AEROSTAR
AIRCRAFT CORPORATION

AEROSTAR CONSIDERS COMPLIANCE MANDATORY

SERVICE BULLETIN

SB600-138

DATE: August 30, 2018

2265 West Aerostar Way • Hayden Lake, ID 83835 • (208) 762-0338 • Fax: (208) 762-8349

SUBJECT: Elevator and Aileron Balance Tube Corrosion

MODELS AFFECTED: 601P, 602P, and 700P

S/N's AFFECTED: All

PURPOSE: Reports have been received of corrosion to the elevator and aileron balance tubes. This service bulletin is being issued to inspect the elevator and aileron balance tubes and replace them with P/N 26003-003, Revision M or later. If left unreplaced, the corrosion could lead to the balance tubes jamming which would affect the control of the elevator and/or ailerons.

COMPLIANCE TIME:

Part I (Inspection):

Within the next 10 hrs. See next page for instructions.

Part II (Replacement):

Part I Inspection Result	Action
If there are any signs of rust or corrosion on the tube assemblies (inside or outside).	Replace prior to further flight in accordance with Part II instructions (see next page).
If there are no signs of any rust or corrosion on the tube assemblies (inside or outside).	Replace at next 100 hour inspection or annual inspection (whichever is applicable) in accordance with Part II instructions.

Once tube assemblies have been replaced, inspect with a boroscope every 10 years by the method used in Part I.

10 Year Inspection Result	Action
If there are signs of significant corrosion (pitting, flaking, etc.) on the tube assemblies (inside or outside).	Replace prior to further flight in accordance with Part II instructions (see next page).
If there are signs of rust (discoloration) and no signs of significant corrosion (pitting, flaking, etc.) on the tube assemblies (inside or outside).	Reinspect with a boroscope by the method used in Part I in 2 years.
If there are no signs of rust or corrosion on the tube assemblies (inside or outside).	Reinspect with a boroscope by the method used in Part I in 10 years.

INSTRUCTIONS:

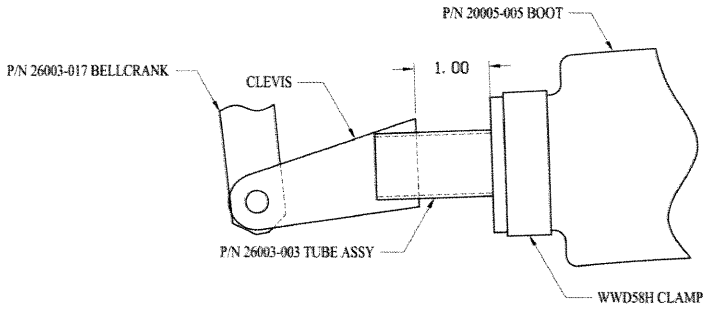
Part I (Inspection):

1. Remove access cover (P/N 24001-205) located on fuselage belly between the main landing gear wheels (see Figure 1).
2. Adjust the controls, such that, the balance tubes are in their furthest aft position.
3. Looking forward over the frame (P/N 210003-213) with a flashlight and a mirror pointed downward (or a borescope, if available), locate the open ends of the (2) balance tube assemblies (P/N 26003-003) (see Figure 2).
4. If any signs of rust or corrosion can be seen on the tube assemblies (inside or outside), replace them prior to further flight in accordance with Part II. If no signs of any rust or corrosion can be seen, replace at next 100 hour inspection or annual inspection (whichever is applicable) in accordance with Part II.
5. Make logbook entry stating that Part I has been completed, including the result.

Part II (Replacement):

1. Remove seats per Chapter 25 of the Aerostar MM.
2. Remove aft cabin floor panel per Chapter 53 of Aerostar MM.
3. Remove the elevator balance tube assembly (lower right looking aft), see Figure 4. *Note, to facilitate removal, the following steps may be followed.*
   a. Remove control tube connection link (P/N 26003-015) fastener and bellcrank (P/N 26003-017) center fastener located at F.S. 167.50. Set all hardware aside for reuse, except (2) cotter pins. New cotter pins will be used.
   b. Loosen small clamp (P/N WWD58H) on forward end of balance boot (P/N 20005-005).
   c. Break boot free from tube using a 90 degree pick tool, or similar, with special care taken to not damage the boot.
   d. With the bellcrank still attached to the tube assembly (P/N 26003-003, Revision L or prior), remove both by pulling forward and up on the upper end of the bellcrank. *Note, the boot will also work forward until you brace the front end against one of the brackets that positions the bellcrank.*
   e. Disconnect bellcrank from tube assembly and mark tube assembly to indicate location (elevator or aileron). Set all hardware aside for reuse, except (1) cotter pin. New cotter pin will be used.
4. Remove the aileron balance tube assembly (lower left looking aft), see Figure 4. *Note, the same steps used above to remove the elevator balance tube assembly may be used.*
5. Measure the lengths of the (2) removed tube assemblies from the center of the clevis hole to the end of the tube (see image below).

6. If both lengths are within tolerance, continue to step 7. If one (or both) of the lengths are out of tolerance, your aircraft has a factory deviation and you cannot install the standard length replacement tube assemblies as this could restrict the full motion of the controls. Record the lengths of the aileron and elevator tube assemblies for later reference. You will need to send any non standard length tube assembly back to Aerostar, so new tubes can be fabricated to match your installation. If you have already purchased replacement tube assemblies, send one (or both, as needed) back to Aerostar with your old tube assembly. Once you receive modified tube assemblies back from Aerostar, continue to step 7.
7. Prior to installing the new tube assemblies, ensure nylon guide rings are still positioned on holes in intercostal assembly (P/N 24006-003) by inspecting per the method used in Part I (reference Figure 5, Section A-A).
8. Install the elevator balance tube assembly (lower right looking aft), see Figure 5.
   a. Attach bellcrank to new tube assembly (P/N 26003-003, Revision M or later) using hardware removed in step 3e, along with (1) new cotter pin (P/N MS24665-134). *Note, tube assemblies that deviate from the standard length will be marked P/N 26003-003/9XX, Revision M or later, and are acceptable for compliance with this service bulletin.*
   b. Mark the tube assembly one inch back from end of clevis to indicate where the forward edge of the boot should be positioned (see image below).



   c. Insert new tube assembly into boot. *Note, if modifed tube assemblies are to be installed, ensure the tube lengths are in their proper location, based on the lengths recorded in step 6 above.*
   d. Reattach bellcrank center fastener and control tube connection link fastener using hardware removed in step 3a, along with (2) new cotter pins (P/N MS24665-134).
   e. With the forward edge of the boot at the marked location, tighten the clamp.
9. Install the aileron balance tube assembly (lower left looking aft), see Figure 5. *Note, the same steps used above to install the elevator balance tube assembly may be used.*
10. With new tube assemblies installed, ensure nylon guide rings are still positioned on holes in intercostal assembly by inspecting per the method used in Part I (reference Figure 5, Section A-A).
11. Remove all locks from control system and actuate all systems simultaneously thru their full travels to ensure there is no interference between any components or adjacent structure. During the check for full motion of the controls, have a helper inspect the tube assemblies per the method used in Part I to ensure the tubes do not interfere with the bulkhead clearance holes.

To complete compliance with this Service Bulletin.

12. Make logbook entry of compliance with this Service Bulletin, including the recording of P/N's (with Rev. Level) installed, and date of installation.
13. Complete the Service Bulletin Reply Card and return it to Aerostar Aircraft Corporation.

PARTS AVAILABILITY: Replacement parts may be purchased by contacting:

Aerostar Aircraft Corporation, Parts Department
2265 West Aerostar Way
Hayden Lake, ID 83835
phone: (800) 442-4242
email: johnj@aerostaraircraft.com

EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

SUMMARY: To fully comply with this Service Bulletin, make logbook entry of compliance after the balance tube assemblies have been inspected and replaced. Recurring inspections are required for continued compliance with this Service Bulletin. If you no longer own the airplane, please notify Aerostar Aircraft Corporation.

FIGURE 1 - PART I INSPECTION LOCATION

FIGURE 2 - PART I INSPECTION

FIGURE 3 - CORROSION EXAMPLE

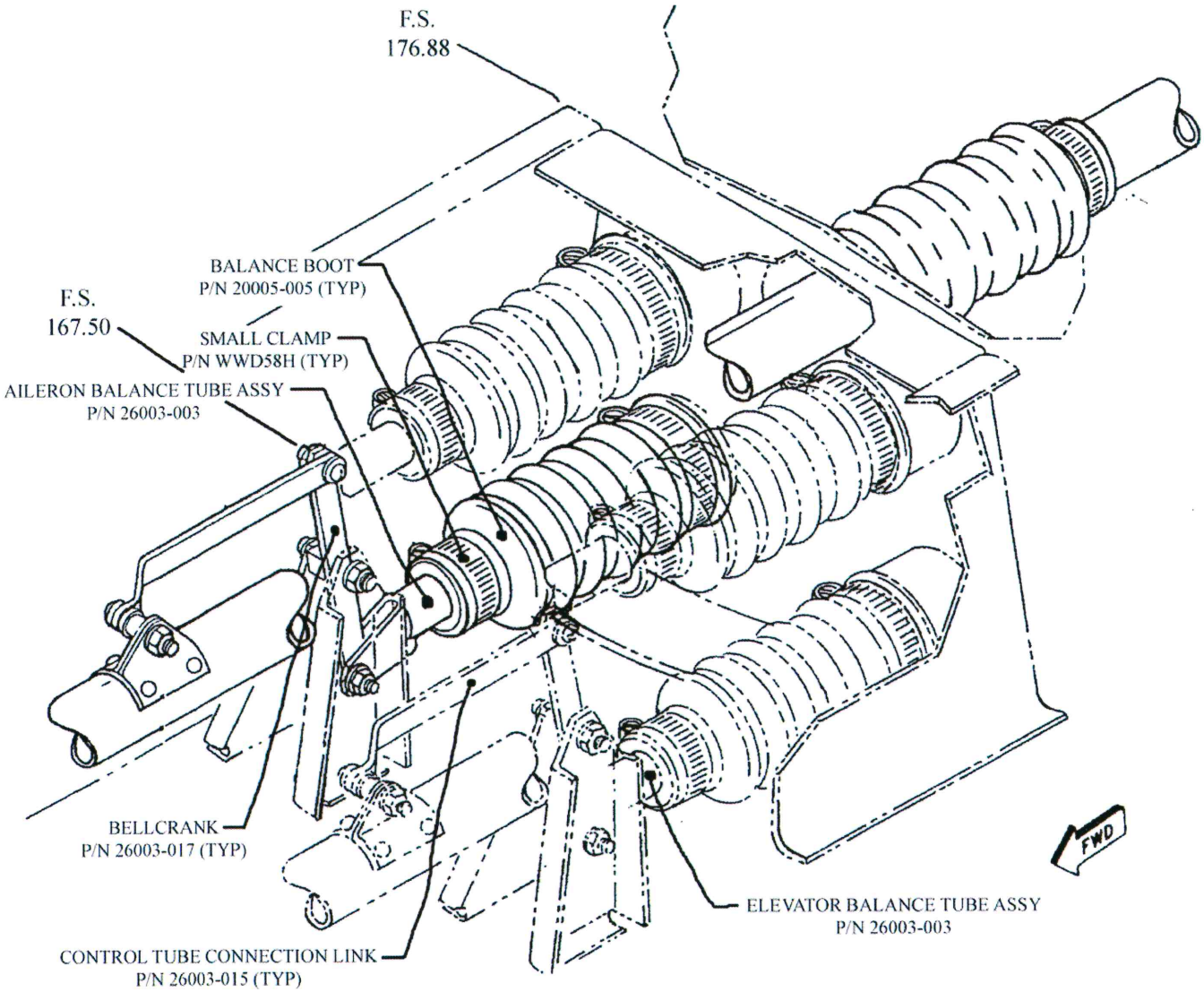


FIGURE 4 - REMOVAL DIAGRAM

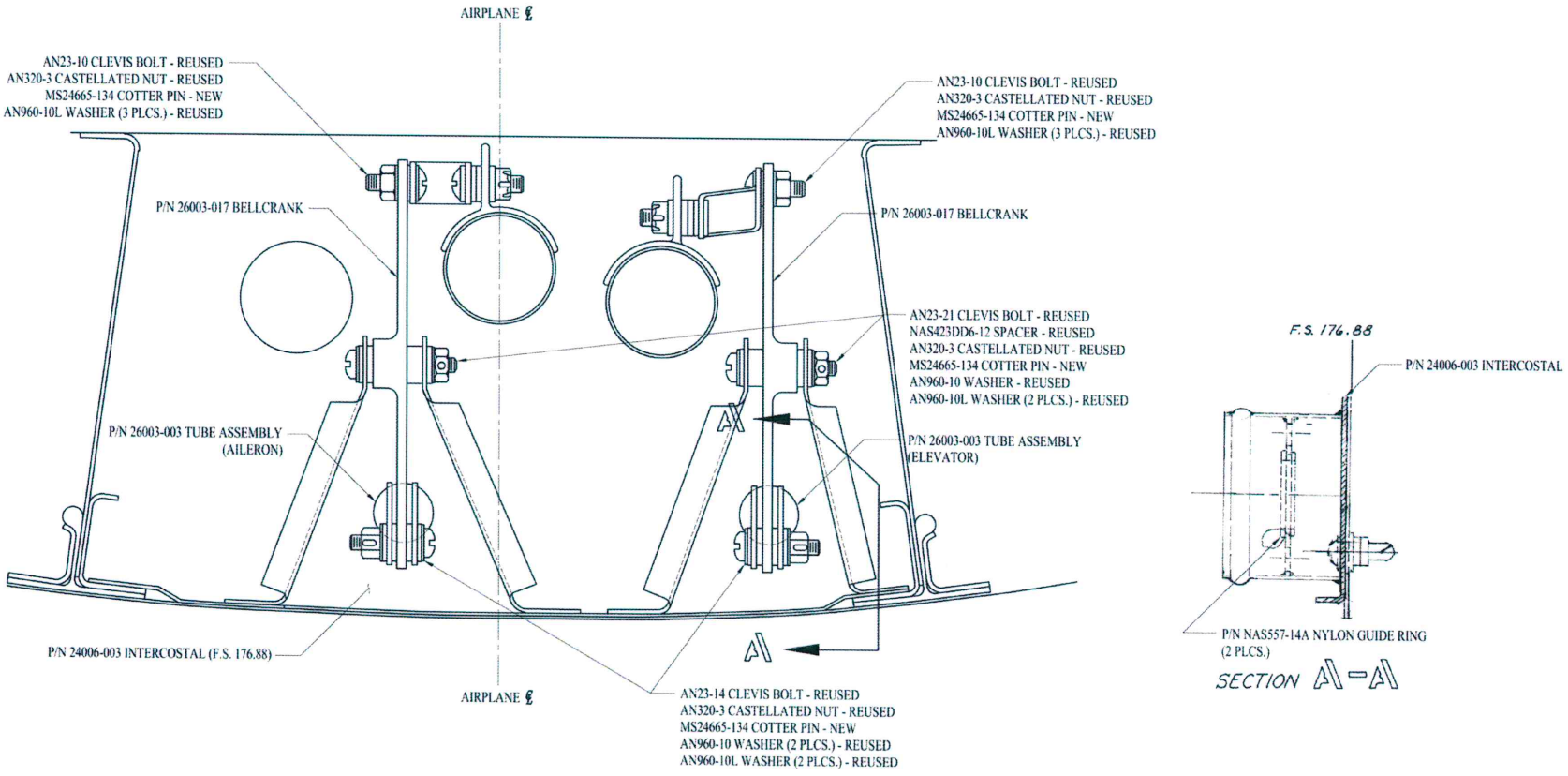


FIGURE 5 - INSTALLATION DIAGRAM