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Navion Service Bulletin No. 109

Subject: Frame Assembly Station 311.07 Inspection:

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Approval Basis: The technical references contained in this service bulletin are FAA approved.

Models Affected: All Navions, Serial Numbers NAV-4-002 through NAV-4-2561

Compliance: Mandatory

Purpose: To inspect for internal (doubler) and external (web) damage of frame assembly Part No. 143-31004-7 (Fuselage Station 311.07).

Background: Routine maintenance inspections of Navion aircraft in the field have revealed damaged webs and/or frames with non-approved, non-standard repairs at Station 311.07. Reference Figure (1) through (9) below.

Inspection: Visually inspect to verify that Fuselage Station 311.07 frame assembly (Part No. 143-31004-7) is free of cracks and damage. To gain access, remove aft lower rudder fairing and left side access panel at Fuselage Station 302 to inspect fuselage frame as illustrated in Figure (1a) and (1b). If frame is undamaged, reinstall lower rudder fairing and left side access panel. Inspection should be performed during periodic maintenance inspection intervals or before further flight in the event of a suspected tail strike or damage.

Action: If the frame doubler or web is found to be cracked or distorted beyond '*negligible damage*' as described in the Navion Structural Repair Manual (SRM) paragraph 4-47, (4-25), the affected components must be replaced in accordance to paragraph 4-48 of the SRM. Reference Figure (1) through (9) below. **Please contact SHA for any technical support, parts support or any general inquiries that may arise during the inspection procedure at info@navion.com or +01 651-306-1456.**



Figure 1a



Figure 1b

Figure (1a) shows aft rudder fairing removed to facilitate inspection. Figure (1b) shows left side access panel at Fuselage Station 302 with panel removed.

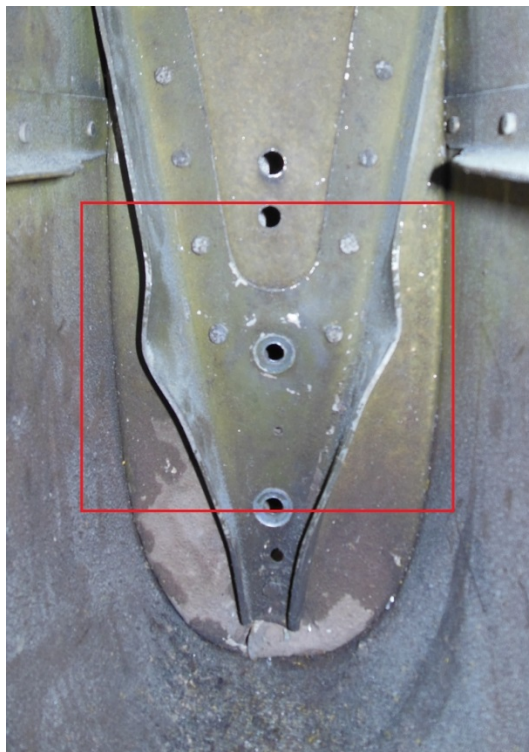


Figure 2a



Figure 2b

Figure (2a) illustrates the inside (fore) of a damaged Fuselage Station 311.07 frame assembly. Red box indicates the affected area (Part No. 143-31004-7). Figure (2b) illustrates undamaged frame assembly.



Figure 3a



Figure 3b

Figure (3a) illustrates the outside (aft) of a cracked Fuselage Station 311.07 frame assembly (Part No. 143-31004-7). Figure (3b) illustrates undamaged frame assembly.



Figure 4a



Figure 4b

Figures (4a) and (4b) illustrate non-standard repairs installed with damage to web and doubler still remaining, requiring replacement of the assembly (Part No. 143-31004-7).

END