH 50/34
- AD/BEECH 55/98
- AD/BEECH 56/36

The CASA ADs provide instructions to inspect the forward elevator control cable assembly for wear, broken wires and corrosion. The ADs also mandate that any cable be removed and replaced if it had been in service for more than 15 years. The ADs were applicable to all “single pole” design control systems. The definition noted on the ADs reads as follows; “single pole” refers to the arrangement whereby the pilot’s control yokes are supported by a single shaft moving in and out of the instrument panel for elevator (pitch) control.

HBC reminds owners/operators of the importance of doing a thorough flight control cable system inspection. Some areas of control cable routing require a deliberate inspection effort due to location and cable routing between pulleys. Refer to Figure 2 for an illustration of a

typical Bonanza elevator control cable system. Actual configuration may vary depending on airplane model. For further illustrations and specific parts callouts, refer to the applicable model Maintenance or Shop Manual or Illustrated Parts Catalog. Access to the inspection area will vary. Removal of equipment to facilitate the inspection will be at the discretion of maintenance personnel. For some models, the inspection area may require the removal of access panels, interiors, equipment, fairings, or cowlings to accomplish a thorough inspection of flight control cable systems.

NOTE

Assistance of additional maintenance technicians may be required to move controls while conducting control cable inspections due to bob weights, down springs and centering springs.

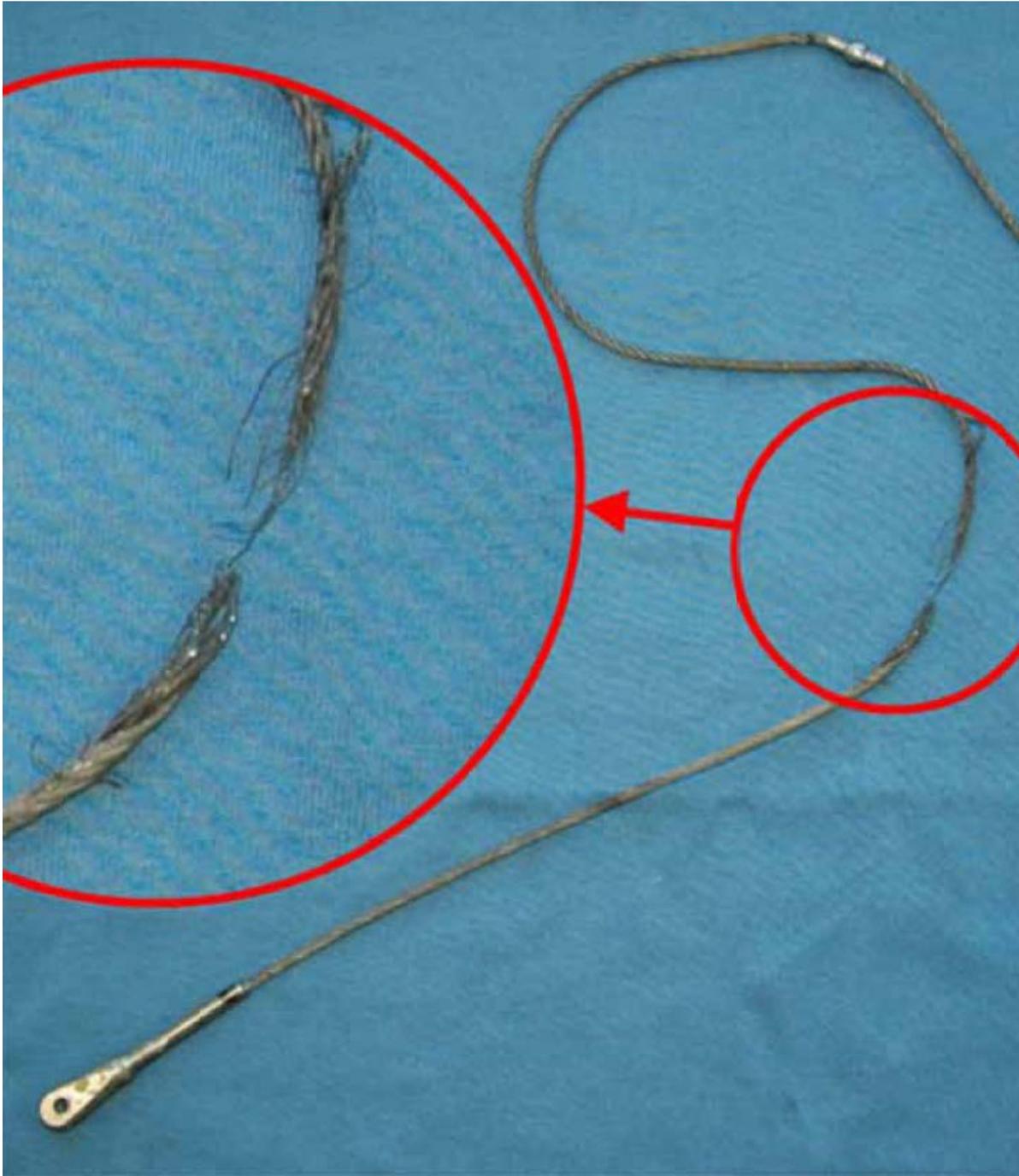
HBC recommends, when inspections are performed on flight control cable systems as instructed in the applicable airplane Shop or Maintenance Manual, that flight controls are operated through their full range so that cables move away from pulleys and all portions of the cables are exposed for inspection. Full control travel motion may require two persons, one to cycle controls and another to inspect cables during movement. Although the CASA ADs only affect the elevator control cable system, current HBC inspection guidelines apply to all flight control cables. Anywhere a cable is not visible, the flight controls should be manipulated so 100% of all cables can be inspected. During the inspection process, the inspecting individual shall also examine the cable runs for incorrect routing, fraying, twisting, or wear at fairleads, pulleys, anti-abrasion strips and guards. Inspecting individuals shall ensure there is no interference with adjacent structure, equipment, wiring, plumbing, and other controls. Cable systems shall not exhibit binding through full travel, and proper tension of cables shall be maintained.

NOTE

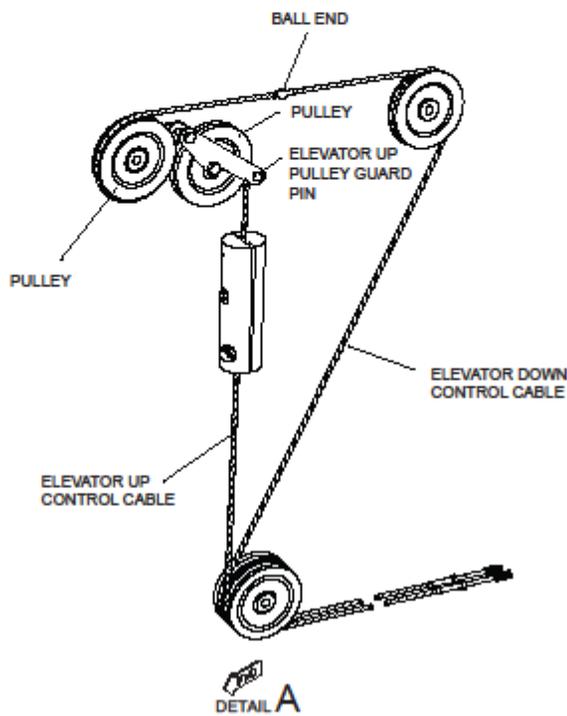
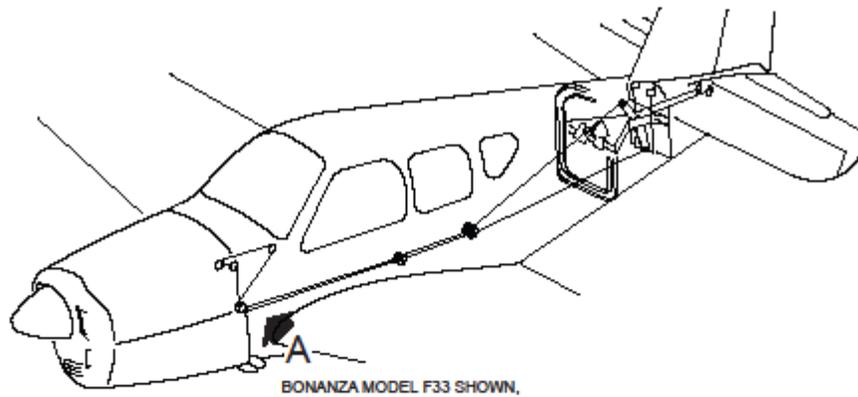
Following initial break-in period for a newly installed control cable, any unexpected decrease in control cable rig tension should also be considered an indication of control system issues (such as broken cable strands) and merits further investigation. The “set” taken by a new control cable during the first 100 hours of operation is normal break-in and is not considered unexpected.

HBC reminds owners/operators of the importance of maintaining corrosion preventive compound on control cables and applying proper lubricants to control cable system components as defined in the applicable airplane Shop or Maintenance Manual. Replace control cables showing evidence of corrosion.

HBC will continue to gather information concerning this issue and will publish additional information as appropriate. For technical questions, please contact Hawker Beechcraft Corporation Technical Support at 1-800-429-5372 or 316-676-3140.



Frayed Elevator Control Cable
Figure 1



9C32201.AJ

Forward Control Cable Assembly – Model F33
Figure 2