



FEDERAL AVIATION ADMINISTRATION

Aviation Maintenance Alerts Template

Hello Aviation Industry Members,

The Federal Aviation Administration (FAA) received numerous requests from the Aviation Industry (Industry) to reinstate the Aviation Maintenance Alerts (AC-43-16) (AMA) to assist industry members when sharing information regarding any anomalies and safety issues found during aircraft maintenance or related to their in-flight experiences.

This newly created Aviation Maintenance Alerts (AMA) Template is available for voluntary submission of information that you will provide as a non-formatted document to add new data regarding any anomalies, adverse risks, safety issues, or problems encountered while using, inspecting, or modifying the aircraft. The FAA Alerts Team will add this data to our historical Alerts files.

Further, when populated and submitted, the data is included as individual Alerts to our FAA Safety Team (FAAST) site. The Site is located under the General Aviation section (see User Guide for additional information).

The FAA Alerts Team will log and track the Alerts in the FAAST site's historical files and is included in the Table of Contents (List). The List will be searchable by 'Product Category' 'Manufacturer', and 'Model' for the aircraft, power plants, rotors, or component part of the accessories. This information will assist the Industry in finding similar Alerts for products written by others. The FAA Alerts Team will update the site's List on a regular basis (either monthly or quarterly depending on the information received), and include copies of the original Alerts, as well as the updated List. The Word template is very simplistic and easy-to-populate.

The Industry will use the AMA Template to submit an Aviation Maintenance Alert that identifies anomalies and safety issues, [as well as experiences] found during daily usage or routine maintenance checks and inspections. Gathering this information will not only help the Industry to share their experiences, but will assist the entire Aviation Community to improve aeronautical product safety.

If the Industry submitter resolves the issues and successfully creates a workable solution, the submitter is encouraged to describe the corrective actions in Section III of the Template; or, if the submitter has found an option to correct future issues of the same nature, please include your recommendation in Section III. These actions will provide important information to other members of the aviation industry to ensure the information is captured and provided to industry personnel. These records will not only describe possible issues and resolutions, but will encourage feedback from other members regarding their experiences on similar products.

When an AMA is published, the corrective action may not be fully evaluated. As more knowledge is provided, the Alerts will be promptly updated to include all facts provided. This includes feedback from other Aviation personnel or government agencies who provide support to the Aviation Industry. When the Alert is received, the List is updated and published on a regularly established schedule.

Please use this Voluntary Template to document any safety issues, possible alerts, comments, or suggestions you may find. Download the Template to your electronic communication device, fill in as much information as possible, save the Template on your device, and email your completed document to us at: FAA; ATTN: AFS-600 at: 9-AVS-Mxalerts@faa.gov.

Thank you.

SECTION I: DESCRIBE ALERT SUBJECT

PRODUCT CATEGORY	MANUFACTURER	MODEL	YEAR OF MFG	TOTAL TIME IN SERVICE
AIRCRAFT Note: This is the Word Template which must be populated by the submitter	There is a list of common manufacturers listed in the Instructions, should you require the preferred product title for the categories	Enter the Model Number of your product	If available, please list the manufactured year of the product	If available, please enter the Total Time in Service for the Product
AIRPLANES	Cessna	172 and 175	1956 - 1986	
HELICOPTER/ ROTORCRAFT				
BALLOONS				
UAS				
POWERED PARACHUTE, WEIGHT-SHIFT CONTROL AND ULTRA-LIGHT				
POWERPLANT				
PROPELLER				
APPLIANCES/ACCESSORIES				

SECTION II: DESCRIBE SAFETY ISSUE

CESSNA 172 and 175, Horizontal Stabilizer Spar

Submitter found Cracks in the Horizontal Stabilizer Forward Spar on Cessna 172 and 175 Airplanes.

Improper ground handling can cause cracking and deformation of the Horizontal Stabilizer structure. Textron and FAA recommend using a tow/steering bar to manually position the airplane on the ground. Further, it is suggested that technicians do not push on control surfaces or outboard empennage surfaces. Inspect and modify the Horizontal Stabilizer Forward Spar per the Cessna Service Manuals and Supplemental Inspection Documents (SIDs). Non-compliance to these service documents may result in the failure of the Horizontal Stabilizer.

Nearly 90 Service Difficult Reports (SDRs) were submitted during the past 30 years; these SDRs reported cracks in the Horizontal Stabilizer Forward Spars on Cessna 172 and 175 Airplanes.

Service experience indicates the possibility of cracks and buckles developing in the area of the center lightening hole in the Horizontal Stabilizer Forward Spar. (See Figure 1, Crack in the Center Lightening Hole on the Horizontal Stabilizer Forward Spar example)

The inspection team should conduct an inspection for cracks and buckles in this area. If a crack or buckle is found, the Spar will be repaired or replaced; the repair will depend upon the extent of crack propagation. To assist in preventing this condition from occurring, a strengthened one-piece forward Spar reinforcement is available. Cessna series 172R and 172S incorporate the front Spar reinforcement.

Textron Aviation has developed SIDs for the Cessna 172 and 175 Airplanes that supersede and replace inspections in Service Bulletin SEB94-8. Table 1 identifies these SIDs. Each of these SIDs contains the note:

“Improper ground handling can cause cracking and deformation in the horizontal stabilizer. It is recommended that a tow/steering bar be used when the airplane is manually positioned on the ground. Do not steer the airplane by pushing down on the horizontal tail.”

Figure 2, Horizontal Stabilizer Forward Spar inspection, shows example schematics from a SID where cracks are occurring at the lightening hole.

SECTION III: DESCRIBE ALERT CORRECTIVE ACTION/RECOMMENDATION

NOTE: If a resolution or correction action is identified, please describe below. If not, mark this section to be determined (TBD). Thank you.

Improper ground handling can cause cracking and deformation of the Horizontal Stabilizer structure. It is recommended that the mechanic use a tow/steering bar to manually position the airplane on the ground. Do not push on control surfaces or outboard empennage surfaces. Inspect and modify the Horizontal Stabilizer Forward Spar per the Cessna Service Manuals and Supplemental Inspection Documents (SIDs). Non-compliance to these service documents may result in the failure of the Horizontal Stabilizer.

SECTION IV: INCLUDE GRAPHICS, DRAWINGS, AND PICTURES, See Instructions



Figure 1 Crack in the Center Lightning Hole on the Horizontal Stabilizer Forward Spar (example)

Table 1 Cessna 172 and 175 Supplemental Inspection Documents (SIDs)

SID	Model	Series	*Horizontal Spar Reinforcement ~Part No.	*Replacement Horizontal Stabilizer Forward Spar ~Part No.	Inspection Compliance
55-11-01	172 and 175	1953-1962	0531037-1	0532001-98	100 hours or 1 year
55-11-01	172/F172/P172/FP172	1963-1968	0531037-1	0532001-98	100 hours or 1 year
55-11-01	172/F172	1969-1976	0531037-1	0532001-98	100 hours or 1 year
55-11-01	172/F172	1977-1986	0531037-1	0532001-98	100 hours or 1 year
55-11-01	R172/FR172	1977-1981	0531037-1	0532001-98	100 hours or 1 year
55-11-01	172RG	1980-1985	0531037-1	0532001-98	100 hours or 1 year

*Installation of 0531037-1 Horizontal Spar Reinforcement or 0532001-98 Horizontal Stabilizer Forward Spar is a terminating action for this inspection.

Note: Manufacturers used the Horizontal Forward Spar Part No. is 0532001-10 when the airplanes were built.

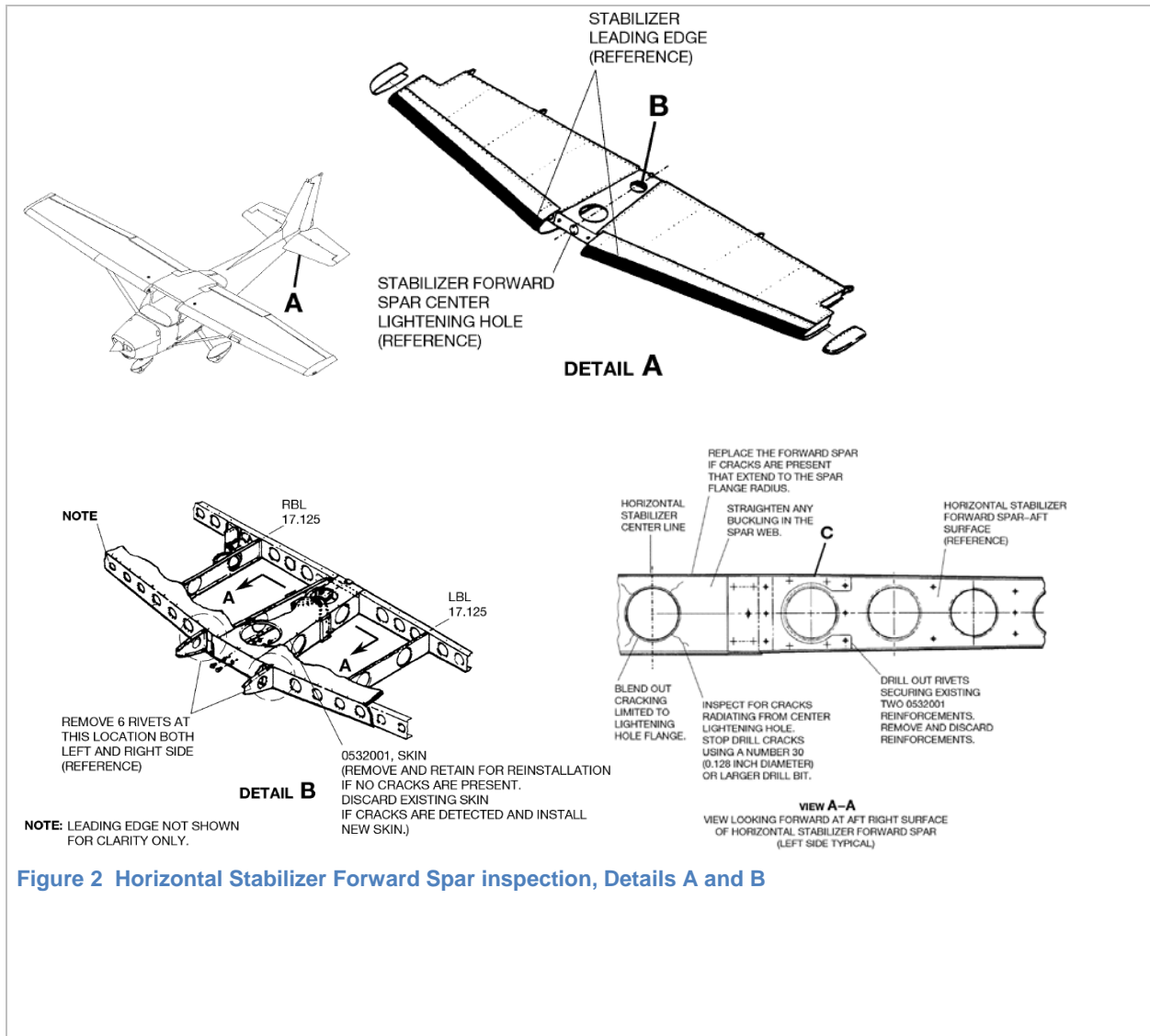


Figure 2 Horizontal Stabilizer Forward Spar inspection, Details A and B