



THIS SERVICE BULLETIN SUPERSEDES SB-04-09-26-1 Rev B

DATE RELEASED:

04-09-26

DATE EFFECTIVE:

04-09-26

SUBJECT:

Elevator Stop Punctures

EFFECTIVITY:**MODEL:** Ranger R7**SERIAL NO:** ALL AIRCRAFT WITH SERIAL 10257 AND LOWER**SYNOPSIS:**

Excessive use of the elevators' end stop has been found to potentially puncture the elevator spars. Excessive force during flight or control check procedures can further contribute to this issue. Punctures in the spar will impact elevator control range and potentially lead to scraping and damage on the empennage fairing.

Structural failure is less of a concern as the horizontal stabilizer takes most of the structural load of this assembly.

REQUIRED ACTION:

Inspect both elevator spars for punctures.

MINIMUM LEVEL OF CERTIFICATION:

LSRM

TIME OF COMPLIANCE:

The following intervals are valid:

- Inspect elevator travel before further flight and as part of every pre-flight check. If elevator scrapes with empennage fairing, follow instructions detailed in [Appendix A](#).
- The inspection detailed in [Appendix A](#) must occur with each annual maintenance period (every 100hrs).
- If the procedures outlined in [Appendix B](#), [Appendix C](#), [Appendix D](#) have been completed, these inspections are no longer required.

**METHOD OF COMPLIANCE:**

Inspect the spar in each elevator as seen in [Appendix A](#). This will require removal of the elevators. If any punctures are present, contact Vashon Aircraft Support and refer to [Appendix C and D](#) for corrective action.

[Appendix B](#) details preventative measures that greatly decrease the risk of spar punctures which would terminate the effectivity of this service bulletin.

If tear/hole is visible, accomplish one of the following: replace the elevator spar as outlined in [Appendix C](#), or install a new elevator and replace the horizontal stabilizer stop brackets as supplied by Vashon Aircraft in accordance with [Appendix D](#).

LABOR REQUIRED:

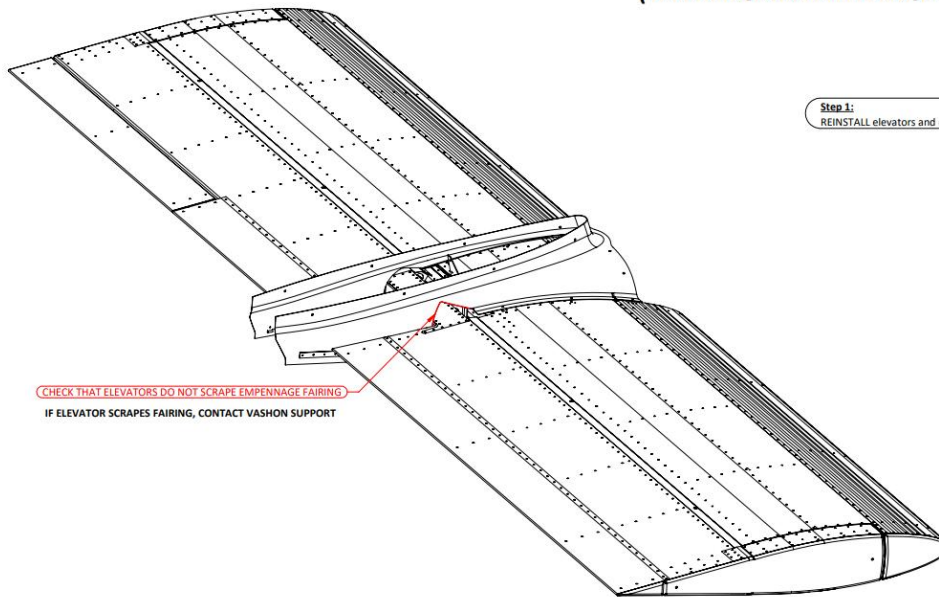
The following time estimates for each job:

Task:	Approximate work hours:
• Removal and inspection of elevator	~ 1
• Installation of preventative measures detailed in Appendix B	~ 6
• Replacement of elevator spar detailed in Appendix C	~ 16
• Replacement of elevator and brackets Appendix D	~ 4



Appendix A: Inspection of elevator spars

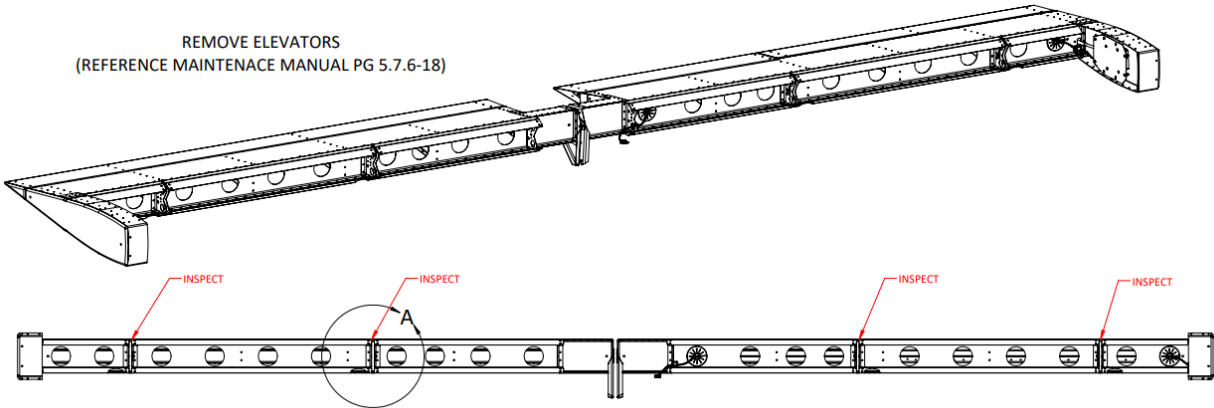
REINSTALL ELEVATORS (REFERENCE MAINTENANCE MANUAL PG 5.7.6-18)



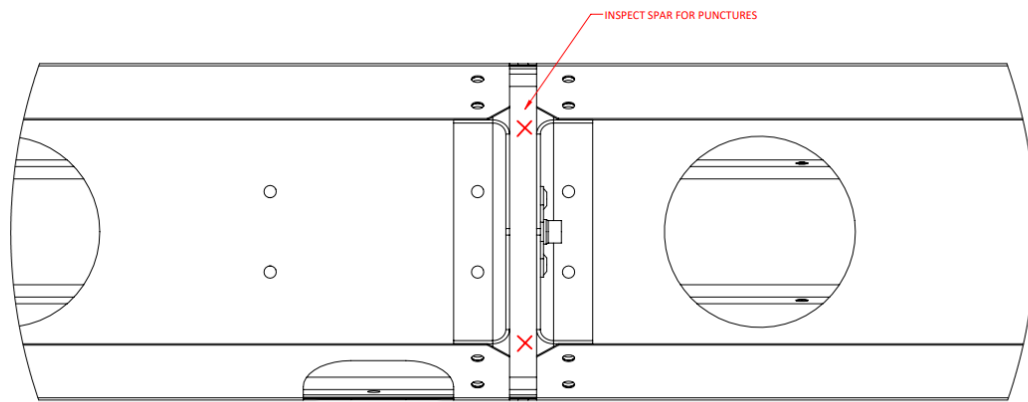
Step 1:
REINSTALL elevators and check travel

CHECK THAT ELEVATORS DO NOT SCRAPE EMPENNAGE FAIRING
IF ELEVATOR SCRAPES FAIRING, CONTACT VASHON SUPPORT

REMOVE ELEVATORS
(REFERENCE MAINTENACE MANUAL PG 5.7.6-18)



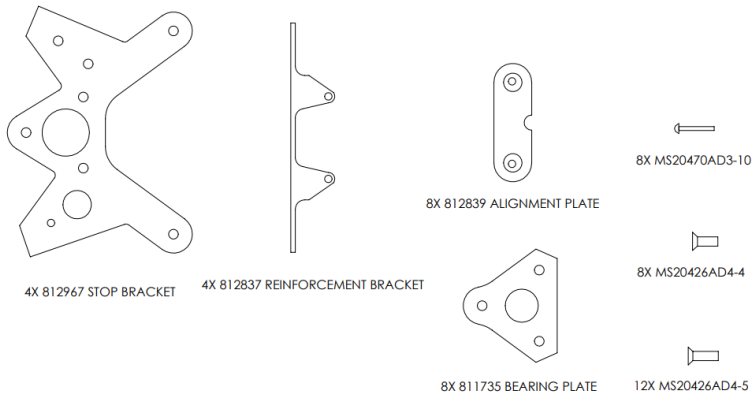
ELEVATOR SPAR VIEW



DETAIL A

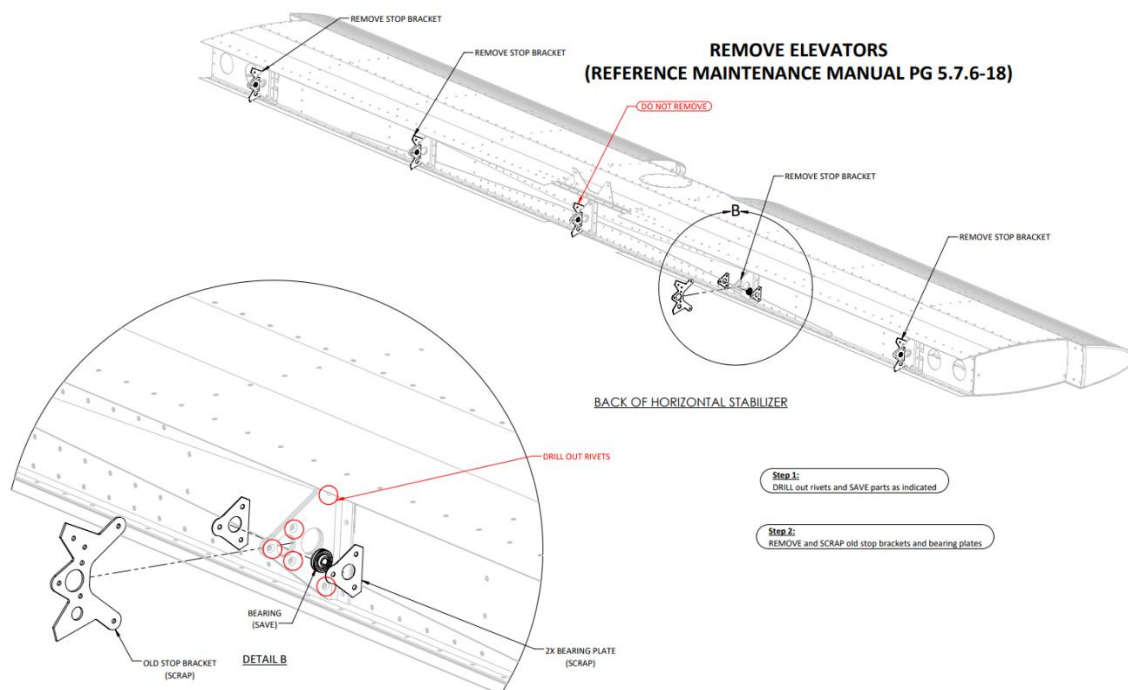
Appendix B: Installation of Preventative Measures

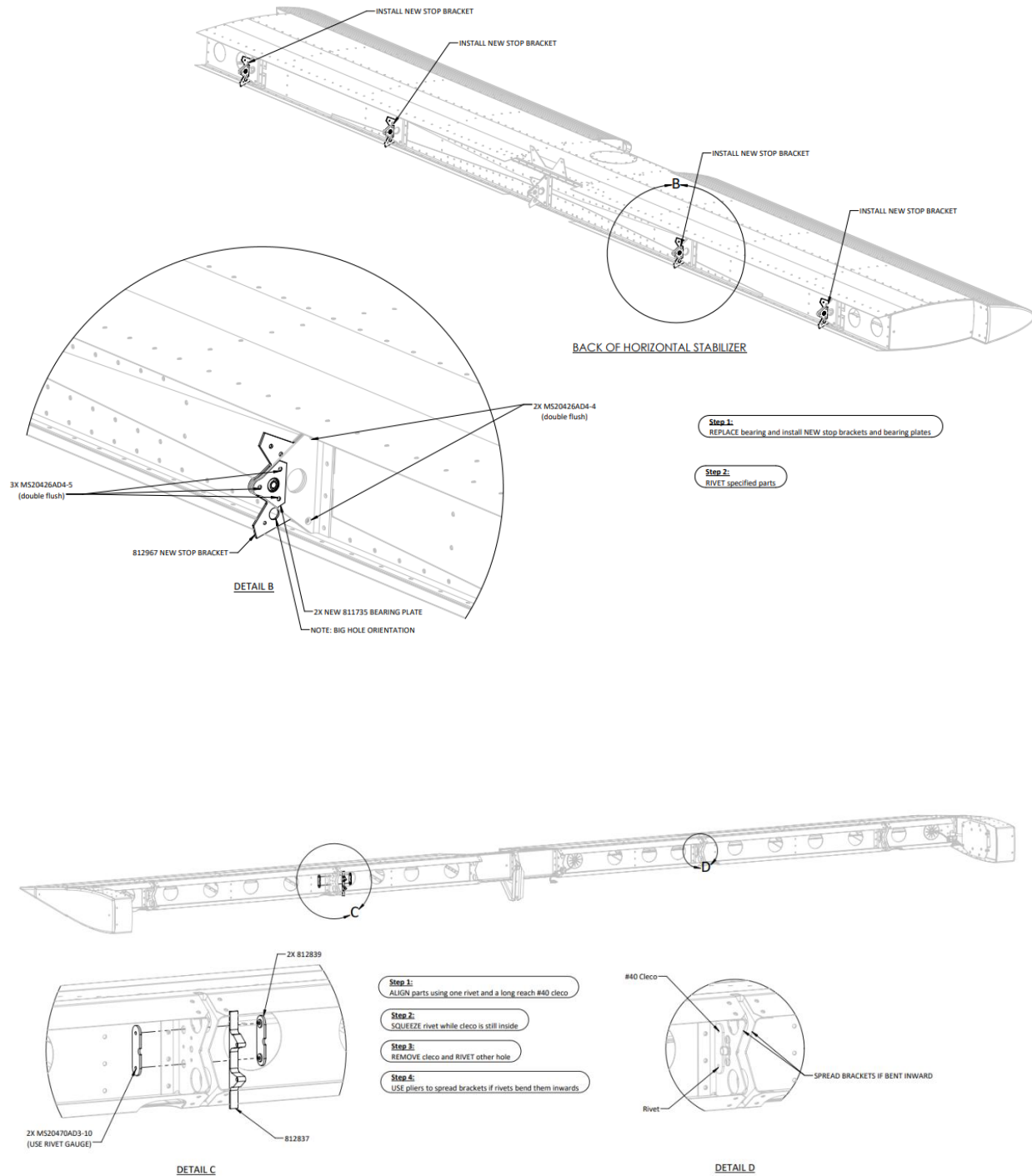
PARTS NEEDED

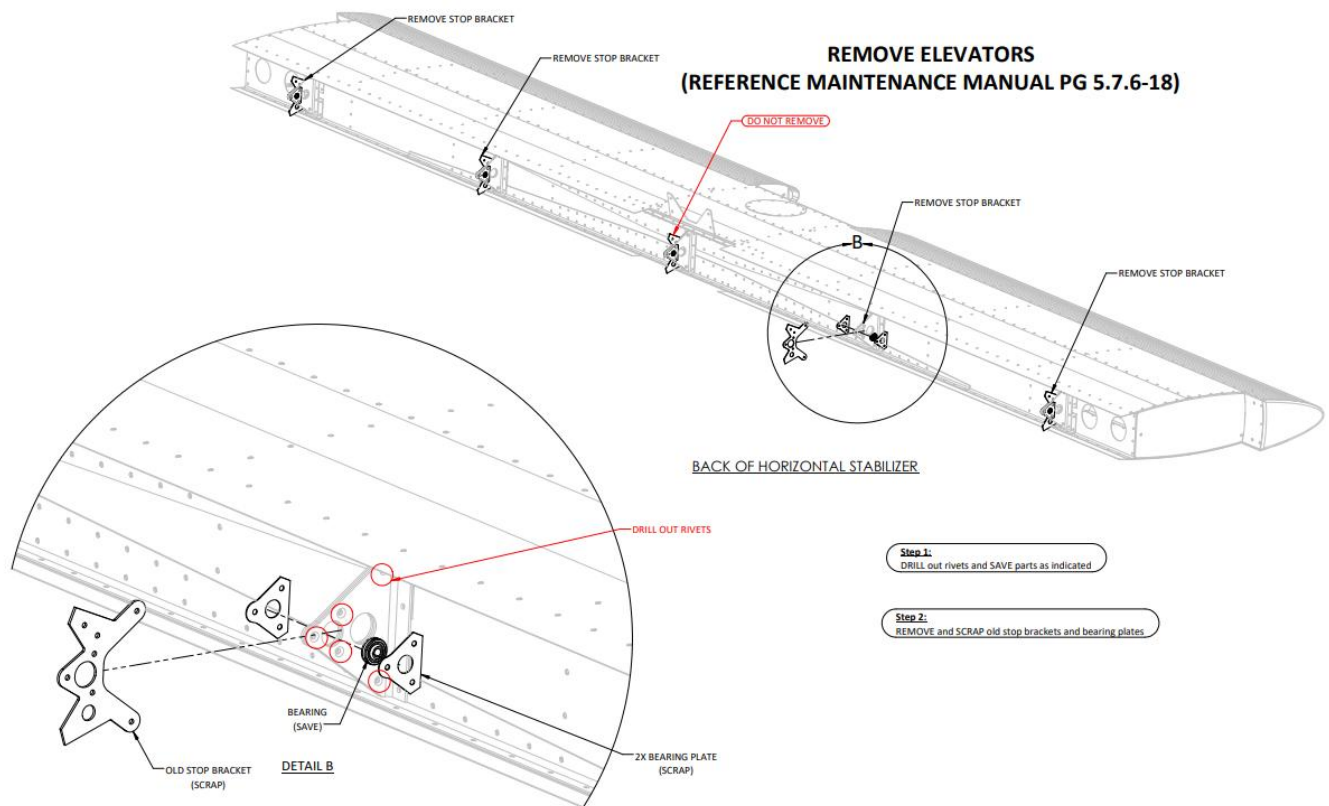


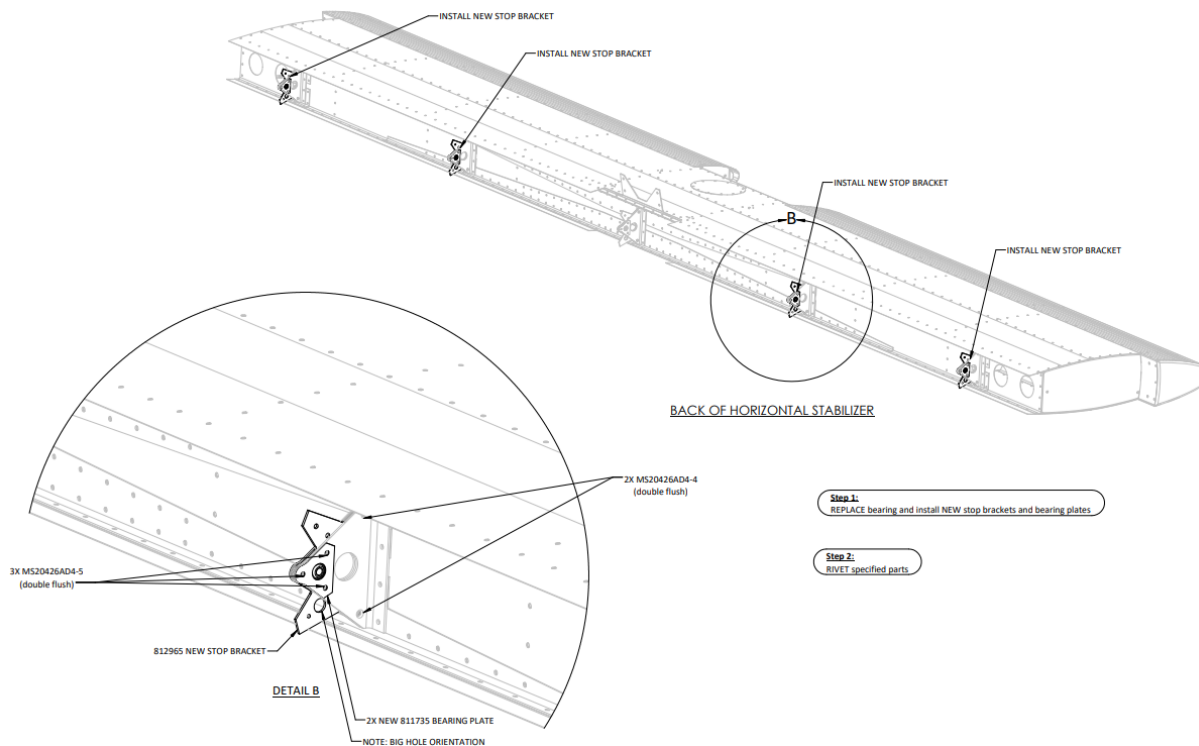
TOOLS NEEDED

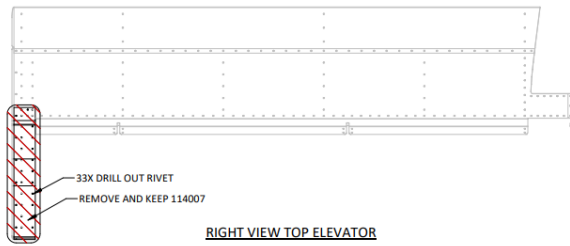
1X #40 LONG REACH CLECO
 DUCK BILL OR FLAT END PLIERS
 RIVET SQUEEZER
 DRILL WITH #30 DRILL BIT
 RIVET GAUGE FOR AD3 SIZE



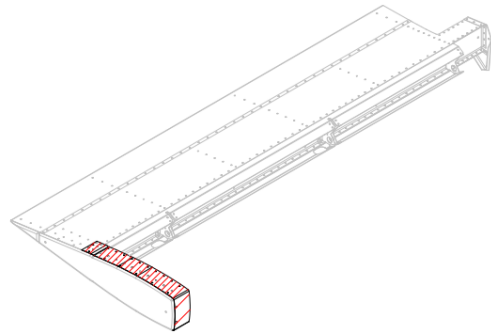


Appendix C: Replacing elevator spar





RIGHT VIEW TOP ELEVATOR



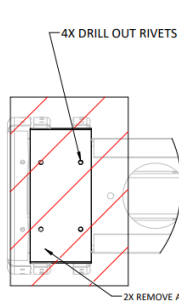
ISO VIEW RIGHT ELEVATOR

Step 1:

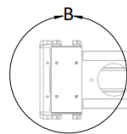
- DRILL out all rivets in marked areas
- REMOVE and KEEP horn skin

Step 2:

- REPEAT on left elevator



DETAIL B

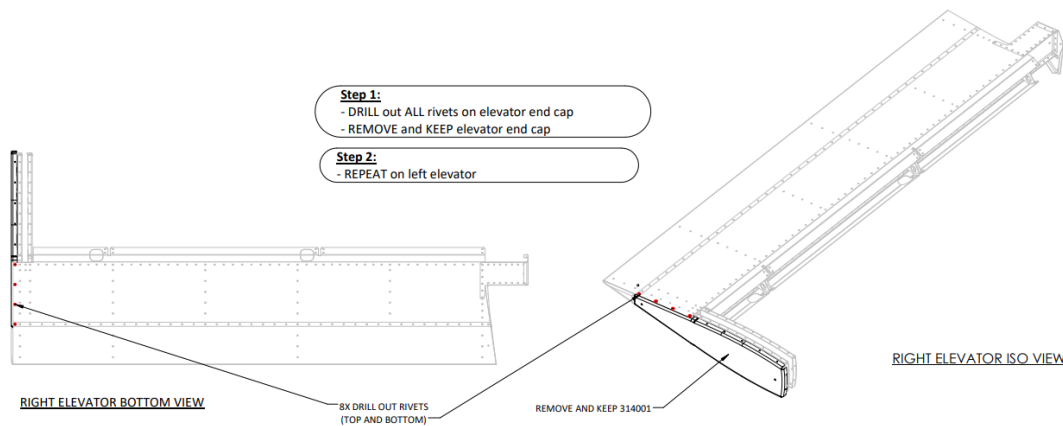
**Step 1:**

- DRILL out highlighted rivets, and remove and keep lead weights

Step 2:

- REPEAT on left elevator

FRONT OF RIGHT ELEVATOR



RIGHT ELEVATOR BOTTOM VIEW

Step 1:

- DRILL out ALL rivets on elevator end cap
- REMOVE and KEEP elevator end cap

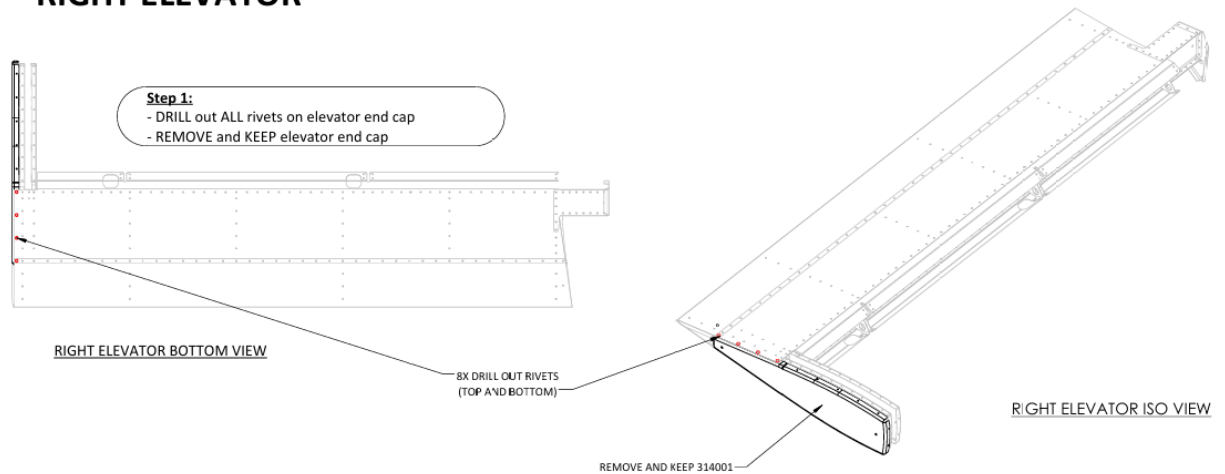
Step 2:

- REPEAT on left elevator

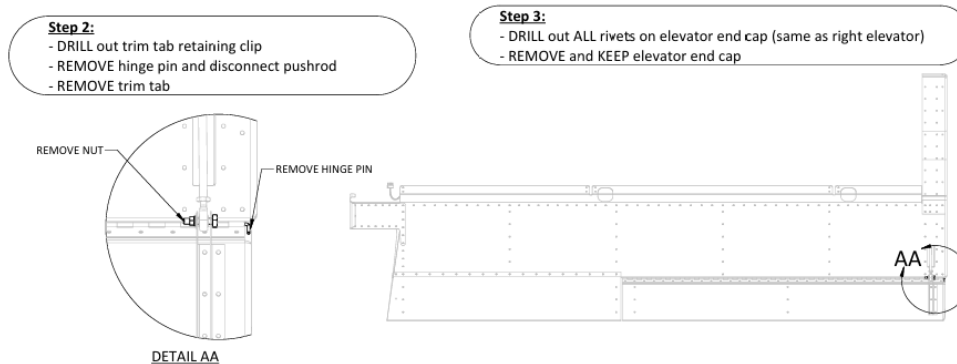
RIGHT ELEVATOR ISO VIEW



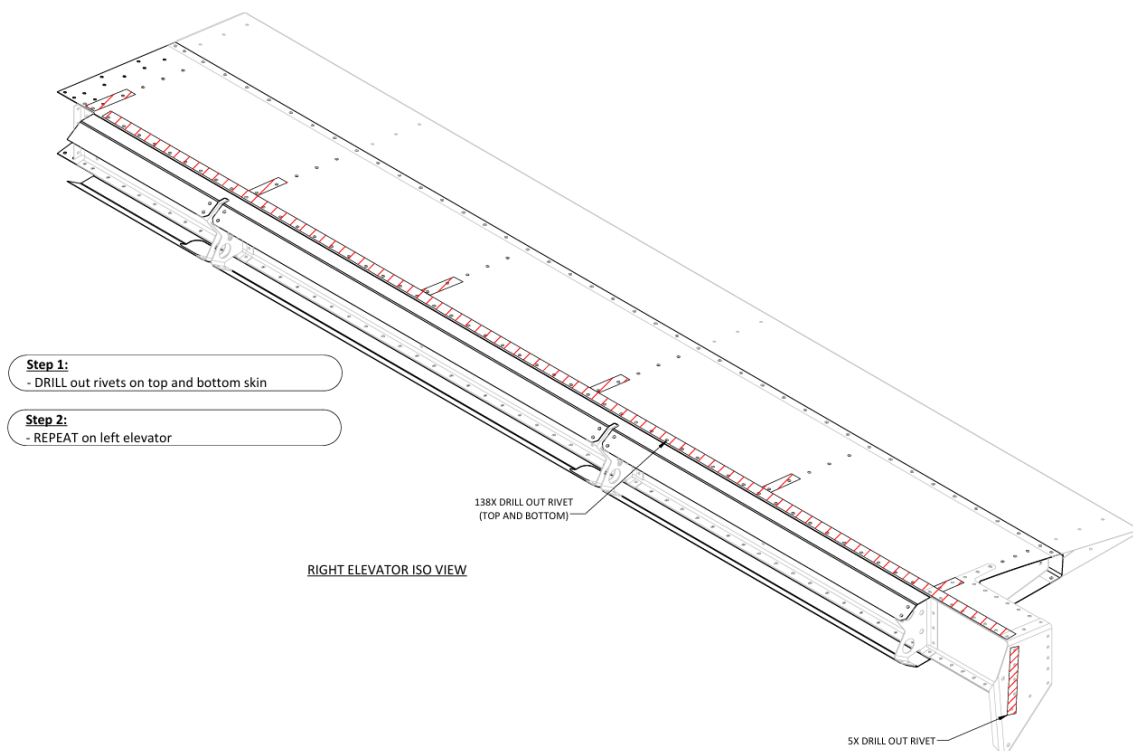
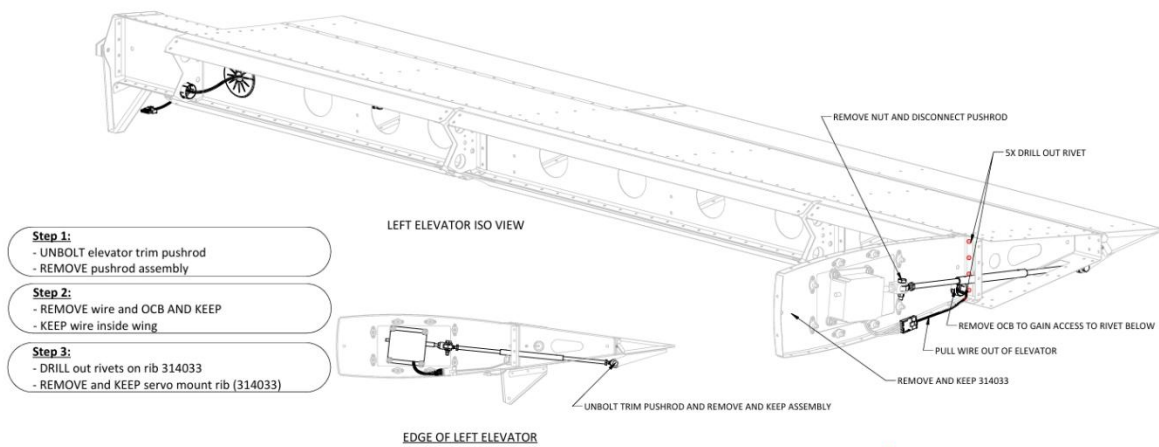
RIGHT ELEVATOR

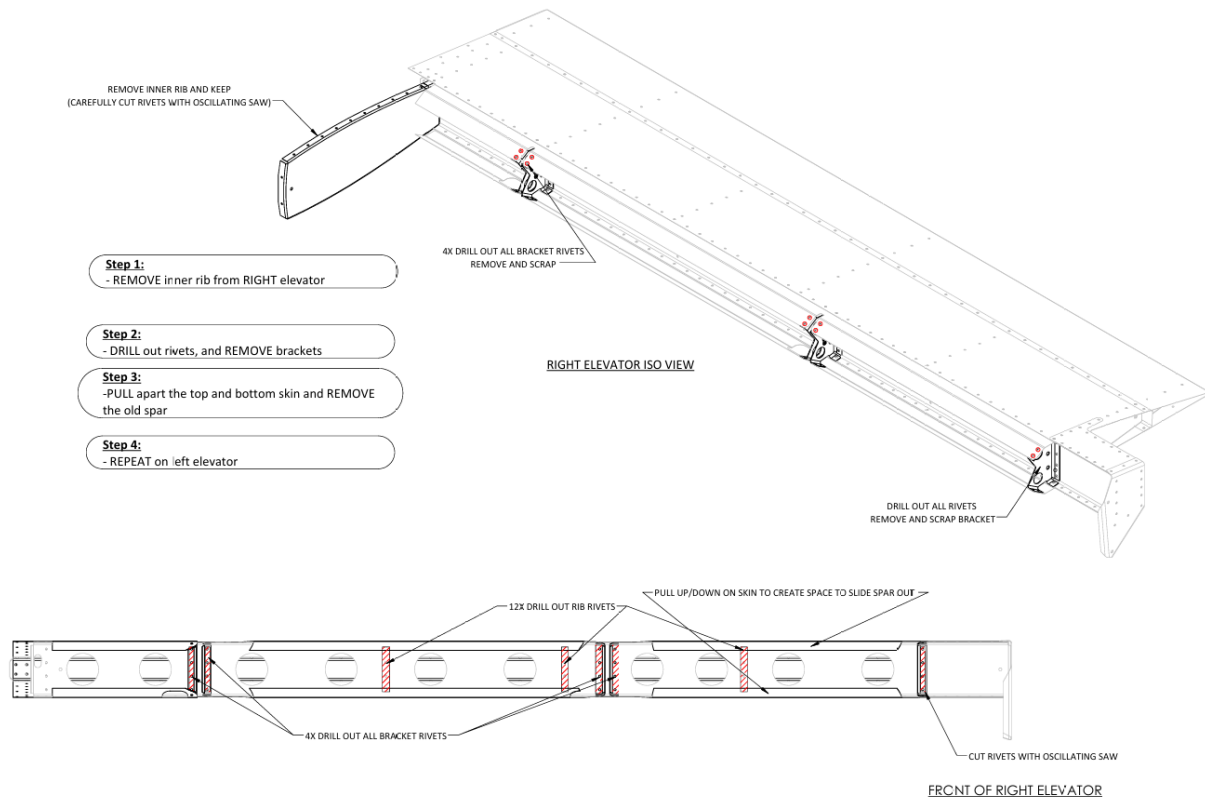


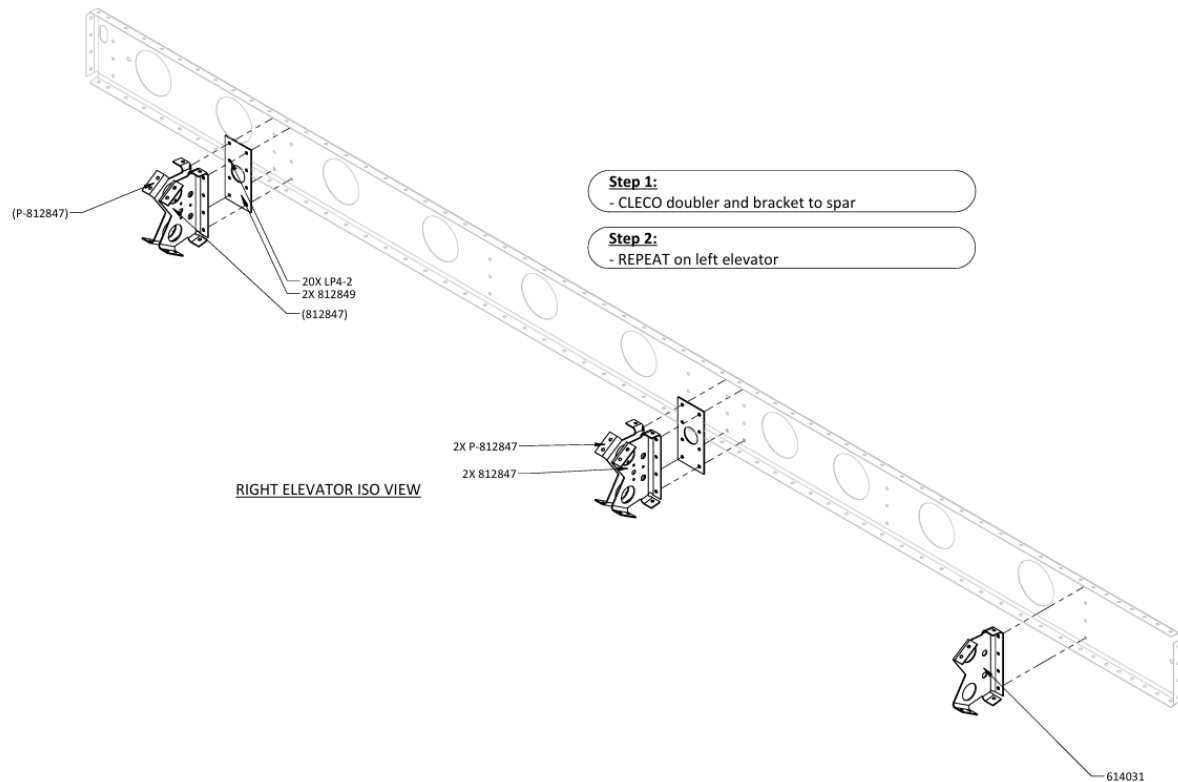
LEFT ELEVATOR



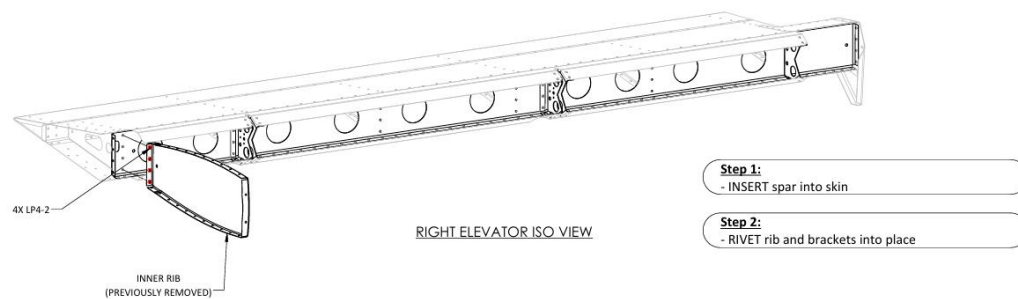
LEFT SIDE ONLY



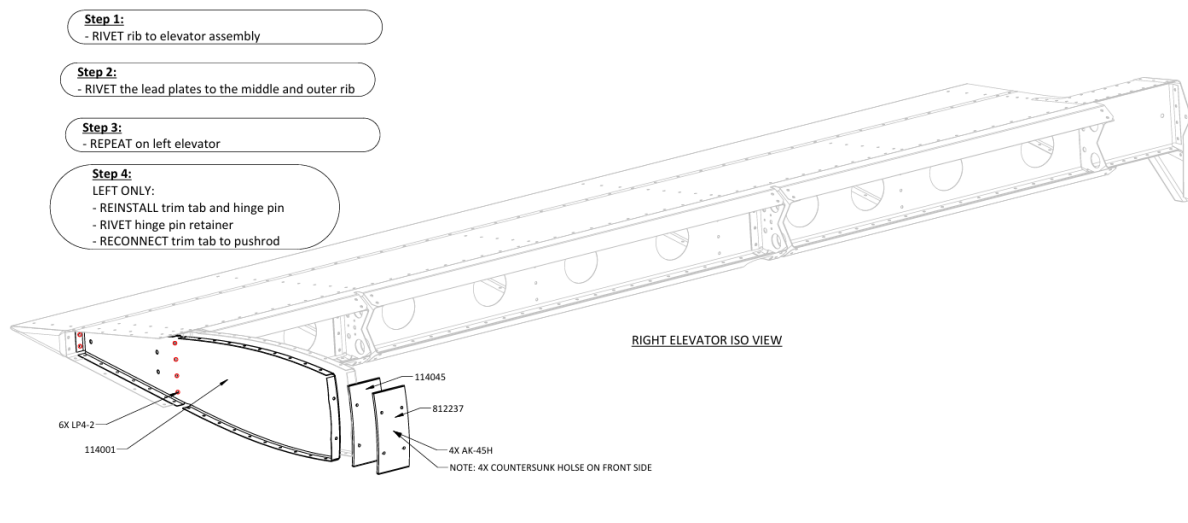
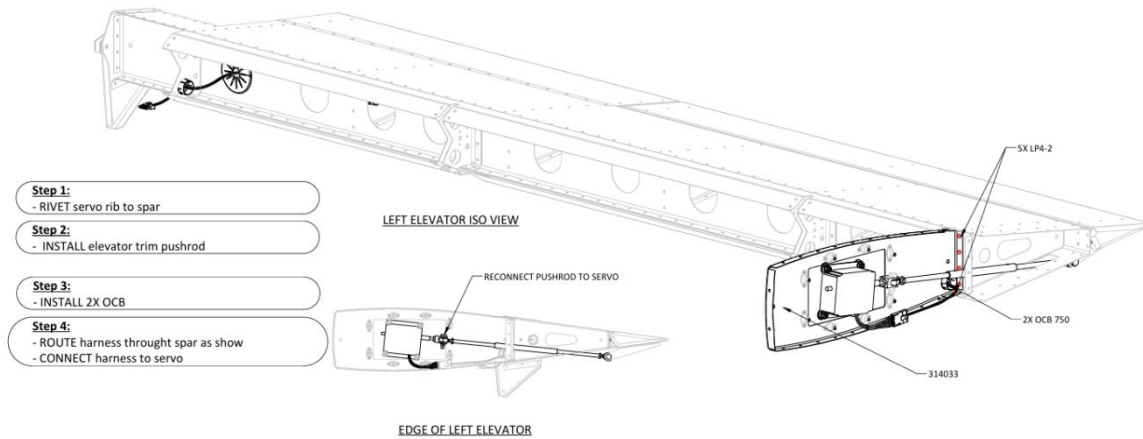


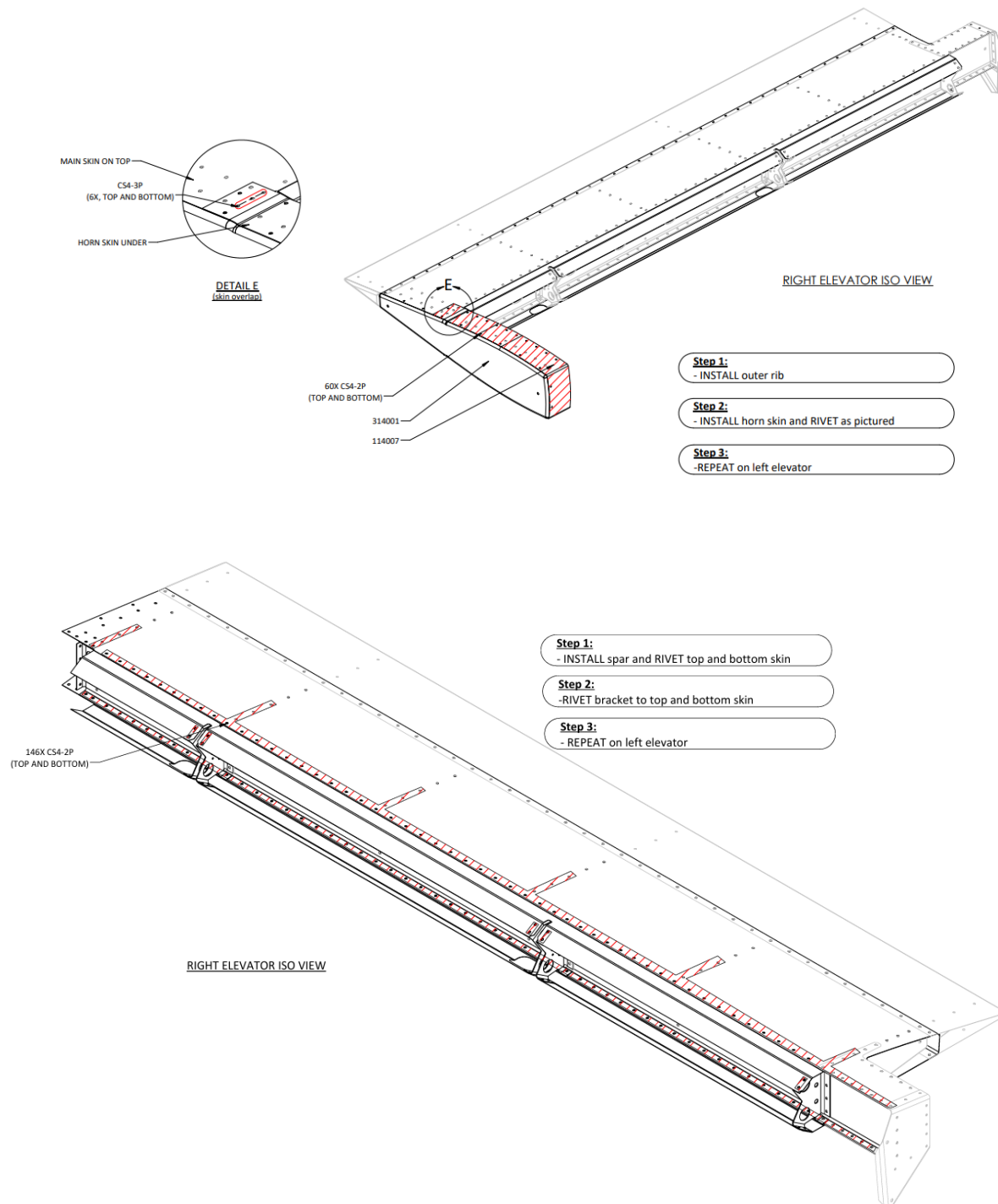


RIGHT ELEVATOR ONLY

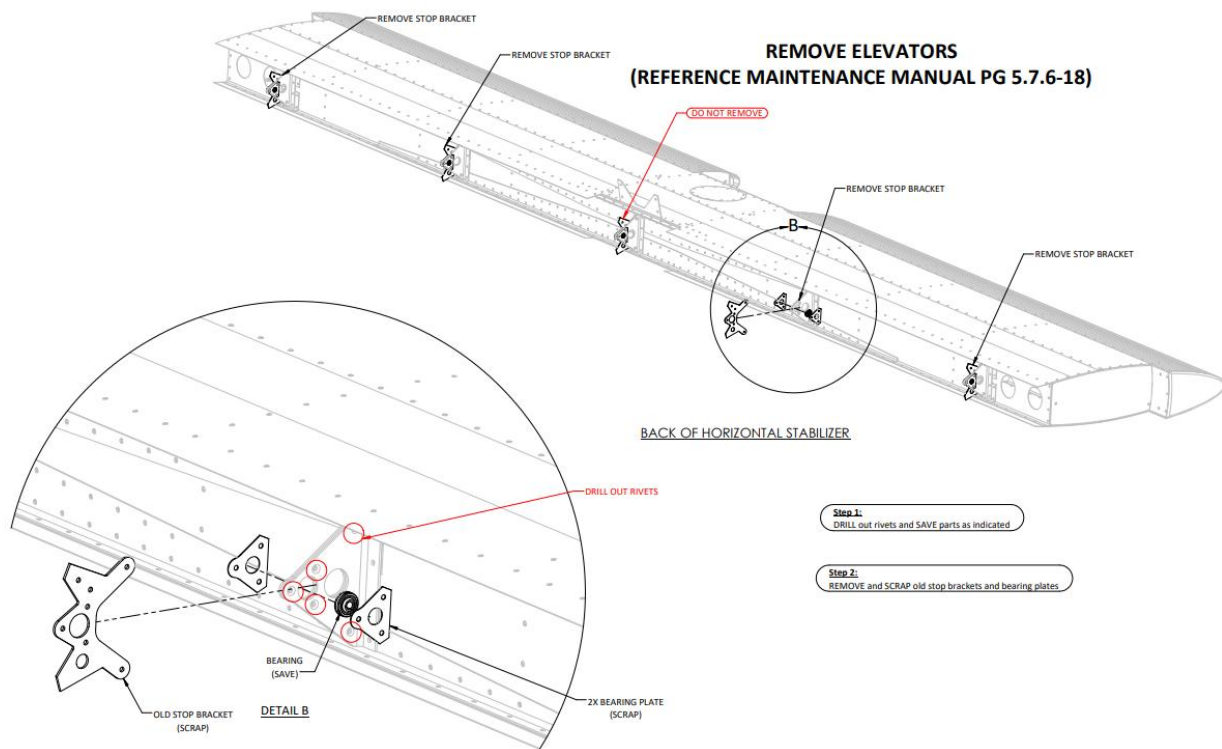


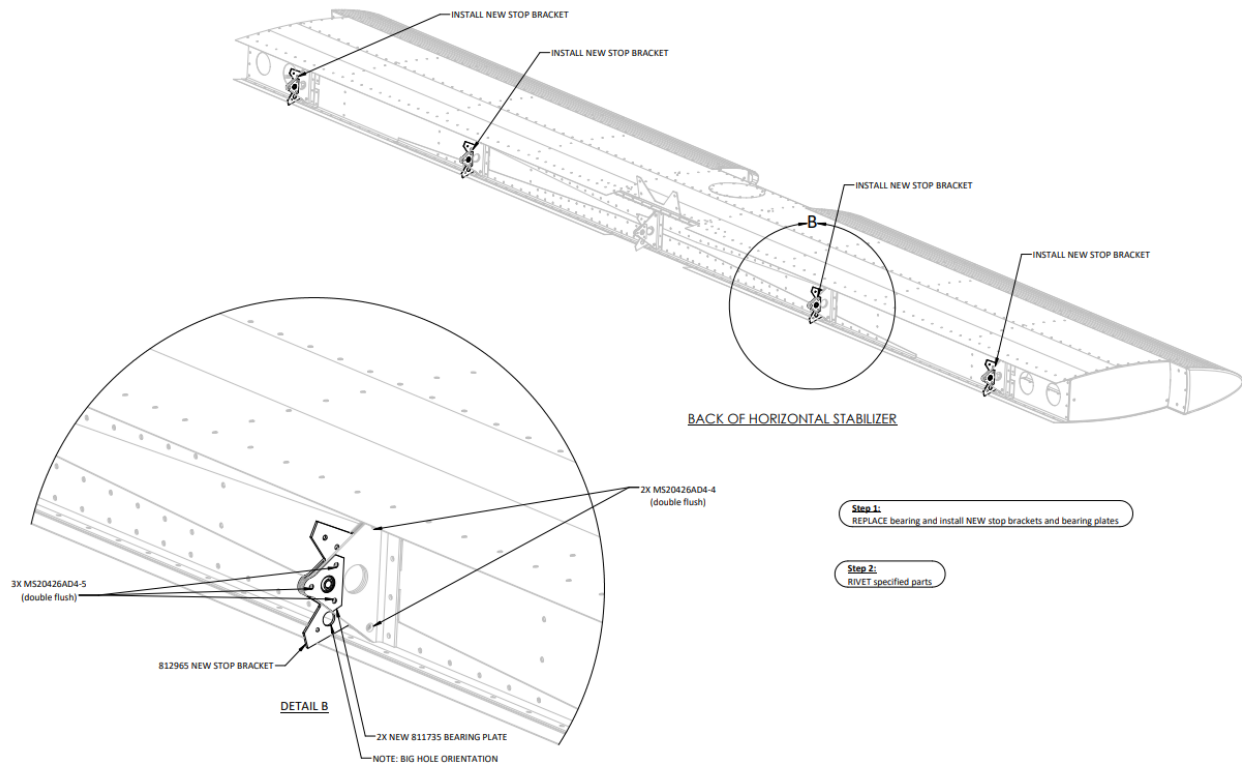
LEFT ELEVATOR ONLY





Appendix D: Replacing Elevator, and Stop Brackets on H-STAB





Then install new Elevator in accordance with maintenance manual PG 5.7.6-18.