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Rev.: # 2

Date:

PURPOSE: CHECKING THE STRUCTURAL INTEGRITY OF THE FRONT LONGITUDINAL SPARS OF THE WINGS OF THE PIPER PA-25 Series, IN ORDER TO PREVENT CATASTROPHIC FAILURES

THIS PUBLICATION of SB # 25-57-11 R2 (Revision # 2) REPLACES THE PREVIOUS "Original and R1"

LAVIA ARGENTINA S.A., in accordance with the responsibility transferred by PIPER Aircraft in Service Spars Letter # 413 dated May 6, 1998, with the explicit purpose that the new owners of the Type Certificate shall have responsibility for support of any nature as of April 15, 1998," proceeded to issue this Service Bulletin REVISION # 2 in order to comply with the delegated responsibility.

BACKGROUND: Due to service difficulties (DES) with PA-25 aircraft, where WING DETACHMENTS have been observed, studies and observations carried out on the recovered material concluded that the main spars collapsed due to fatigue.

The failures were structural (cracks), starting at holes or screw threads. This was interpreted as poor maintenance practices during metal leading edge changes or during the replacement of metal leading edges with composite leading edges that are not original equipment from the manufacture and certification of the PA-25 Series.

The original publication of this bulletin recommended preventive measures and stipulated that a visual NDT inspection be performed using a borescope. Acceptance or rejection criteria were established based on the findings.

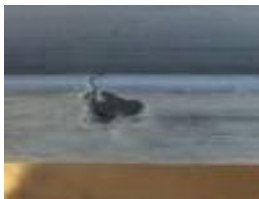
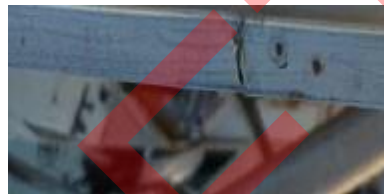
As a reinforcement measure to the visual inspection by borescopy, an NDT by induced currents was incorporated in the first instance, which gave rise to Revision #1, where the procedure to be performed was specified in Annex ALFA.

Subsequently, with more data received and the participation of different international organizations, a more generalized overview of the situation became apparent.

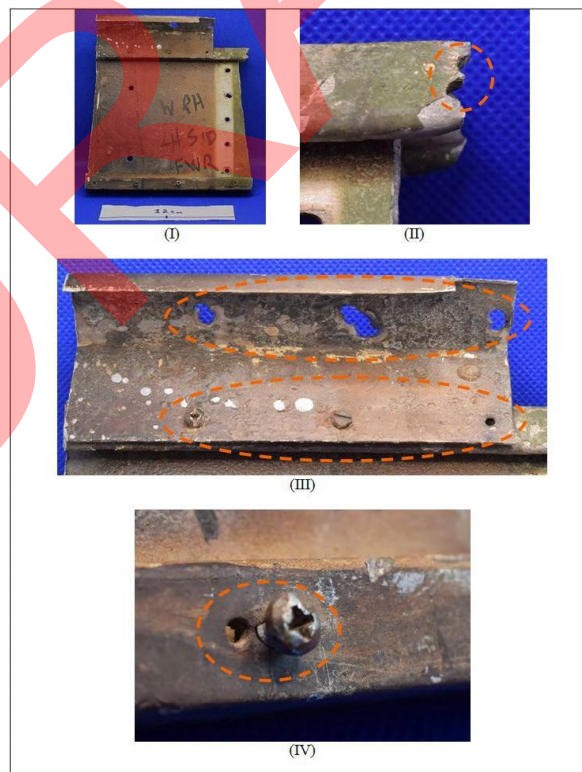
Thus, it was observed that the vast majority of PA-25 Series aircraft currently in operation are approximately 55 years old or older, and their maintenance and overall condition vary greatly.

Furthermore, not all PA-25 Series aircraft perform the same aerial work, and therefore are not subject to the same conditions for the application of this Service Bulletin.

Even so, the criteria adopted to adjust this bulletin in REVISION #2 has been to try to preserve the resources of owners with the highest possible level of operational safety in general aviation.

PHOTOS OF FAILURES FOUND

The evidence of poor maintenance practices is based on the observation of parts recovered from the three aircraft that crashed in Argentina, which, taken as a reference, reveal holes that were superimposed and misaligned with the originals (see photos above), significantly displaced from the centerline of the flange, or even holes drilled in the upper flange. (See image below, photos I to IV)



NOTE: Users or workshops that have made leading edge changes, whether or not they have recorded the action, must pay special attention during the execution of this visual END by borescopy in order to ensure that there are no cracks in the main spar flanges.

APPLICABILITY:

Models affected	S/N affected	Compliance
PIPER "Pawnee" PA-25; PA-25-235 y PA-25-260	All	MANDATORY
CHINCUL "Pawnee" PA-25; PA-25-235 y PA-25-260	All	MANDATORY
LAVIASA "Puelche" PA-25-235 y PA-25-260	Only in cases where Leading Edges changes have been made or this information is unknown.	MANDATORY
	Those in which no Leading Edges changes have been made or the main spar or entire wing has been replaced..	RECOMMENDED
FADEA "Puelche" PA-25-235 y PA-25-260	Only in cases where Leading Edges changes have been made or this information is unknown.	MANDATORY
	Those in which no Leading Edges changes have been made or the main spar or entire wing has been replaced.	RECOMMENDED

COMPLIANCE:

Compliance with this SB is detailed on page 4, depending on the maintenance actions that have been carried out on the aircraft, their age (identified by the year of manufacture), and the type of operation carried out with aircraft.

The OPERATIONS CONSIDERED are: AERIAL APPLICATION and TOWING..

NOTE: THE END INSPECTION BY EDDY CURRENTS detailed in the annex

"ALFA" MUST BE PERFORMED ONLY ONCE TIME

and each Time the Leading edges are replaced.

IT MUST BE PERFORMED after the initial action when this SERVICE BULLETIN is applied.

AIRCRAFT THAT ARE 50 YEARS OLD OR OLDER FROM THEIR DATE OF MANUFACTURE, REGARDLESS OF THE TYPE OF OPERATION THEY PERFORM, MUST CONSIDER THE APPLICATION OF THIS SERVICE BULLETIN MANDATORY.

AIRCRAFT used for AERIAL APPLICATION

1) MANUFACTURED BY PIPER or CHINCUL, AND THOSE MANUFACTURED BY LAVIASA AND FADEA THAT HAVE BEEN MODIFIED WITH CHANGES OF THE LEADING EDGES or WHERE IT IS UNKNOWN WHETHER SUCH CHANGES HAVE BEEN MADE.

COMPLIANCE: MANDATORY.

OPPORTUNITY FOR IMPLEMENTATION: (once this Service Bulletin has been received and before the NEXT aerial application campaign is carried out)

RECURRENCE: Annual, every year, **DURING THE ANNUAL INSPECTION**

2) MANUFACTURED BY LAVIASA or FADEA THAT HAVE NOT BEEN MODIFIED WITH CHANGES OF THE LEADING EDGES, or THOSE THAT HAVE BEEN INSPECTED (ACCORDING TO PREVIOUS PUBLICATIONS) AND HAVE BEEN REPAIRED AND RETURNED TO SERVICE BY REPLACING THE MAIN SPAN or REPLACING THE WING FOR A NEW ONE.

COMPLIANCE: RECOMMENDED

OPPORTUNITY FOR IMPLEMENTATION: (DURING THE NEXT ANNUAL INSPECTION)

RECURRENCE: Annual, every year, **DURING THE ANNUAL INSPECTION**

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AIRCRAFT used for TOWING

1) MANUFACTURED BY PIPER or CHINCUL, AND THOSE MANUFACTURED BY LAVIASA AND FADEA THAT HAVE BEEN MODIFIED WITH CHANGES OF THE LEADING EDGES or WHERE IT IS UNKNOWN WHETHER SUCH CHANGES HAVE BEEN MADE.

COMPLIANCE: MANDATORY.

OPPORTUNITY FOR IMPLEMENTATION: (once this Service Bulletin has been received and before the NEXT campaign TOWING is carried out)

RECURRENCE: : Calendar every 2 years, **DURING THE ANNUAL INSPECTION**

2) MANUFACTURED BY LAVIASA or FADEA THAT HAVE NOT BEEN MODIFIED WITH CHANGES OF THE LEADING EDGES, or THOSE THAT HAVE BEEN INSPECTED (ACCORDING TO PREVIOUS PUBLICATIONS) AND HAVE BEEN REPAIRED AND RETURNED TO SERVICE BY REPLACING THE MAIN SPAN or REPLACING THE WING FOR A NEW ONE.

COMPLIANCE: RECOMMENDED

OPORTUNITY FOR IMPLEMENTATION: (DURING THE NEXT ANNUAL INSPECTION)

RECURRENCE: Calendar every 2 years, **DURING THE ANNUAL INSPECTION**

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ACTIONS:

To perform the actions in this service bulletin, six (6) inspection covers (Kit P/N 96001-100) must be installed on each half-wing in the locations shown below:

PHOTOGRAPHS indicating the six (6) inspection cover areas**PHOTO OF INSPECTION COVER KIT (KIT P/N 96001-100) and List of Materials**

Laviasa
aeroindustria

KIT P/N 96001-100

Tapas de Inspección

Aplicables al BS LAVIASA # 25-57-11

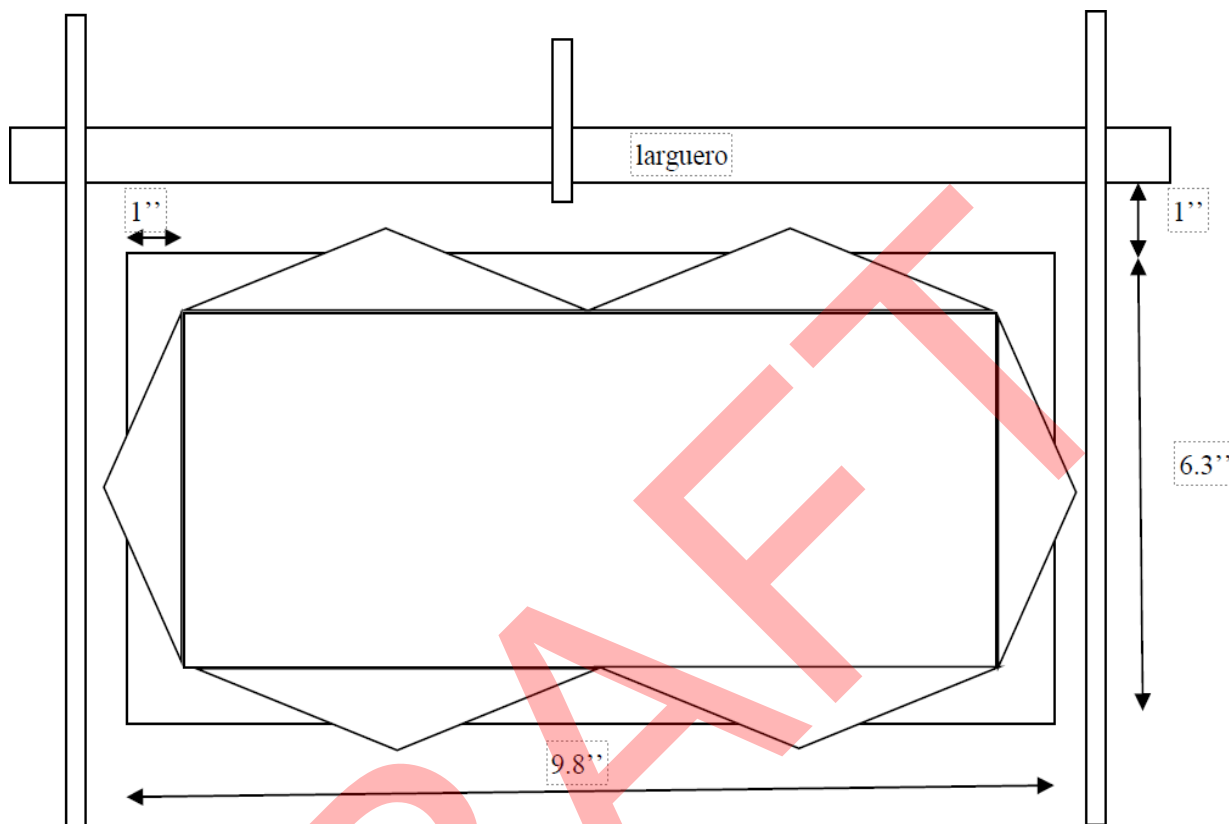
LISTA DE MATERIALES

Cant.	Unidad	P/N	Designación	Especificación
12	c/u	96001-101	MARCO	Chapa Al 2024-T3 law Plano del P/N
12	c/u	96001-102	TAPA	Chapa Al 2024-T3 law Plano del P/N
1	c/u	96001-103	GALGA	law medidas especific. en BS# 25-57-11
12	c/u	96001-104	SELLO	law medidas especific. en Plano del P/N
72	c/u	LHA4972-8-02	Floating Clip Nut (Para los laterales)	law P/N.
48	c/u	LHA4972-10-02	Floating Clip Nut (Para las esquinas)	law P/N.
120	c/u	AN526-V1032R8	Screw	law P/N.
TBD	Lts.	LP045	Luzadur de Sherwin Williams	Washprimer mono componente.
TBD	Lts.	101	Fortex	Cemento de contacto

Initial ACTION:

1. Install rectangular inspection cover frames (from Kit P/N 96001-100), centering them between consecutive ribs 1" from the front spar, according to the "Inspection Cover Installation Instructions." (It is recommended to install the covers one at a time, starting with the station adjacent to the wing walk pad, perform a visual NDT inspection using a borescope, and if no issues are found, continue sequentially. If issues are found, the wing must be removed to perform a detailed inspection of the spar and possible replacement).

INSTALLATION DRAWING OF INSPECTION COVER

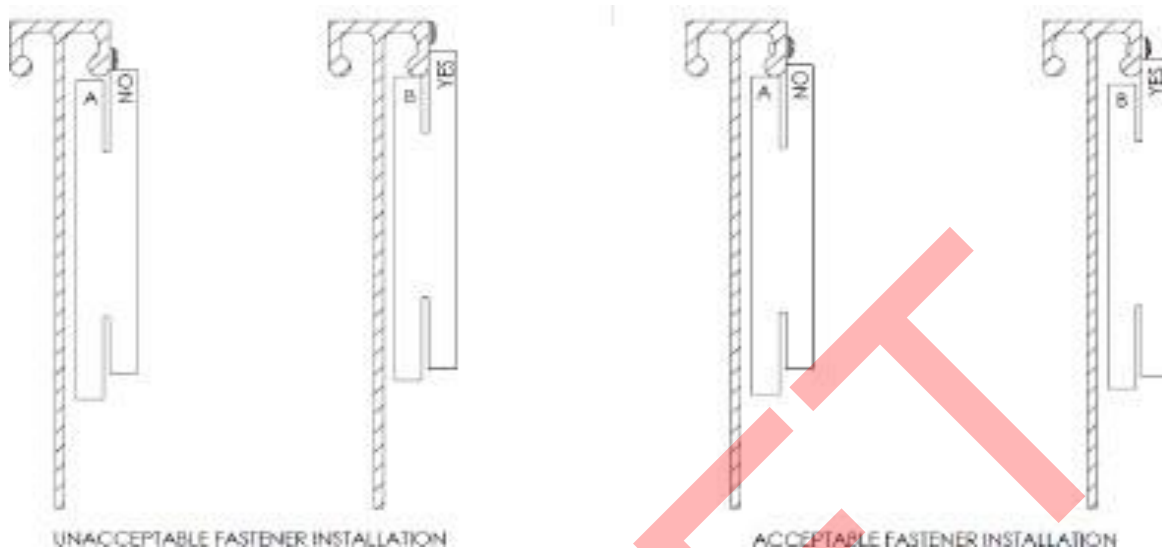
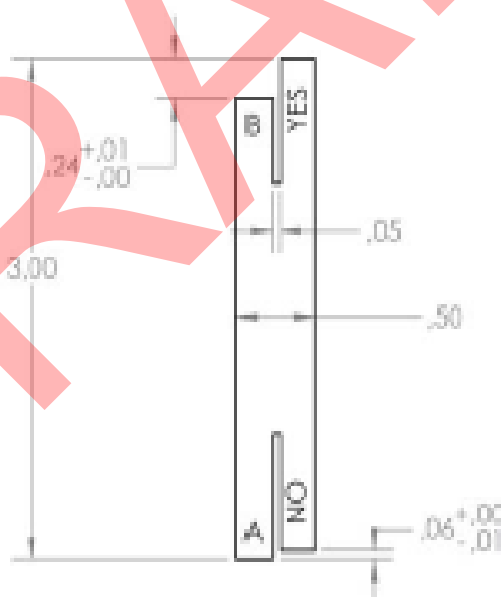


Instructional guide for installing inspection covers

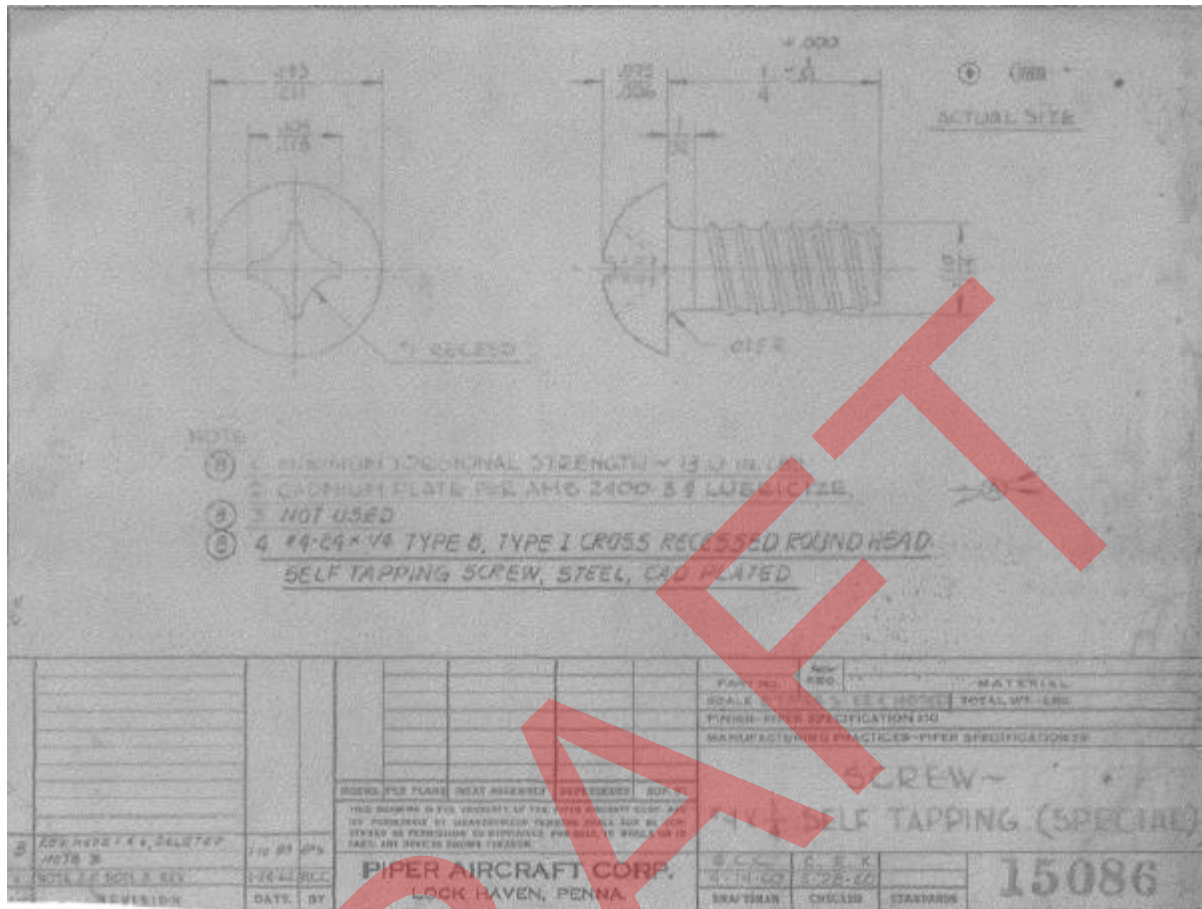
- a) Center the frame between ribs, measuring the distances, mark its position, and mask the area to be sanded.
- b) Sand the paint in the area where the inspection cover frame will be installed, using 240-grit wet sandpaper on the fabric-covered surface of the wing's intrados.
- c) Glue the inspection cover frame P/N 96001-101 with contact cement in the corresponding location.
- d) Glue a patch of Ceconite 101 fabric on top with contact cement.
- e) Paint the affected area with polyurethane paint.
- f) Using a cutter, make diagonal cuts in the fabric inside the frame to open the inspection hole.
- g) Fold the cuts inward, gluing them with contact cement.
- h) Screw on inspection cover P/N 96001-102.

2. Clean the surfaces of the sills to be inspected with a neutral detergent.

3. Verify the vertical position of the screws using template LA-96001-103 according to the instructions for "Verifying the vertical position of screws in the crossbar plate" on the upper flanges in areas #1 to #5, and on the lower flange in area #6.

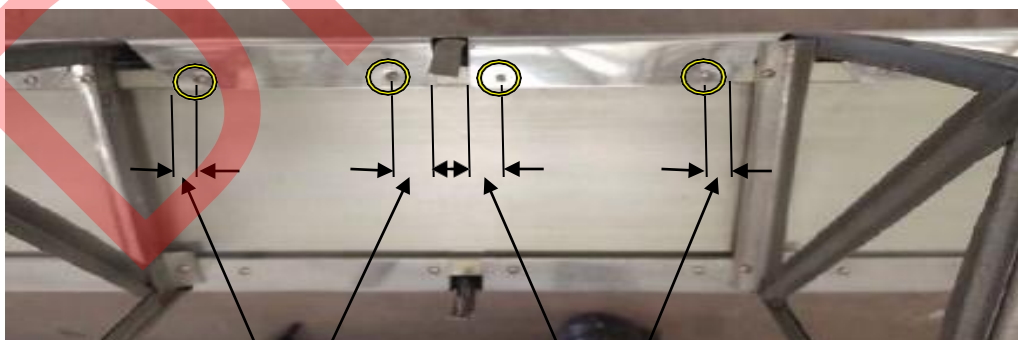
Verification Vertical position of screws in spar flangePLANTILLA LA-96001-103

- 4 Remove the screws that secure the leading edge tabs to the front spar flange (between the wing walk pad and the strut mount, on the upper spar flange. And between the strut mount and the wing tip on the lower spar skin). **NOTE: Perform this action with extreme care, lubricating the screw previously in order to best preserve the threads.**
- 5 Verify that the screws are: #4-24 x 1/4 Type B, Type I Cross Recessed Round Head Self Tapping Screw Steel Cad Plated. (See below Drawing 15086),



- 5 Lift the flaps from the leading edge, clean the flange with a mild detergent, dry, and check. There should be no more than 4 holes between ribs (see typical installation of screws in leading edge flaps).

Typical installation of screws on leading edge flaps



- 6 Visually check that there are no cracks near the drill holes.
- 7 Perform a visual inspection using a borescope as indicated below in points a) to c).
- a). Insert the borescope and advance it, grazing the core of the spar while keeping the camera vertically upward in areas #1 to #5. **Visually inspect the lower area of the upper flange for signs of cracks such as those shown in Figure 1 Detail B.**

b) Similarly, insert the borescope and advance it, grazing the core of the spar while keeping the camera vertically downward in the area of Cover #6. **Visually inspect the upper area of the lower flange for signs of cracks such as those shown in Figure 1 Detail B.**

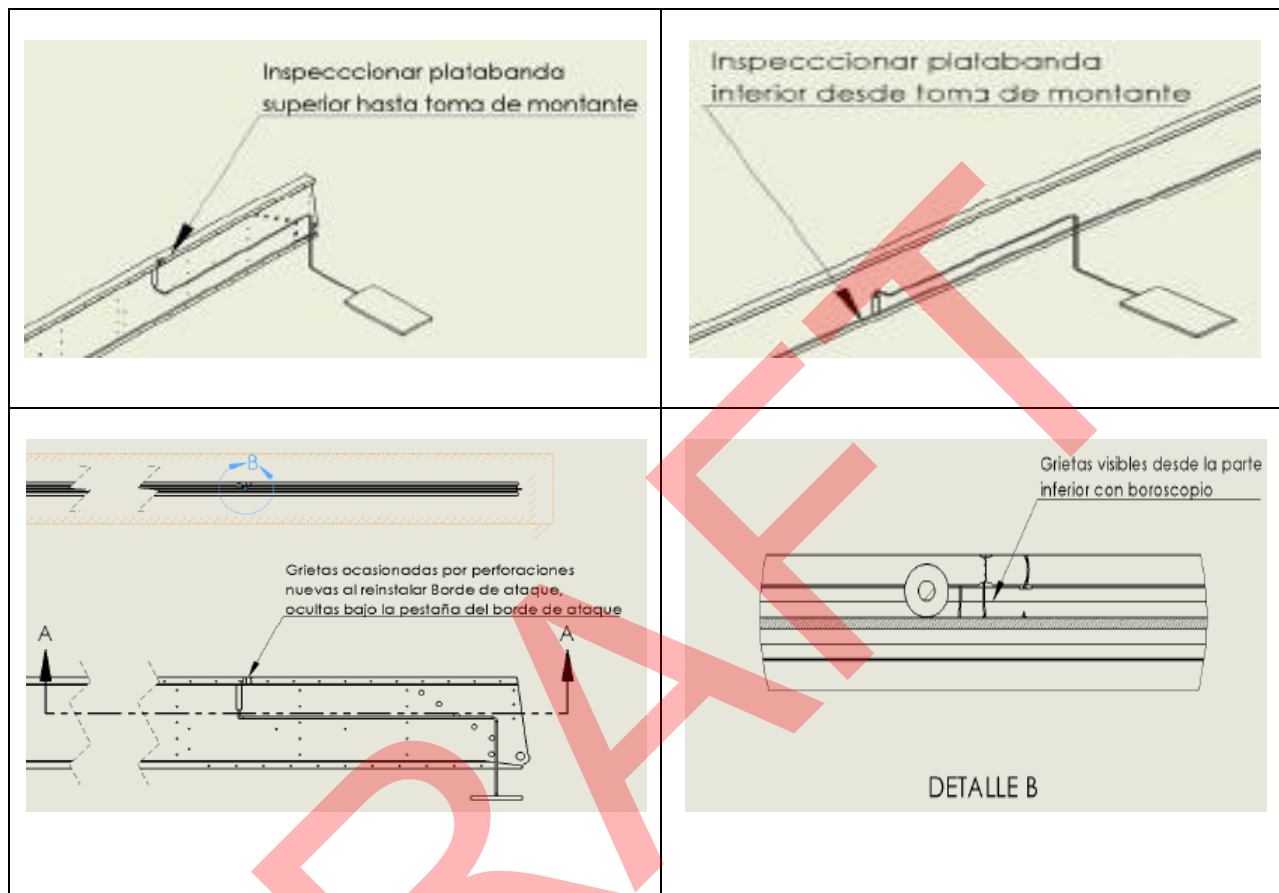
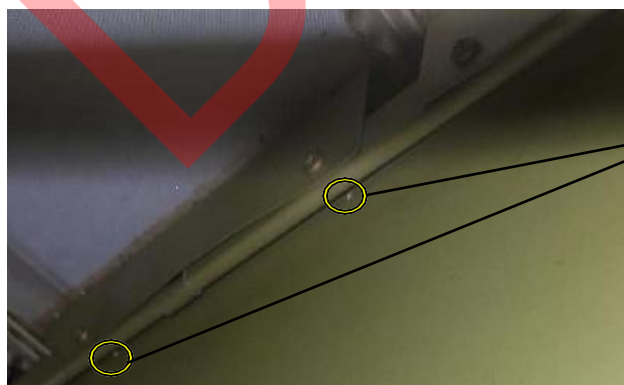


Figure 1 – Inspection areas, reference to faults to be detected, and camera positioning

c) Check for drill marks such as those shown in the following photograph.



Pothograph # 1

NOTE: If drill bit marks are detected, mark them, sketch them on a diagram, include them in the maintenance log, and **emphasize the obligation to check their condition during each inspection stipulated in RECURRENCE of the item COMPLIANCE**

NOTE: SUBSEQUENTLY PERFORM THE END INSPECTION for EDDY CURRENT detailed in the annex "ALFA".

Once the NDTs have been completed, screw the leading edge flaps back onto the flange, placing new screws specified in point 5. Alternatively, MS51861-12 or AN505-4-24-4 screws may be used, and if the thread is affected, upgrading to an oversized screw may be considered. Replace the inspection covers and record the inspection in the aircraft logbook.

Repetitive ACTION

1. 1. Open the inspection covers of KIT P/N 96001-100, located on the underside of the right and left wings between the end of the wing walk pad and the wing strut attachment point. (Covers #1 to #5) and the one located between the strut attachment point and the wing tip (Cover #6).
2. Clean and dry the surfaces of the flanges to be inspected with a neutral detergent. Remove the screws that secure the leading edge flaps to the front spar flange (between the wing walk pad and the stringer attachment, on the upper flange of the spar). And between the strut mount and the wing tip on the lower spar skin). **NOTE: Perform this action with extreme care, lubricating the screw beforehand in order to best preserve the threads.**
3. Lift the flaps of the leading edge, clean the flange with a mild detergent, dry, and verify that there are no more than 4 holes between ribs (see Typical installation of screws in tabs on the leading edge).
4. Insert the borescope and advance it, grazing the core of the spar while keeping the camera vertical and pointing upward in areas #1 to #5. **Visually inspect the underside of the upper flange for signs of cracks such as those shown in Figure 1 Detail B.**
5. Similarly, insert the borescope and advance it, grazing the core of the spar while keeping the camera vertically downward in the area of Cover #6. **Visually inspect the upper area of the lower flange for signs of cracks such as those shown in Figure 1 Detail B.**

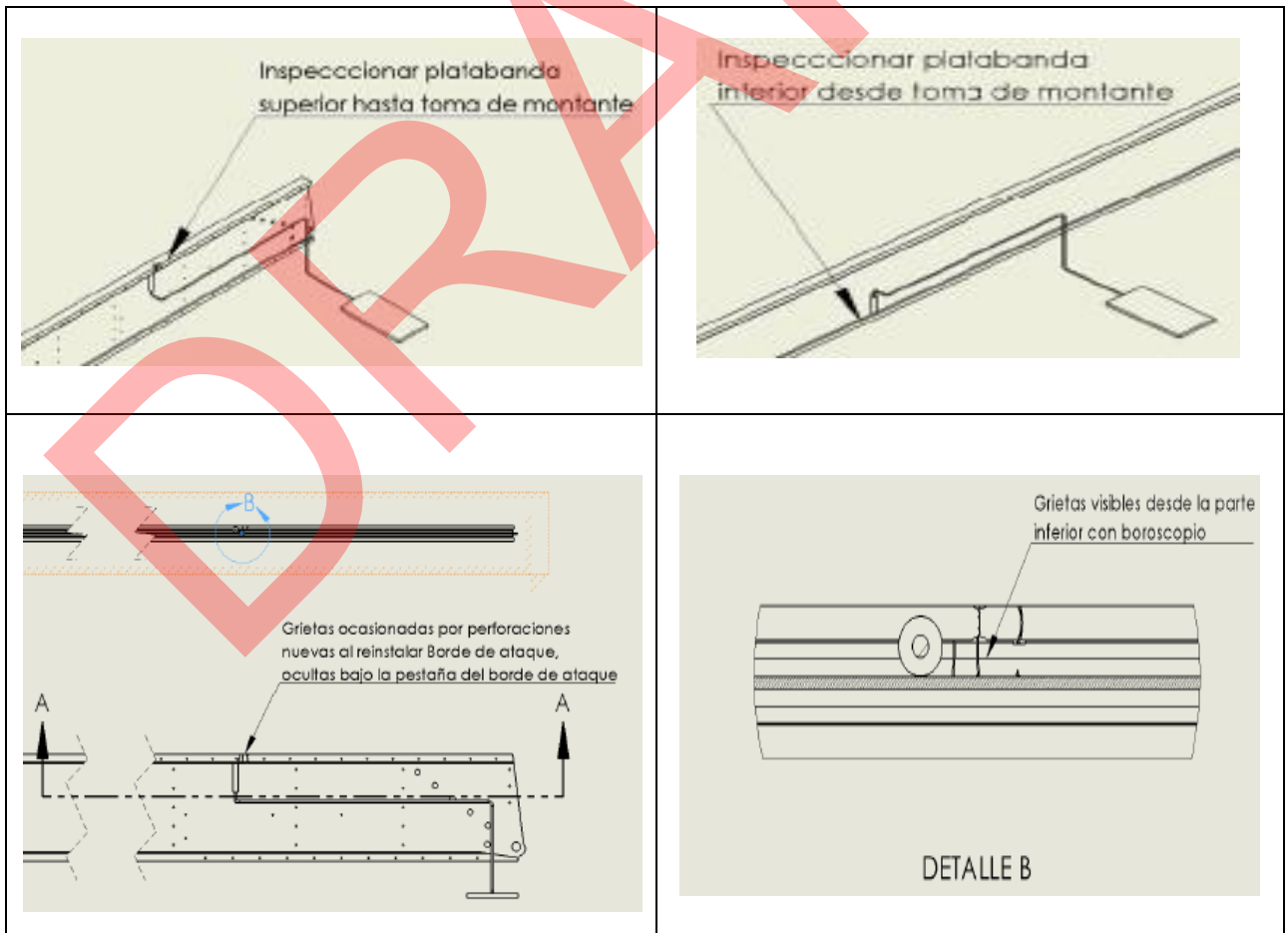
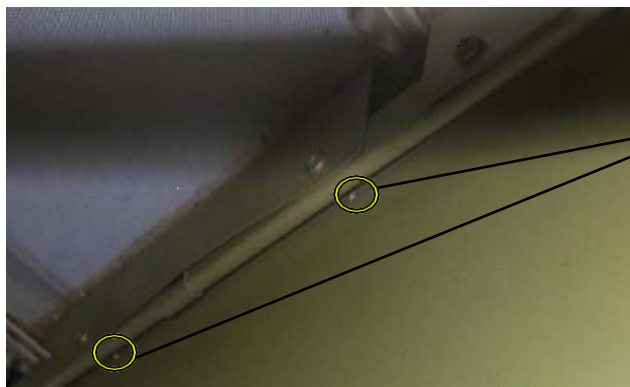


Figure 1 – Inspection areas, reference to faults to be detected, and camera positioning

- 6 If there are drill bit marks that are highlighted in the INITIAL action, as exemplified in the next photograph, do as specified in the NOTE.



Photograph # 1

NOTE: If you notice wick marks from drill.

Check the drawings in the maintenance logbooks and comply with the requirement to monitor their condition

- 7 Once the END is complete, screw the leading edge flaps back onto the flange by placing new screws specified in point 5. Alternatively, MS51861-12 or AN505-4-24-4 screws may be used, and if the thread is affected, upgrading to an oversized screw may be considered.
- 8 On aircraft with fuel tanks in the wings, inspection of the front lower spar area does not require the installation of Inspection Cover #6. The area can be accessed from above by opening the maintenance cover of the wing tank.

Once ACTIONS #1 through #8 have been completed

- a. Make technical records in the history books detailing the status of what was observed.
- b. Close all inspection covers.
- c. Analyze the new information found and consider the action to be taken.

ACCEPTANCE or REJECTION CRITERIA

- If you find more holes than in the original design, the spar must be replaced. Alternatively, an AMOC should be proposed.
- If there are screws with diameters greater than those stipulated in drawing P/N 15086, the spar may be compromised and must be replaced. Alternatively, an AMOC should be proposed.
- If there are holes very close to the round tip of the flange or very close to the upper side of the flange, according to Verification of Vertical Location of Screws holes in Spar Flange, the spar must be replaced. Otherwise, an AMOC should be proposed.
- If you find drill bit marks on the core of the doble T main spar, as shown in photo #1, you must follow up on them at each ANNUAL scheduled inspection by means of a visual END inspection with the aid of a borescope to check their condition.
- If you find cracks, the Spar must be replaced.

CONSIDERATIONS regarding Monitoring, Control, and Security

1. If you have found any new anomalies, detail them in the aircraft logbook, indicating the completion of this SB, the date, and who detected them. Also report the anomalies to ANAC by contacting des@anac.gob.ar
2. Similarly, report the anomalies to LAVIA ARGENTINA S.A. at administracion@laviaargentina.com
3. Ground the aircraft (DO NOT CONTINUE WITH FLIGHT OPERATIONS) as a potential structural collapse must be avoided and actions must be taken for major repairs if it is decided to return the aircraft to service.
4. If no issues are detected, the aircraft should be released for service, recording the actions taken in detail in the aircraft's history, with the date of completion and who performed and checked the application of this SB.

RUN TIME: An eight (8) man-hour workday is considered sufficient for the job.

AIRCRAFT DOWNTIME: 2 (two) days, at least.

RECOMMENDED TOOLS:

5m Endoscopic Camera Android Endoscope Borescope USB Cell or similar (Ref. Borescope for Cell Phone) and common tools

LABOR FORCE: One A&P qualified mechanic, assisted by one structural mechanic.

WEIGHT & BALANCE: N/A.

REQUIRED MATERIAL KIT LA-96001-100 (INSPECTION DOORS), CECONITE 101 and Contact Adhesive

AVAILABILITY OF PARTS: Upon Request.

QUERIES to email: administracion@laviaargentina.com

FINAL REMARKS

The current manufacturer and owner of the TCDS for the PA-25 Series, LAVIA ARGENTINA S.A., STRONGLY RECOMMENDS to use, in case of replacement parts, original parts and comply with the maintenance practices detailed in AC 43-13 1B, with special attention to the form and method of connecting the leading edges through proper hole drilling practices.
The holes in the leading edge must be adjusted to match the original holes in the upper and lower flaps of the flanges in the main spars.

The final connection of the parts must be made with new screws of the same type and size as the originals, according to Drawing #15086 attached on page 7. Alternatively, MS51861-12 or AN505-4-24-4 screws may be used, and if the thread is affected, upgrading to an oversized screw may be considered.

IT IS NOT ACCEPTABLE TO MAKE NEW HOLES IN THE FLANGES OF THE MAIN SPARS BECAUSE DOING SO REMOVES MATERIAL, REDUCE THE STRUCTURAL STRENGTH OF THEM, AND POTENTIALLY GENERATE, THROUGH STRESS CONCENTRATION, A PROCESS OF DAMAGE ACCUMULATION THAT COULD LEAD TO FUTURE FAILURE.

INQUIRIES: to submit them to administracion@laviaargentina.com

Instructivo de inspección por el método de Corrientes Inducidas (CI) para la verificación de Larguero Delantero de Aeronaves PA-25

1. Propósito

A. Objeto

Dar las instrucciones necesarias para realizar una correcta inspección por el método de Corrientes Inducidas (CI) en áreas específicas del Larguero Delantero de Ala PA-25, con el fin de identificar discontinuidades **NO DETECTADAS VISUALMENTE**.

B. Alcance

ESTE END SE DEBE REALIZAR SOLO SI NO SE DETECTARON FALLAS POR EL METODO VISUAL BOROSCOPICO REALIZADO CON ANTICIPACIÓN

SI DETECTÓ FALLAS CON EL MÉTODO VISUAL BOROSCÓPICO NO REALICE ESTE ENSAYO

Se inspeccionarán las partes según la **DA RA No 2024-05-01, PARTE II – DETECCION DE FISURAS EN LARGUERO DELANTERO** en las áreas de la platabanda SUPERIOR del larguero, en toda su extensión, entre costillas adyacentes y en ambas semi alas concentrándose en la zona de fijación del borde de ataque (BA), ingresando por las tapas de inspección N°1 y N°2. Y en las áreas de la platabanda INFERIOR del larguero en toda su extensión, entre costillas adyacentes y en ambas semi alas, concentrándose en la zona de fijación del borde de ataque (BA), ingresando por la tapa de inspección N°6 Ref.: **SB25-57-11** de LAVIA S.A.

(1) Las áreas específicas de inspección sobre la solapa superior/ inferior del larguero son resaltadas y mostradas abajo en la **Figura 1**.

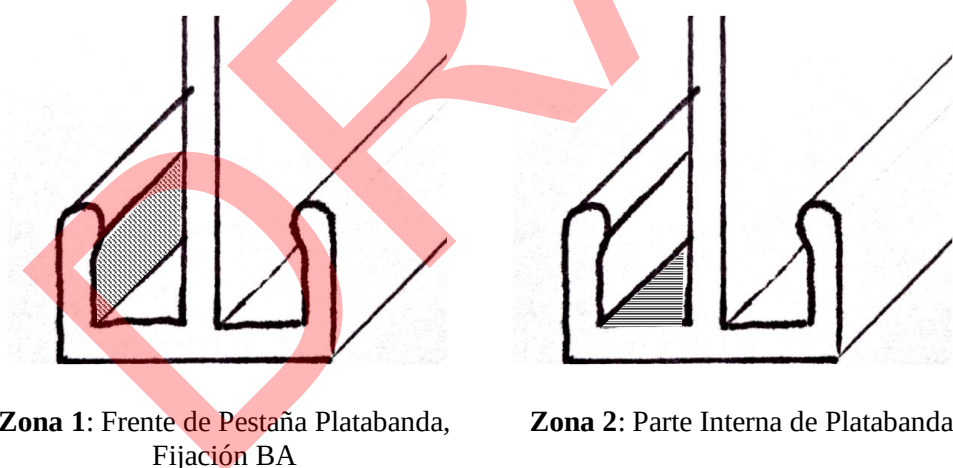


Figura 1 – Áreas de Inspección de Larguero Delantero PA-25

2. Referencias

Los siguientes documentos son usados como referencia para preparar estas instrucciones:

DA RA No 2024- 05-01 – DIRECTIVA DE AERONAVEGABILIDAD, 17 de julio 2024

SB No 25-57-11 – BOLETIN DE SERVICIO LAVIA SA, 31 de mayo 2024

MIL-HDBK-728/2 – MILITARY HANDBOOK EDDY CURENT TESTING, Julio 1992

3. Calificaciones del Personal

El personal que realice inspecciones por el método de Corrientes Inducidas deberá estar calificado de acuerdo con NAS 410 (o estándares equivalentes que figuran en la Circular Asesora (AC) 65-31B de la FAA) como personal de inspección no destructiva calificado de Nivel II o Nivel III.

Las inspecciones en áreas específicas del Larguero Delantero de Ala PA-25 por corrientes inducidas, se realizarán de acuerdo con la MIL-HDBK-728/2 y mediante procedimiento escrito bajo los lineamientos de estas instrucciones.

Equipamiento

A. General

Utilice equipos de inspección que puedan calibrarse con los patrones de referencia especificados en el Punto D.

B. Instrumento

(1) Utilice un instrumento de corrientes inducidas que:

(a) Tenga una pantalla de visualización de planos de impedancias.

(b) Funcione en un rango de frecuencia de 300 Hz a 9 kHz.

(2) Se presentan a continuación algunos equipos comerciales a modo de referencia:

(a) Equipo Olympus NORTEC 600

(b) Equipo Olympus NORTEC 600D

C. Sondas

(1) Las sondas de la **Tabla 1** se utilizaron para ayudar a preparar este procedimiento.

Tabla 1 – Datos de Sondas

NUMERO DE SONDA	DIMENSIONES	TIPO DE SONDA	RANGO DE FRECUENCIA	MARCA
TPEN9100-6	1.0" Drop - .125" Tip	Microdot	50-500KHz	Techna NDT
TPENFLX-6	6.0" Largo - .125" Tip	Flexible	50-500KHz	Techna NDT
SPO-3611	.045" - .060" Thickness	Straight	50-500KHz	Nortec

D. Patrón de Referencia

(1) El patrón de referencia standard de la **Tabla 2** fue utilizado para ayudar a preparar este procedimiento.

NUMERO DE PATRON	DIMENSIONES	TIPO DE MATERIAL	ALEACIÓN	MARCA
RS0824-2024T3	.008" - .020" - .040"	Aluminum	2024-T3	Techna NDT

Tabla 2 – Patrón de Referencia Standard

NOTA: El estándar anterior se puede obtener comercialmente. Se aceptan estándares equivalentes.

Cualquier patrón de referencia utilizado deberá tener la misma conductividad 2024-T3 dentro de un margen de error de $\pm 15\%$ IACs.

Deberá tener entallas de mecanizado por descarga eléctrica (EDM) para simular defectos como referencias de calibración.

4. Preparación

A. Obtenga acceso a las áreas de inspección, ver **Figura 4A**.

Ingresa a las zonas de platabanda SUPERIOR por los accesos de las tapas de inspección N° 1, y N° 2, e ingrese a las zonas de la platabanda INFERIOR por el acceso de la tapa de Inspección N° 6 en el intradós del ala, según SB25-57-11.

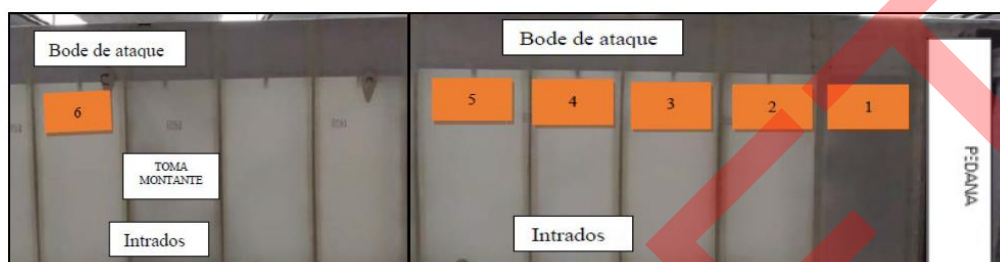


Figura 4A – Zona de Acceso por Tapas de Inspección según SB25-57-11

- B. MANTENGA DESMONTADOS los tornillos #4-24 x 1/4, Round Head Self Tapping Screw Steel Cad Plated, de fijación de los bordes de ataque a las platabandas. Los agujeros de instalación deben mantenerse libres para la inspección.
- C. Retire la pintura suelta, la suciedad y el sellador de la superficie del área de inspección. El área a inspeccionar debe estar libre de suciedad, grasa, aceite u otra contaminación.
- D. Posteriormente si la inspección no detectó novedades atornille las pestañas del BA con tornillos nuevos.

5. Calibración del Instrumento

NOTA: El equipamiento debe configurarse y operarse de acuerdo con esta instrucción e indicaciones propias del fabricante.

- A. Coloque la sonda de superficie sobre el patrón de referencia en un área alejada de las muescas (grietas simuladas por EDM-Electrical Discharge Machining). Utilizar patrones de referencia standard como el mostrado en **Tabla 2**, párrafo 4.
- B. Establezca el punto nulo (NULL POINT).
- C. Levante la sonda de superficie del patrón de referencia utilizado y controle la pantalla del equipo para ver la respuesta de despegue (LIFT-OFF).
- D. Ajuste el equipo hasta que la respuesta de despegue (LIFT-OFF) se coloque en posición horizontal y a la izquierda del punto nulo (NULL POINT), dando respuestas similares a las mostradas en la **Figura 4D**.

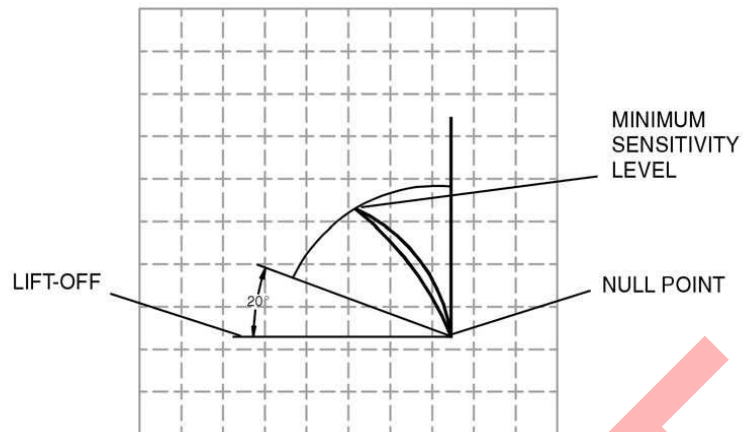


Figura 4D – Señal de Respuesta de Despegue (LIFT-OFF) Tipo

- E. Verifique ahora la sensibilidad de su configuración de inspección colocando la sonda sobre el patrón **RS0824-2024T3** con una cinta no conductora en el estándar (si es necesario), escanee las muescas de referencia de **0,008 in**, **0,020 in** y **0,040 in**, pulgadas de profundidad. Las respuestas deben ser similares a las de la **Figura 4E**.

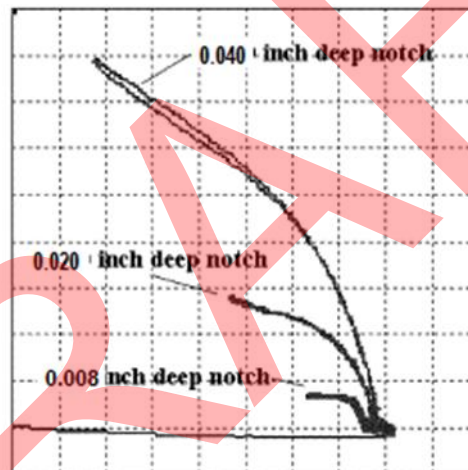


Figura 4E – Señal de Verificación de Sensibilidad Tipo (Aluminio)

NOTA: La respuesta de una muesca de 0,005 debe producir un mínimo de 5 % de FSH en respuesta vertical (la mitad de una división) y debe ser claramente discernible del ruido de referencia.

- F. Si no se obtienen respuestas, verifique la configuración del instrumento y repita el procedimiento de estandarización.
- G. Si después de la re estandarización, esta sensibilidad aún no se puede lograr, seleccione una sonda diferente y repita la estandarización.

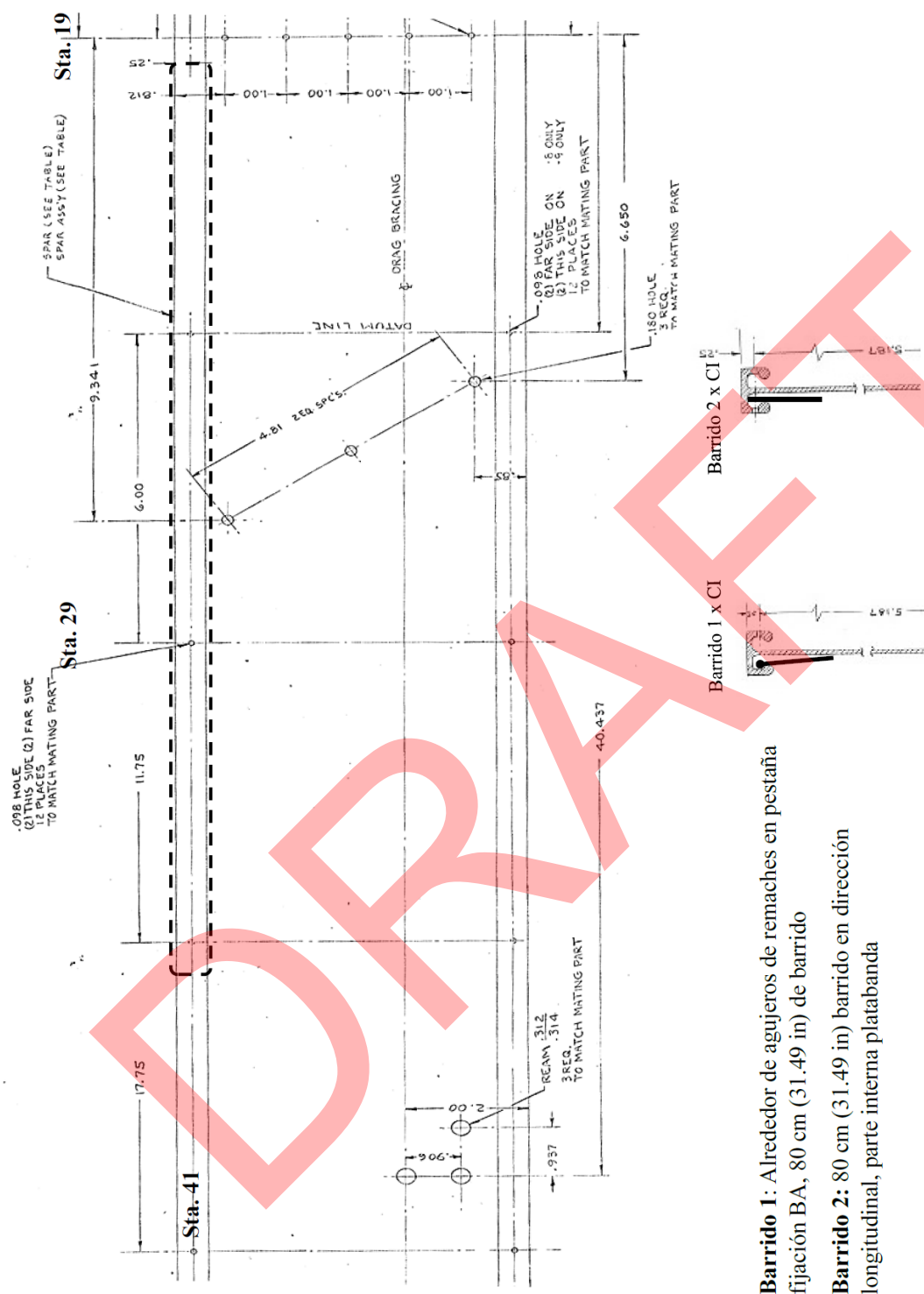
NOTA: Este ajuste se utiliza para establecer la sensibilidad de la inspección y NO debe ser considerado como un criterio de aceptación o rechazo.

6. Instrucciones de ensayo

- A. Puede ser necesario volver a establecer el punto nulo (NULL POINT) del instrumento en el área de inspección para ajustar la pantalla en función de las diferencias entre el estándar de referencia y el larguero.
- B. Siempre que sea posible, el área de inspección de la **Zona 1** debe examinarse en dos direcciones diferentes, a 90 grados entre sí.
- C. Examine el área de inspección en pasos de índice que no sean mayores que el ancho de la sonda de CI.
- D. La inspección se debe realizar con dos barridos. Ver localización en **Figura 7D**.

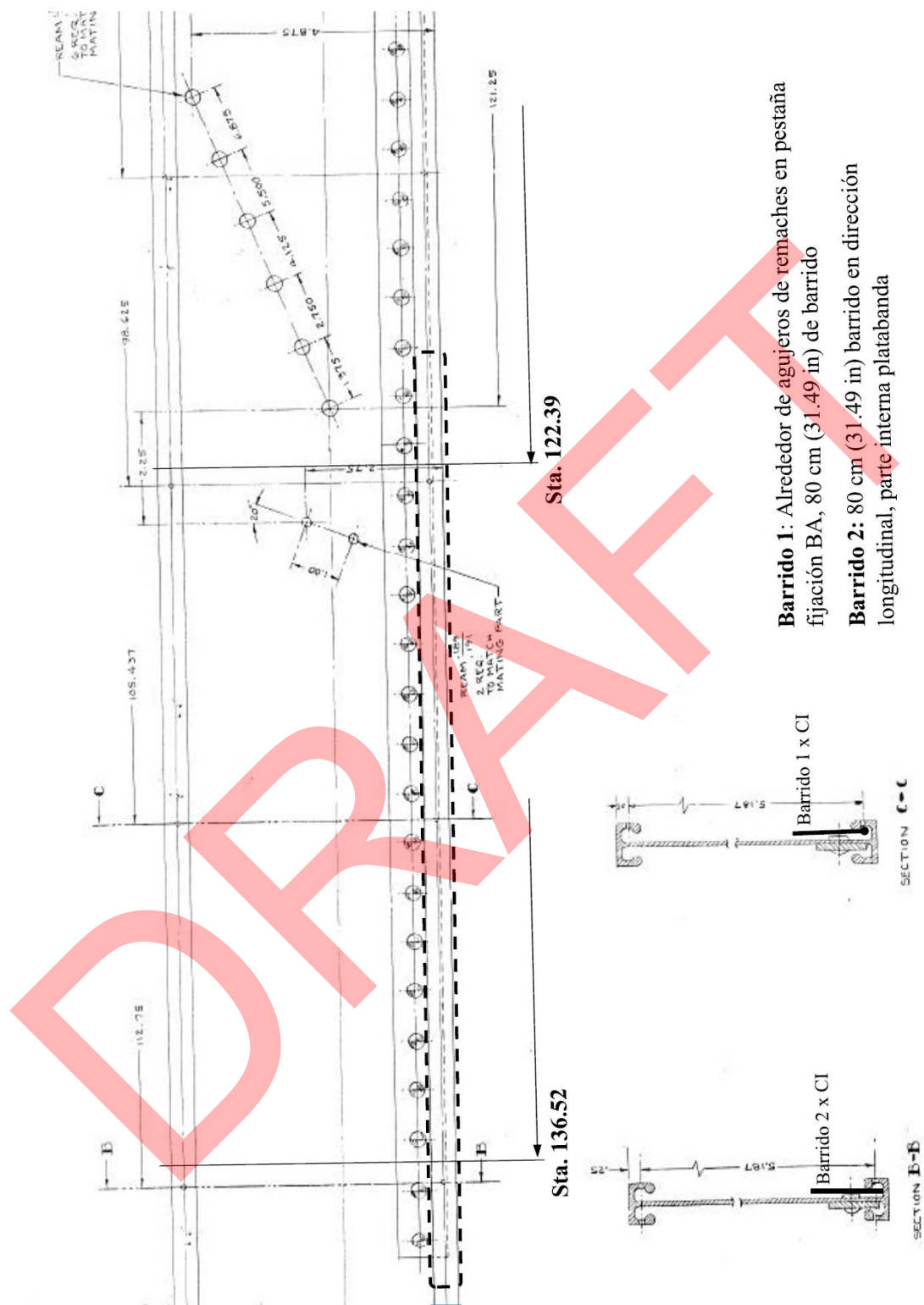
El primer barrido debe hacerse ingresando por las **tapas N° 1 y N° 2**, apoyando la sonda SPO-3611 en el lateral interior de la **pestaña platabanda superior**, e ingresando por la **tapa N° 6**, apoyando la sonda SPO-3611 en el lateral interior de la **pestaña platabanda inferior**, sobre todo el largo y entre las costillas adyacentes, con especial atención en los límites de los orificios existentes.

El segundo barrido debe hacerse ingresando por las tapas N° 1 y N° 2, sobre todo el largo y entre costillas adyacentes, apoyando la sonda TPEN9100-6 en la base interior platabanda superior, e ingresando por la tapa N° 6, sobre todo el largo y entre las costillas adyacentes, apoyando la sonda TPENFLX-6 en la base interior platabanda inferior.



ACCESO POR TAPAS N° 1 & 2 - PLATABANDA SUPERIOR

Figura 7D – Localización Platabandas



ACCESO POR TAPA N° 6 - PLATABANDA INFERIOR

Figura 7D – Localización Platabandas (Cont.)

- E. El barrido propiamente dicho de las áreas a inspeccionar, mostrado en **Figura 7E**, debe extenderse 80 cm (31.49 in) prestando particular atención a los alrededores de agujeros, marcas o "lastimaduras" de herramientas, golpes, melladuras, y pits de corrosión.

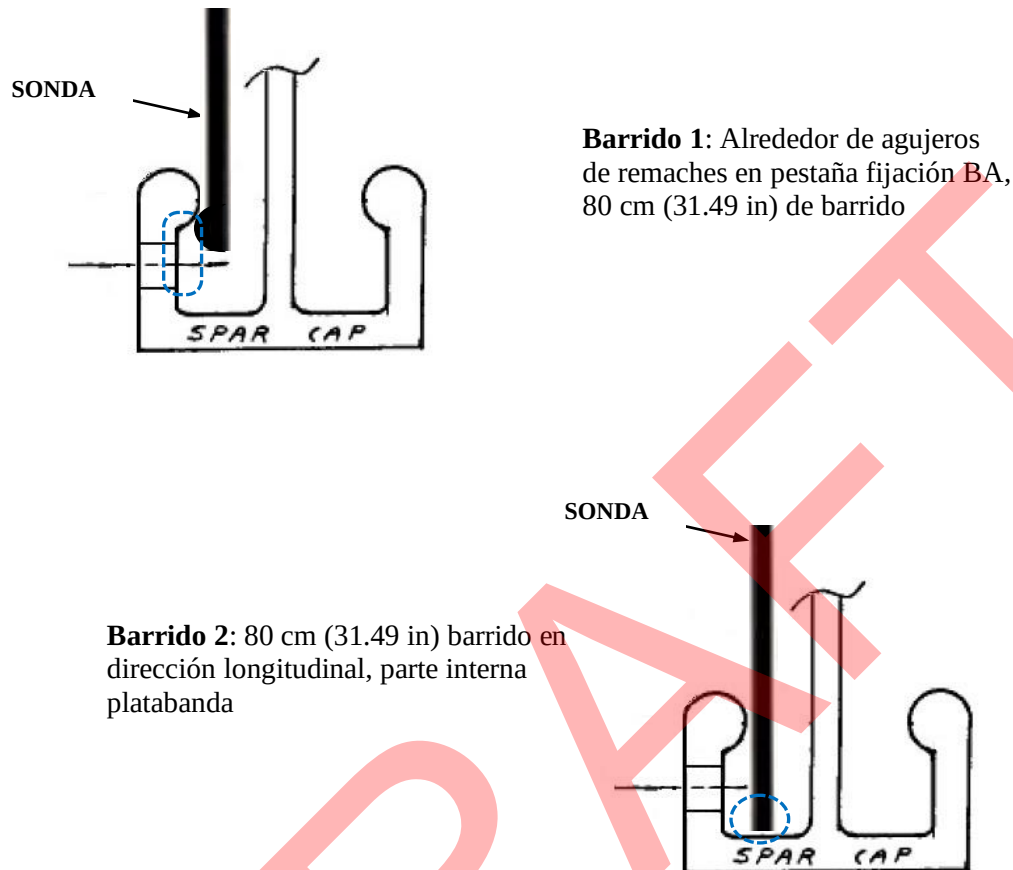


Figura 7E – Áreas de Inspección y Barridos

(1) **BARRIDO 1**

- a) Par el barrido de la Zona 1 - Parte Interna de Platabanda, utilizar Bobina SPO-3611.
Adaptador AN16-BR
- b) Encienda el equipo y ajuste:
 - La frecuencia a 120 Khz.
 - El ángulo a 58°
 - La ganancia horizontal a 48.3 dB
 - La ganancia vertical a 59.1 dB
- c) Coloque la sonda sobre el patrón y sobre el equipo
 - Presione botón NULL
 - Presione botón ERASE
 - Coloque la sonda sobre la probeta y deslícela sobre las muescas (grietas simuladas), área de los defectos.

- d) Observe la pantalla del equipo y verifique la sensibilidad utilizando como referencia la Figura 4E – Señal de Verificación de Sensibilidad Tipo (Aluminio)
 - i. Efectué el barrido sobre la Zona 1 (Interior pestaña, entre remaches), 40 (cuarenta) centímetros a ambos lados de la toma del montante, sobre el ala izquierda y derecha.
 - ii. Si no obtuvo la indicación requerida en sensibilidad, repita el paso c) anterior.

(2) BARRIDO 2

- a) Par el barrido de la Zona 2 - Parte Interna de Platabanda, utilizar
Bobina TPEN9100-6
Cable CN16-TF-6
- b) Encienda el equipo y ajuste:
La frecuencia a 120 Khz.
El ángulo a 19°
La ganancia horizontal a 60.3 dB
La ganancia vertical a 70.2 dB
- c) Coloque la sonda sobre el patrón y sobre el equipo
Presione botón NULL
Presione botón ERASE
Coloque la sonda sobre la probeta y deslícela sobre las muescas (grietas simuladas), área de los defectos.
- d) Observe la pantalla del equipo y verifique la sensibilidad utilizando como referencia la Figura 4E – Señal de Verificación de Sensibilidad Tipo (Aluminio)
 - i. Efectué el segundo barrido sobre la zona especificada en el ítem E del presente instructivo de inspección.
 - ii. Si no obtuvo la indicación requerida en sensibilidad, repita el paso c) anterior.

7. Registros de la Inspección

Se deben registrar todas aquellas indicaciones iguales o mayores al 50% de altura de sensibilidad mínima y la ubicación de las mismas, indicando la zona donde se ubica la misma en el larguero. Ver modelo de formulario en **ANEXO 1** - Registros de Inspección.

NOTA: Si durante la inspección detecta una indicación, repita cuidadosamente la inspección en la dirección opuesta al movimiento de la sonda para asegurarse que la indicación es real.

Si la indicación sigue ahí, controle cuidadosamente la cantidad de movimiento o rotación de la sonda necesaria para hacer que la señal se aleje de la respuesta de indicación máxima.

8. Análisis de los Resultados

- A. A menos que se especifique lo contrario, debe rechazar una pieza con una grieta.
- B. El final de una grieta se encuentra con el método del 50 por ciento. Mueva la sonda lentamente a través del final de la grieta hasta que se alcance un punto donde la amplitud de la señal de grieta se haya reducido en un 50 %. El centro de la bobina de la sonda se considera el final de la grieta.
- C. Se debe tener en cuenta que en este tipo de componentes es muy posible detectar pits alineados. Los mismos deben ser considerados como indicaciones lineales y evaluarse como tales (fisuras abiertas a la superficie)

D. ANEXO 1 - Registros de Inspección

DATOS DE LA AERONAVE		
AVION MARCA:		MODELO:
CATEGORIA:	SERIE N°:	
EQUIPAMIENTO UTILIZADO		
METODO: CORRIENTES INDUCIDAS		NORMA: MIL-HDK-728/2
MARCA:	MODELO:	S/N:
CERTIFICADO POR:		VENCE:
SONDA:		PROBETA:
LARGUERO PRINCIPAL AERONAVE PA25 - SEMI ALA IZQUIERDA / DERECHA		
BAHIAS ENTRE COSTILLAS	RESULTADOS DE LA INSPECCION POR CORRIENTES INDUCIDAS	
	ZONA 1	ZONA 2
TAPA N° 1 (IZQ.)		
TAPA N° 2 (IZQ.)		
TAPA N° 1 (DER.)		
TAPA N° 2 (DER.)		
TAPA N° 6 (IZQ.)		
TAPA N° 6 (DER.)		
OBSERVACIONES:		

Form ANEXO A - Registros de Inspección