PIAGGIO AERO INDUSTRIES S.p.A.
Via Cibrario, 4 – 16154 Genoa, Italy
Product Support Department

The EASA states mandatory compliance with inspections, modifications or technical directives and related time compliance by means of relevant Airworthiness Directives.

SERVICE BULLETIN (MANDATORY) N.: SB-80-0262 REV.3 **ATA CHAPTER:** 55-20
MODIFICATION N.: DMT 80-0866 and DMT 80-1021
TITLE: P180 - HORIZONTAL STABILIZER TO ELEVATOR HINGE FITTING - INSPECTION AND MODIFICATION

REVISION STATUS OF THE BULLETIN
This MANDATORY Service Bulletin is at the revision status no.3 and consists of 26 pages.
This revision supersedes previous issues of this Service Bulletin.
Parts which are affected by this revision are marked with a vertical line on the right side of the page
No further action is required to operators that have already accomplished to previous issues of this Service Bulletin.

1. PLANNING INFORMATION

A. EFFECTIVITY
Piaggio Aero Industries P180 Avanti and Avanti II, Manufacturing Serial No. (MSN): 1002; 1004 up to 1191.

B. CONCURRENT REQUIREMENTS
None.

C. REASON
Presence of corrosion was detected on in service P180 aircraft, on the horizontal stabilizer to elevator hinges fittings. Investigation identified the root cause in galvanic corrosion between dissimilar materials (carbon fiber and metallic). A modification was developed to solve this issue on new aircraft, that can be installed also on in service aircraft. It is therefore required to perform a visual inspection and, if necessary, the replacement of the corroded hinges.

Moreover, the improvement of the electrical bonding by adding aluminum strips is required, also if corrosion is not detected.
Acceptability criteria of the improved bonding installation is also revised with revision 2 of the Service Bulletin, following the results of previous installations of this Service Bulletin.

Revision 2 was issued following information that, during installation of this Service Bulletin, pilot holes, not required by design, have been found on the rear spar of several stabilizers. Investigation revealed that these holes were erroneously added during manufacturing. Even if the pilot holes detected up to now have been assessed not to impair structural strength of the stabilizer, an inspection is required on the rear spar. Inspection results shall be communicated to Piaggio Aero Industries to verify that defects, if detected, are within the hypotheses used during structural evaluation.

Revision 3:
- introduce a change of shape of bonding strips to ease their installation;
- provide additional information about horizontal stabilizer manufactured by Sikorsky;
- define when no repair is needed for pilots holes found near the hinges fittings holes.

D. DESCRIPTION
This Service Bulletin consists of the following:

PART A
- Removal of LH and RH elevators

PART B (LH SIDE) and D (RIGHT SIDE): HINGE INSPECTION
- Inspection of the LH and RH elevators hinge fittings corrosion

PART C (LH SIDE) and E (RIGHT SIDE): HINGE REPLACEMENT, HORIZONTAL STABILIZER REAR SPAR INSPECTION

PART C (E) MAY NOT BE REQUIRED FOLLOWING HINGES INSPECTIONS AS PER PART B (D)

- Removal of the hinge fittings.
- Inspection of the horizontal stabilizer rear spars and communication of inspection result to Piaggio Aero Industries (if needed)
- Inspection of the Horizontal Stabilizer Carbon Fiber trailing edge by NDT (coin-tapping)
- Repair of the stabilizer trailing edge if delamination zones are detected
- Reinstallation of the hinge fittings, applying a non-conductive epoxy adhesive
- Improvement of the electrical bonding by installing aluminum strips

PART F: CONCLUSION
- Reinstallation of elevators and of all the secondary structure members previously removed
- Communication to Piaggio Aero Industries of inspection results, using the confirmation slip

E. COMPLIANCE
This Service Bulletin must be accomplished within 1500 Flight Hours or within 5 years (whichever occurs first) from the effective date of the original issue of this Service bulletin.
Piaggio Aero Industries recommend accomplishing during a major inspection (C check or D check).
In compliance with this Service Bulletin, please complete the attached Confirmation Slip and send it back to Piaggio Aero Industries S.p.A. Product Support Department.

F. APPROVAL
The technical content of this Service Bulletin has been approved under the Authority of DOA No EASA.21J.220.

G. MANPOWER

This Service Bulletin may be accomplished in approximately:

- Part A: 3 man-hours.
- Part B: 1 man hour
- Part C: 16 man hours
- Part D: 1 man hour
- Part E: 16 man hours
- Part F: 4 man hours

H. TECHNICAL INFORMATION

For questions concerning the technical content of this Service Bulletin, please contact Piaggio Aero Industries Customer Support Department
Via Cibrario, 4 - 16154 Genoa, Italy
Fax No.: +39 010 6481 374
E-mail: tech.support@piaggioaero.it

I. MATERIAL – COST AND AVAILABILITY

Please contact Piaggio Aero Industries – Product Support Department
Via Cibrario, 4 - 16154 Genoa, Italy
Phone No.: + 39 010 6481 800
Fax No: + 39 010 6481 891
E-mail: commercialustomersupport@piaggioaero.it

J. TOOLING – COST AND AVAILABILITY

Not affected

K. WEIGHT AND BALANCE

Not affected.

L. ELECTRICAL LOAD DATA

Not affected.

M. REFERENCES

Aircraft Maintenance Manual (AMM)	9069 (Avanti) 180-MAN-0200-01105 (Avanti II)	Chapters: 55-20-00, 55-30-00, 51-90-00
Structural Repair Manual (SRM)	report 180-MAN-0250-01106	51-10-50 51-43-00 51-70-80 51-20-20 51-41-00
Non Destructive Test Manual (NDTM)	report 180-MAN-0300-01107	

N. PUBLICATIONS AFFECTED

Not affected.

2. ACCOMPLISHMENT INSTRUCTIONS

Procedure
The following procedures refer to inspections (part.B for LH hinges, and part D for RH hinges), to replacement of corroded hinge fittings and inspection of horizontal stabilizer rear spar (part.C and part E for LH and RH side respectively), plus electrical bonding improvement.

Part.A –Structure removal

1. Remove the L/H and R/H elevators (ref. AMM 27-30-00)

Part.B – LH hinge fittings inspection

2. Inspect for presence of corrosion on LH hinge fittings
3. If traces of corrosion are detected (see fig.1) embody part C of this Service Bulletin, otherwise proceed with step 4.
4. AIRCRAFT MSN 1002; 1034-1191: if the aluminum bonding strips are not installed (see fig. 2), embody part C of this Service Bulletin, otherwise go to part D.
   AIRCRAFT MSN 1004-1033: embody part C of this Service Bulletin

Fig.1 – Corroded center fitting without aluminum bonding strips

Fig.2 – Center Fitting with aluminum bonding strips installed

Part.C – LH hinge fittings replacement, rear spar inspection and electrical bonding improvement

5 If installed, remove the LH aluminum bonding strips:
- Remove the fasteners as per SRM 51-43-00

CAUTION
PAY ATTENTION TO AVOID CARBON FIBER DAMAGE

- Remove the aluminum bonding strips using a spatula
- Using stainless steel brush, remove the conductive adhesive KS4008 located under the strip bonding zones

6 Remove the LH elevator hinge fittings P/N 80-393103-401 and P/N 80-393103-403:

CAUTION
DO NOT APPLY FORCES TO THE FITTING ALONG A CHORDWISE OR VERTICAL DIRECTION: DAMAGE TO COMPOSITE STRUCTURE MAY OCCUR.

- Remove the fasteners as per SRM 51-43-00
- Using a wooden wedge and a soft hammer, act on the fitting in a spanwise direction, oriented towards the vertical fin.

7 Visually inspect the rear spar area in correspondence with the fittings

8 If, following inspection as per previous point, pilot holes are detected (refer to figure 3):

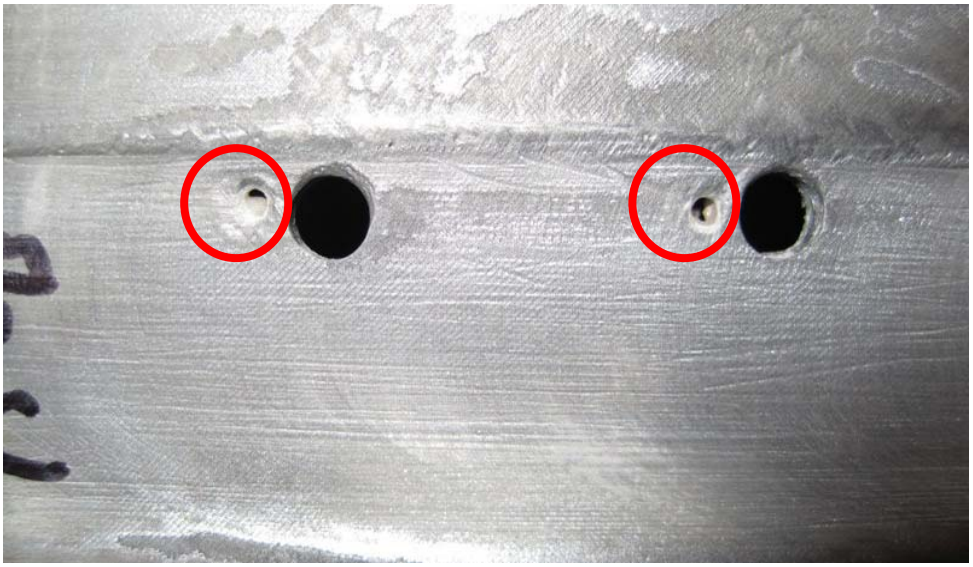


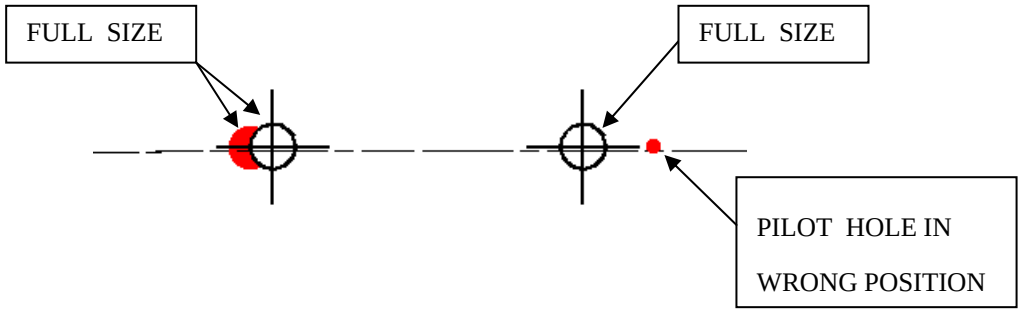
Figure. 3 – Example of wrong holes on Horizontal Stabilizer rear spar

8a Identify type of defect:

TYPE I: full size holes drilled adjacent to the correct ones, that form an 8-shape

TYPE II: 2.5 mm pilot holes that are drilled in the wrong position (see also figure 3)

NOTE: The pilot holes may be found open or covered with conductive sealant

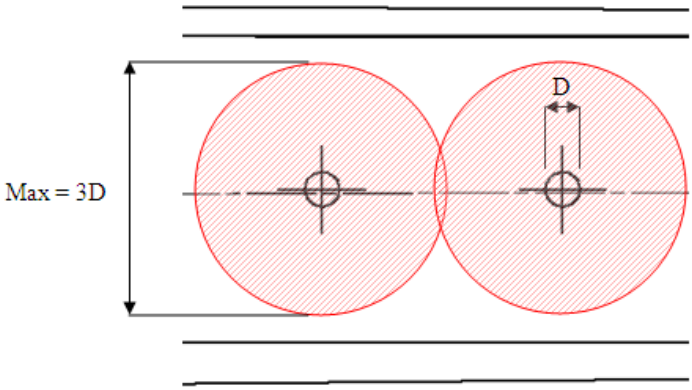


TYPE I **TYPE II**

8b If defect (TYPE I or TYPE II) is covered clean it from any residual of sealant and other debris

8c Verify there are no other defects around holes in the rear spar flanges (upper and lower flange)

8d Only for defect TYPE II, verify that the position of the defects is within 3D from the main holes (D is the diameter of the main holes) . Nominal value of D=.199 - .202 in.



8e If the defect is as TYPE I or TYPE II and (for TYPE II only) complies with the previous step 8d, no repair is needed except the cleaning of the defects.

Otherwise:

8f Take a picture of the holes, measure their dimension (diameter) and position. Fill in the Failure report form as per latest issue of Service Letter 80-0097 latest revision.

8g Send the Failure report to Piaggio Aero Industries

9 Inspect by NDT (coin-tapping) as per AMM chapter 51-90-00 a square area (25cm x 25 cm) on the lower and upper skin of the Horizontal Stabilizer Carbon Fiber trailing edge, near to the elevator hinge attachments:

- If delaminated zones are detected, that are within the limit of (30mm x 30mm), repair the graphite skin as per SRM, ATA 51-70-80, Chapter 3 (*Repair Procedures for Laminates*), Section D (*Voids and Internal Delaminations*), or as per SRM ATA 51-70-80 chapter 6 (*Repair Procedure for the Horizontal Stabilizer Hinge Corrosion*), Section B (*Repair*), paragraph 2 (*Repair of Lower Skin defect)* or paragraph 3 *(Repair of Upper Skin defect*) as applicable.
- If delaminated zones are detected, that are greater than the above limits, the Horizontal Stabilizer has to be repaired using a dedicated repair scheme or must be replaced.
- If fastener holes present delamination, cracks or concentrated defect, beyond the limits defined within SRM, the Horizontal Stabilizer has to be repaired using a dedicated repair scheme or must be replaced.

10 Inspect the hinge fittings:
- Remove the superficial oxidation as per SRM 51-10-50 (if applicable);
- If traces of corrosion are detected, affected hinge fitting(s) shall be replaced. Fitting(s) without corrosion may be reinstalled restoring surface treatment with Alodine as per SRM 51-20-20.

NOTE
STEP 11 AND 12 ARE REQUIRED ONLY ON NEW FITTINGS.

11 Mark fastener location on the upper and lower side of the new fitting(s) (4 fasteners), and drill fastener holes:
- Measure the distance from the edges of each upper and lower fastener location on the removed fitting(s) – refer to red arrows in figure 4.

Figure 4

- Using a pen, copy the position of each upper and lower fastener location on the new fitting(s)
- Drill pilot holes (2.5 mm).
- Temporary install the new fittings at the proper locations on the Horizontal Stabilizer, and verify the correspondence of the pilot holes with Horizontal Stabilizer holes (upper and lower skin).
- Remove the new fittings from the Horizontal Stabilizer
- Drill the finite holes on the new fittings (see fig.7-8-9-10).
- Apply Alodine at the new fitting holes

12 Mark on the new fitting(s) fastener location on the rear side of the fitting (2 fastener) and drill fastener holes:
- Using a pen, track a reference line passing through the holes on the rear spar of the Horizontal Stabilizer, in correspondence with the two rear fastener of each fitting (refer to the red dotted line in figure 5). Install a “paper adhesive tape” on the Horizontal Stabilizer to track a line on it (not in the picture).

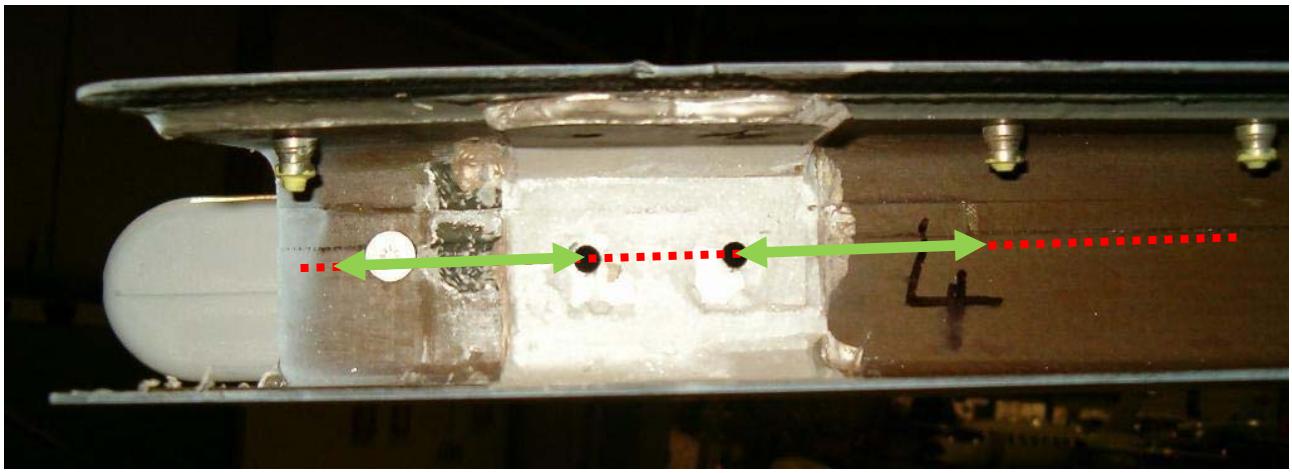


Figure 5

- Temporary install the old fittings on the horizontal stabilizer. Use temporary fasteners on the upper and lower fitting faces only.
- Mark 2 points, located on the reference line tracked before, 5 cm from each of the 2 fastener position on the rear side of the fitting (refer to the green arrows in figure 5).
- Remove the old fittings
- Temporary install the new fittings on the horizontal stabilizer. Use temporary fasteners on the upper and lower fitting faces only.
- Using a pen, mark the 2 fastener positions on the rear side of the new fittings: they are 5 cm from the points previously marked on the reference line.
- Remove the new fittings
- Drill pilot holes (2.5 mm).
- Temporary install the new fittings at the proper locations and check the correspondence of the pilot holes with Horizontal Stabilizer holes on the rear spar,

inserting a pin in the pilot hole and punching the paper adhesive tape previously installed.
- Remove the new fittings
- Drill the finite holes (see fig.7-8-9-10) taking into account the offset of the pilot hole.
- Apply Alodine at the new fitting holes
- Remove the "paper adhesive tape".

CAUTION

PAY ATTENTION TO AVOID CARBON FIBER DAMAGE

13 Using stainless steel brush, remove the conductive adhesive KS4008 located at the hinge fitting zones on the horizontal stabilizer carbon skin

14 Apply the EA956A/EA956B resin on the fiber glass pad, using the nylon film envelope as detaching layer. Cut two rectangular patches (55mm x 105mm) for the external fitting and (55mm x 115mm) for the center one, and attach them on the fittings external surfaces (see fig. 6). Apply an appropriate pressure for the dry time (12h-18h).

15 Install the center fitting P/N 80-393103-405 using temporary fasteners and the epoxy adhesive (EA 934 NA) as sealant (ref also to fig.7-fig.8).

NOTE

BEFORE INSTALLING THE PERMANENT FASTENERS, WAIT FOR THE POLYMERIZATION OF THE ADHESIVE (12h-18h).

16 Install the permanent fasteners on the center fitting as per SRM 51-41-00 (ref also to fig.7-fig.8)

17 Install outboard fitting P/N 80-393103-407 using temporary fasteners and the epoxy adhesive (EA 934 NA) as sealant (ref also to fig.9-fig.10).

NOTE

BEFORE INSTALLING THE PERMANENT FASTENERS, WAIT FOR THE POLYMERIZATION OF THE ADHESIVE (12h-18h).

18 Install the permanent fasteners on the outboard fitting as per SRM 51-41-00 (ref also to fig.9-fig.10)

CAUTION

WITH REFERENCE TO FIG.11, REMOVE ANY GREASE, OIL AND PAINT FROM THE DASHED AREA OF THE ALUMINUM STRIP LOWER SURFACE, TO ASSURE PROPER BONDING

19 Recover the electrical bonding by applying the aluminum strips. Refer to fig. 11 and to SRM, ATA 51-70-80, Chapter 6 (*Repair Procedure for the Horizontal Stabilizer Hinge Corrosion*), Section B (*Repair*), paragraph 4 (*Aluminum Strip Installation*).

NOTE

REINSTALLATION OF THE EXISTING INBOARD STRIPS REQUIRES THE REMOVAL AND SUBSEQUENT INSTALLATION OF EXISTING FASTENERS

FIRST INSTALLATION OF THE INBOARD STRIPS P/N 80-393103-017 (OR P/N 80M000095-007) REQUIRES THE REMOVAL AND SUBSEQUENT INSTALLATION OF FASTENERS AND SELF-LOCKING NUTS AS PER STEPS 20 AND 21.

20 With reference to fig. 12:
   a. (effectivity MSN 1002 and from MSN 1034 to MSN 1191) remove the Hi-Lock p/n HL12VAZ-6-7 with relevant collar
   b. (effectivity from MSN 1004 to MSN 1033 - horizontal stabilizer manufactured by Sikorsky) remove the Hi-Lock p/n HL12VAZ-6-6 with relevant collar
   c. (effectivity: all) remove the self-locking nut p/n MS21060-3 located at the inboard end of the horizontal stabilizer LH trailing edge lower skin (Ref. AMM, ATA 51-43-00).

21 With reference to fig. 12:
   a. (effectivity MSN 1002 and from MSN 1034 to MSN 1191) install a new Hi-Lock p/n HL12VAZ-6-8, plus collar p/n HL75G6AGW on the aluminum strip in lieu of the Hi-Lock previously removed
   b. (effectivity from MSN 1004 to MSN 1033 - horizontal stabilizer manufactured by Sikorsky) install a new Hi-Lock p/n HL12VAZ-6-7, plus collar p/n HL75G6AGW on the aluminum strip in lieu of the Hi-Lock previously removed
   c. (effectivity: all) reinstall on the aluminum strip the Self-Locking Nut previously removed, using no. 2 rivets p/n NASM20605R3W8 (Ref. AMM, ATA 51-41-00).

NOTE

INSTALLATION OF A LONGER HI-LOCK (HL12VAZ-6-9 EFFECTIVITY MSN 1002 AND FROM MSN 1034 TO MSN 1191; HL12VAZ-6-8 FROM MSN 1004 TO MSN 1033) MAY BE REQUIRED IF ALUMINUM STRIP P/N 80-393103-017 (OR P/N 80M000095-007) IS INSTALLED.

22 With reference to fig. 11, apply an ALODINE 1200 protection coat on the dashed area of the aluminum strip - upper surface (Ref. AMM 51-23-00).

23 Verify the electrical conductivity by connecting a standard milliohmeter probe at the central end external hinge fitting and at a convenient ground point of the battery. If the resistance value is 20 milliohms or less, the electrical bond is acceptable otherwise inspect the aluminum strips installation. Contact Piaggio Aero Technical Support if additional support is required.

Part.D – RH hinge fittings inspection

24 Inspect for presence of corrosion on RH hinge fittings
25 If traces of corrosion are detected (see fig.1) embody part E of this Service Bulletin, otherwise proceed with step 26.
26 AIRCRAFT MSN 1002; 1034-1191: if the aluminum bonding strips are not installed (see fig. 2), embody part E of this Service Bulletin, otherwise go to part F.
AIRCRAFT MSN 1004-1033: embody parts E of this Service Bulletin

Part.E – RH hinge fittings replacement, rear spar inspection and electrical bonding improvement

27 If installed, remove the RH aluminum bonding strips:
– Remove the fasteners as per SRM 51-43-00

CAUTION
PAY ATTENTION TO AVOID CARBON FIBER DAMAGE

– Remove the aluminum bonding strips using a spatula
– Using stainless steel brush, remove the conductive adhesive KS4008 located under the strip bonding zones

28 Remove the RH elevator hinge fittings P/N 80-393103-401 and P/N 80-393103-403:

CAUTION
DO NOT APPLY FORCES TO THE FITTING ALONG A CHORDWISE OR VERTICAL DIRECTION: DAMAGE TO COMPOSITE STRUCTURE MAY OCCUR.

– Remove the fasteners as per SRM 51-43-00
– Using a wooden wedge and a soft hammer, act on the fitting in a spanwise direction, oriented towards the vertical fin.

29 Visually inspect the rear spar area in correspondence with the fittings

30 If, following inspection as per previous point, pilot holes are detected, refer to step 8 for defect evaluation and corrective actions, then proceed with step 31.

31 Inspect by NDT (coin-tapping) as per AMM chapter 51-90-00 a square area (25cm x 25 cm) on the lower and upper skin of the Horizontal Stabilizer Carbon Fiber trailing edge, near to the elevator hinge attachments:
– If delaminated zones are detected, that are within the limit of (30mm x 30mm), repair the graphite skin as per SRM, ATA 51-70-80, Chapter 3 (*Repair Procedures for Laminates*), Section D (*Voids and Internal Delaminations*), or as per SRM ATA 51-70-80 chapter 6 (*Repair Procedure for the Horizontal Stabilizer Hinge Corrosion*), Section B (*Repair*), paragraph 2 (*Repair of Lower Skin defect)* or paragraph 3 *(Repair of Upper Skin defect*) as applicable.

– If delaminated zones are detected, that are greater than the above limits, the Horizontal Stabilizer has to be repaired using a dedicated repair scheme or must be replaced.
– If fastener holes present delamination, cracks or concentrated defect, beyond the limits defined within SRM, the Horizontal Stabilizer has to be repaired using a dedicated repair scheme or must be replaced.

32 Inspect the hinge fittings:
– Remove the superficial oxidation as per SRM 51-10-50 (if applicable);
– If traces of corrosion are detected, affected hinge fitting(s) shall be replaced. Fitting(s) without corrosion may be reinstalled restoring surface treatment with Alodine as per SRM 51-20-20.

NOTE
STEP 33 AND 34 ARE REQUIRED ONLY ON NEW FITTINGS.

33 Mark fastener location on the upper and lower side of the new fitting(s) (4 fasteners), and drill fastener holes:
– Measure the distance from the edges of each upper and lower fastener location on the removed fitting(s) – refer to red arrows in figure 4.
– Using a pen, copy the position of each upper and lower fastener location on the new fitting(s)
– Drill pilot holes (2.5 mm).
– Temporary install the new fittings at the proper locations on the Horizontal Stabilizer, and verify the correspondence of the pilot holes with Horizontal Stabilizer holes (upper and lower skin).
- Remove the new fittings from the Horizontal Stabilizer
- Drill the finite holes on the new fittings (see fig.7-8-9-10).
– Apply Alodine at the new fitting holes

34 Mark on the new fitting(s) fastener location on the rear side of the fitting (2 fastener) and drill fastener holes:
- Using a pen, track a reference line passing through the holes on the rear spar of the Horizontal Stabilizer, in correspondence with the two rear fastener of each fitting (refer to the red dotted line in figure 5). Install a “paper adhesive tape” on the Horizontal Stabilizer to track a line on it (not in the picture).
- Temporary install the old fittings on the horizontal stabilizer. Use temporary fasteners on the upper and lower fitting faces only.
- Mark 2 points, located on the reference line tracked before, 5 cm from each of the 2 fastener position on the rear side of the fitting (refer to the green arrows in figure 5).
- Remove the old fittings
- Temporary install the new fittings on the horizontal stabilizer. Use temporary fasteners on the upper and lower fitting faces only.
- Using a pen, mark the 2 fastener positions on the rear side of the new fittings: they are 5 cm from the points previously marked on the reference line.

- Remove the new fittings
- Drill pilot holes (2.5 mm).
- Temporary install the new fittings at the proper locations and check the correspondence of the pilot holes with Horizontal Stabilizer holes on the rear spar, inserting a pin in the pilot hole and punching the paper adhesive tape previously installed.
- Remove the new fittings
- Drill the finite holes (see fig.7-8-9-10) taking into account the offset of the pilot hole.
- Apply Alodine at the new fitting holes
- Remove the "paper adhesive tape".

CAUTION

PAY ATTENTION TO AVOID CARBON FIBER DAMAGE

35 Using stainless steel brush, remove the conductive adhesive KS4008 located at the hinge fitting zones on the horizontal stabilizer carbon skin

36 Apply the EA956A/EA956B resin on the fiber glass pad, using the nylon film envelope as detaching layer. Cut two rectangular patches (55mm x 105mm) for the external fitting and (55mm x 115mm) for the center one, and attach them on the fittings external surfaces (see fig. 6). Apply an appropriate pressure for the dry time (12h-18h).

37 Install the center fitting P/N 80-393103-405 using temporary fasteners and the epoxy adhesive (EA 934 NA) as sealant (ref also to fig.7-fig.8).

NOTE

BEFORE INSTALLING THE PERMANENT FASTENERS, WAIT FOR THE POLYMERIZATION OF THE ADHESIVE (12h-18h).

38 Install the permanent fasteners on the center fitting as per SRM 51-41-00 (ref also to fig.7-fig.8)

39 Install outboard fitting P/N 80-393103-407 using temporary fasteners and the epoxy adhesive (EA 934 NA) as sealant (ref also to fig.9-fig.10).

NOTE

BEFORE INSTALLING THE PERMANENT FASTENERS, WAIT FOR THE POLYMERIZATION OF THE ADHESIVE (12h-18h).

40 Install the permanent fasteners on the outboard fitting as per SRM 51-41-00 (ref also to fig.9-fig.10)

CAUTION

WITH REFERENCE TO FIG.11, REMOVE ANY GREASE, OIL AND PAINT FROM THE DASHED AREA OF THE ALUMINUM STRIP LOWER SURFACE, TO ASSURE PROPER BONDING

41 Recover the electrical bonding by applying the aluminum strips. Refer to fig. 11 and to SRM, ATA 51-70-80, Chapter 6 (*Repair Procedure for the Horizontal Stabilizer Hinge Corrosion*), Section B (*Repair*), paragraph 4 (*Aluminum Strip Installation*).

NOTE

REINSTALLATION OF THE EXISTING INBOARD STRIPS REQUIRES THE REMOVAL AND SUBSEQUENT INSTALLATION OF EXISTING FASTENERS

FIRST INSTALLATION OF THE INBOARD STRIPS P/N 80-393103-017 (OR P/N 80M000095-007) REQUIRES THE REMOVAL AND SUBSEQUENT INSTALLATION OF FASTENERS AND SELF-LOCKING NUTS AS PER STEPS 42 AND 43.

42 With reference to fig. 12
   a. (effectivity MSN 1002 and from MSN 1034 to MSN 1191) remove the Hi-Lock p/n HL12VAZ-6-7 with relevant collar
   b. (effectivity from MSN 1004 to MSN 1033 - horizontal stabilizer manufactured by Sikorsky) remove the Hi-Lock p/n HL12VAZ-6-6 with relevant collar
   c. (effectivity: all) remove the self-locking nut p/n MS21060-3 located at the inboard end of the horizontal stabilizer RH trailing edge lower skin (Ref. AMM, ATA 51-43-00).

43 With reference to fig. 12:
   a. (effectivity MSN 1002 and from MSN 1034 to MSN 1191) install a new Hi-Lock p/n HL12VAZ-6-8, plus collar p/n HL75G6AGW on the aluminum strip in lieu of the Hi-Lock previously removed
   b. (effectivity from MSN 1004 to MSN 1033 - horizontal stabilizer manufactured by Sikorsky) install a new Hi-Lock p/n HL12VAZ-6-7, plus collar p/n HL75G6AGW on the aluminum strip in lieu of the Hi-Lock previously removed
   c. (effectivity: all) reinstall on the aluminum strip the Self-Locking Nut previously removed, using no. 2 rivets p/n NASM20605R3W8 (Ref. AMM, ATA 51-41-00).

NOTE

INSTALLATION OF A LONGER HI-LOCK (HL12VAZ-6-9 EFFECTIVITY MSN 1002 AND FROM MSN 1034 TO MSN 1191; HL12VAZ-6-8 FROM MSN 1004 TO MSN 1033) MAY BE REQUIRED IF ALUMINUM STRIP P/N P/N 80-393103-017 (OR 80M000095-007) IS INSTALLED.

44 With reference to fig. 11, apply an ALODINE 1200 protection coat on the dashed area of the aluminum strip - upper surface (Ref. AMM 51-23-00).

45 Verify the electrical conductivity by connecting a standard milliohmeter probe at the central end external hinge fitting and at a convenient ground point of the battery. If the resistance value is 20 milliohms or less, the electrical bond is acceptable otherwise inspect the aluminum strips installation. Contact Piaggio Aero Technical Support if additional support is required.

Part.F – Conclusion

46 Reinstall the LH and RH elevator previously removed (Ref. AMM 27-30-00).

47 Verify the electrical conductivity by connecting the milliohmeter between the pin G106 (battery ground) and the metallic cover installed on the horn of the left side elevator; measure and record the resistance. The measured value shall be less than 20 milliohm. Repeat the same check for the right side elevator; measure and record the resistance. The measured value shall be less than 20 milliohm.

48 If the value measured is out of the required limit, verify the correct installation of the bonding strips (steps.23 and 45). Contact Piaggio Aero Technical Support if additional support is required.

49 Reinstall vertical fin rear fairing 80-413141-401 previously removed.

50 Make an opportune entry in the airplane logbook to show compliance with this Service Bulletin

51 Complete the attached Confirmation Slip and send it back to Piaggio Aero Industries S.p.A. Product Support Department

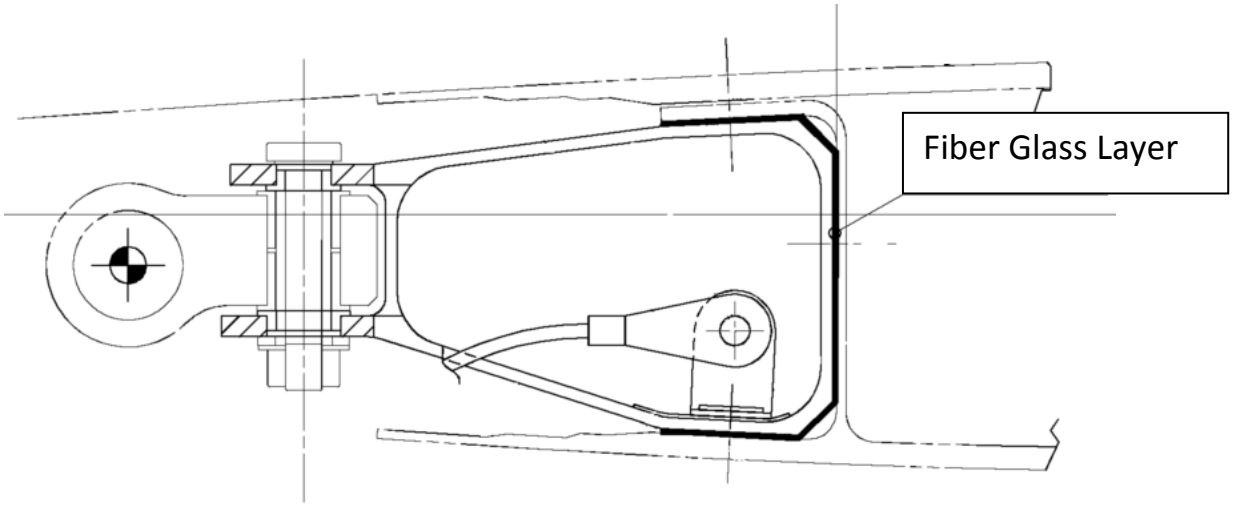


Fig.6 – Fiber glass layer installation

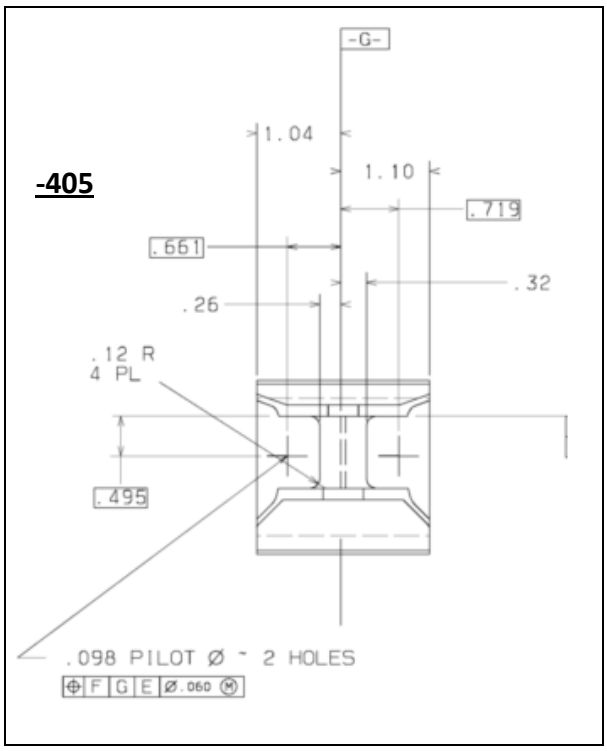


Fig.7 – Center Fitting rear view (common for LH and RH).

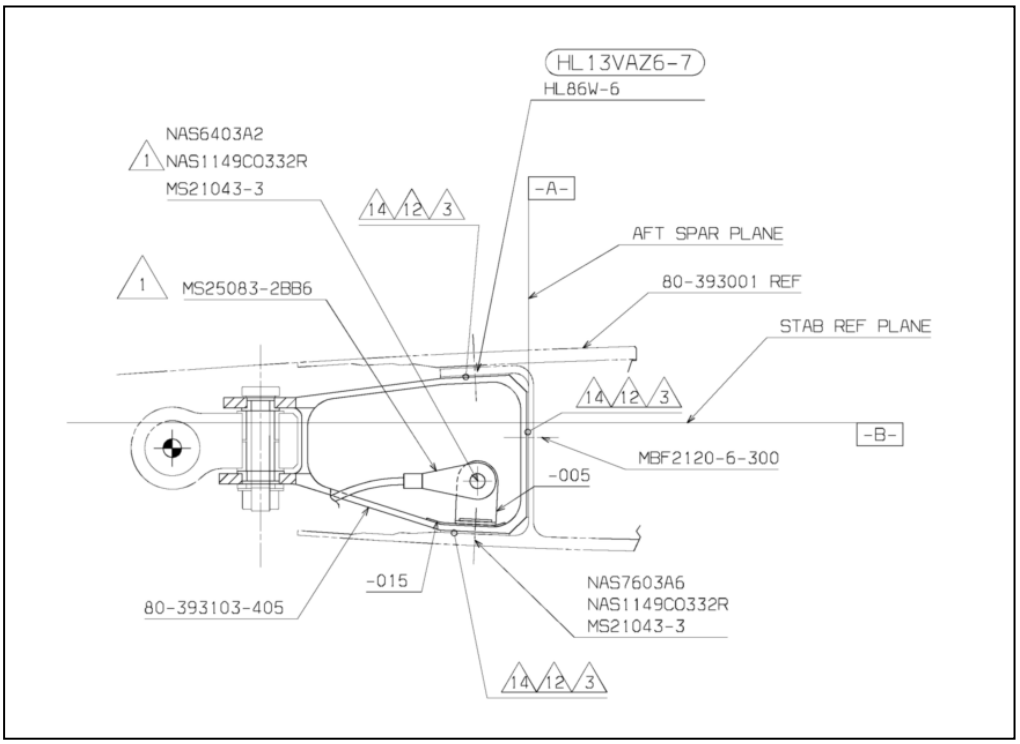


Fig.8 – Center Fitting lateral view (common for LH and RH).

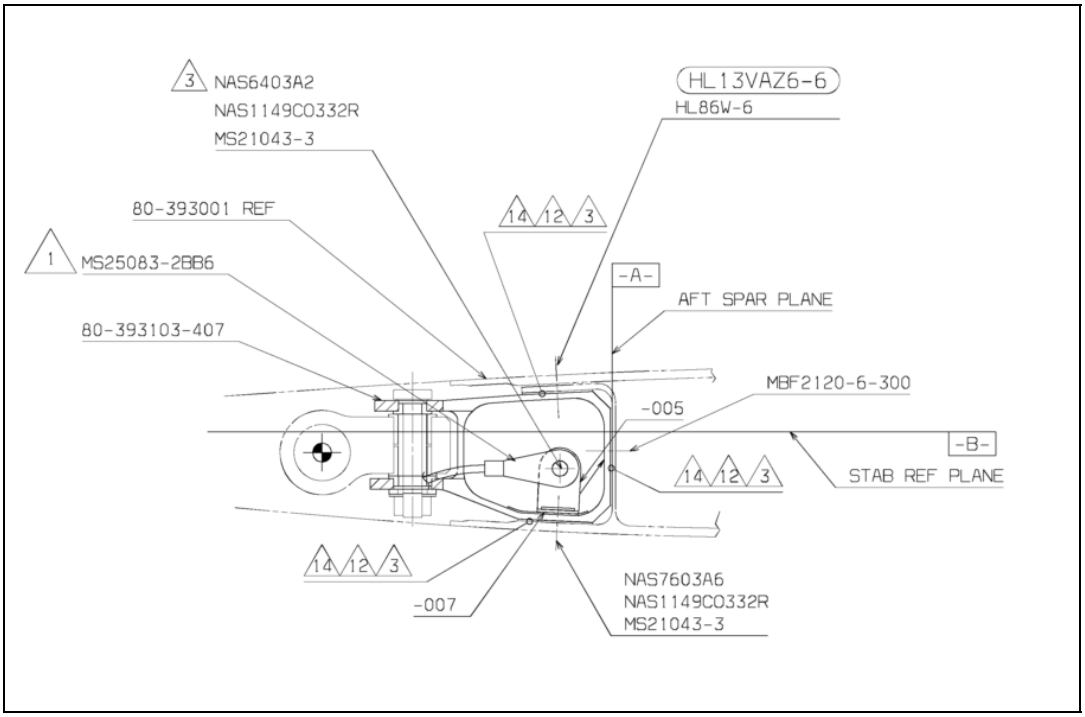


Fig.9 – Outboard Fitting lateral view (common for LH and RH).

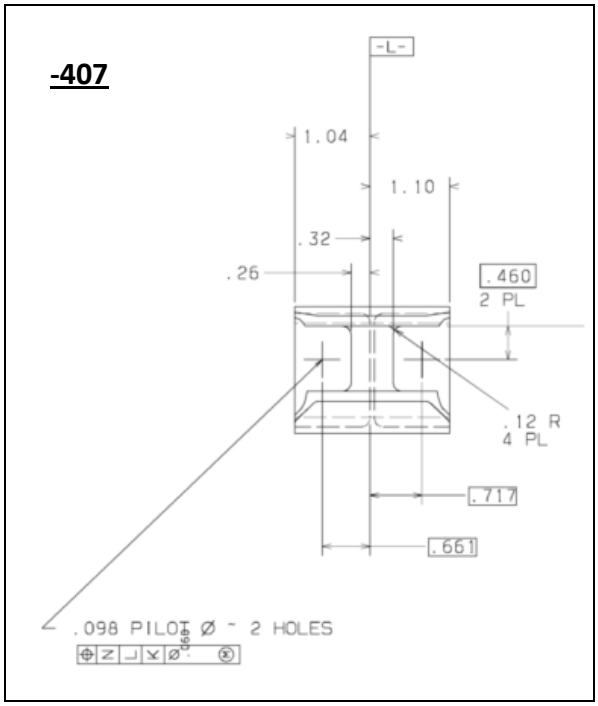


Fig.10 – Outboard Fitting rear view (common for LH and RH).

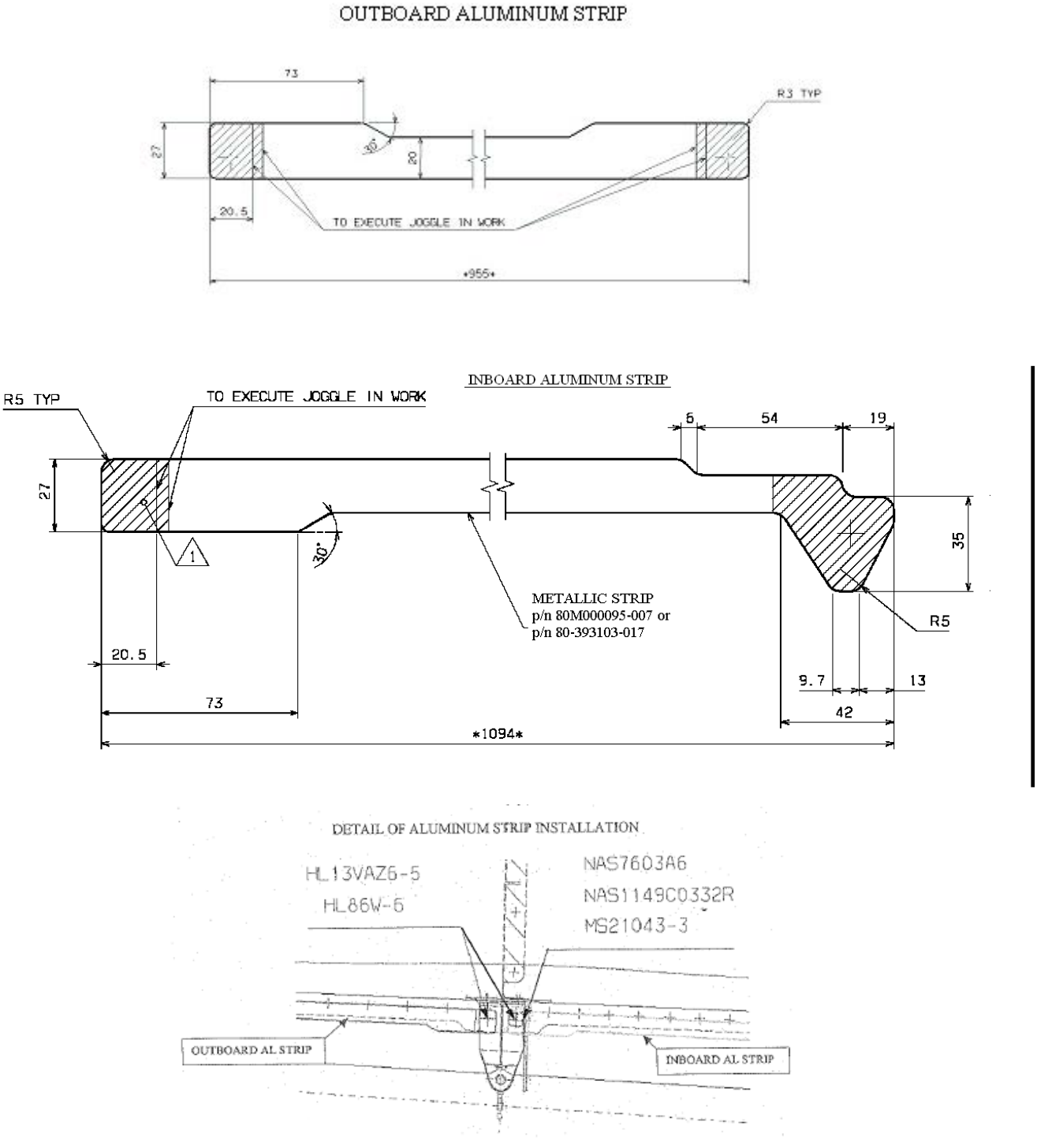


Fig.11 – Electrical Bonding strip upper view (common for LH and RH).

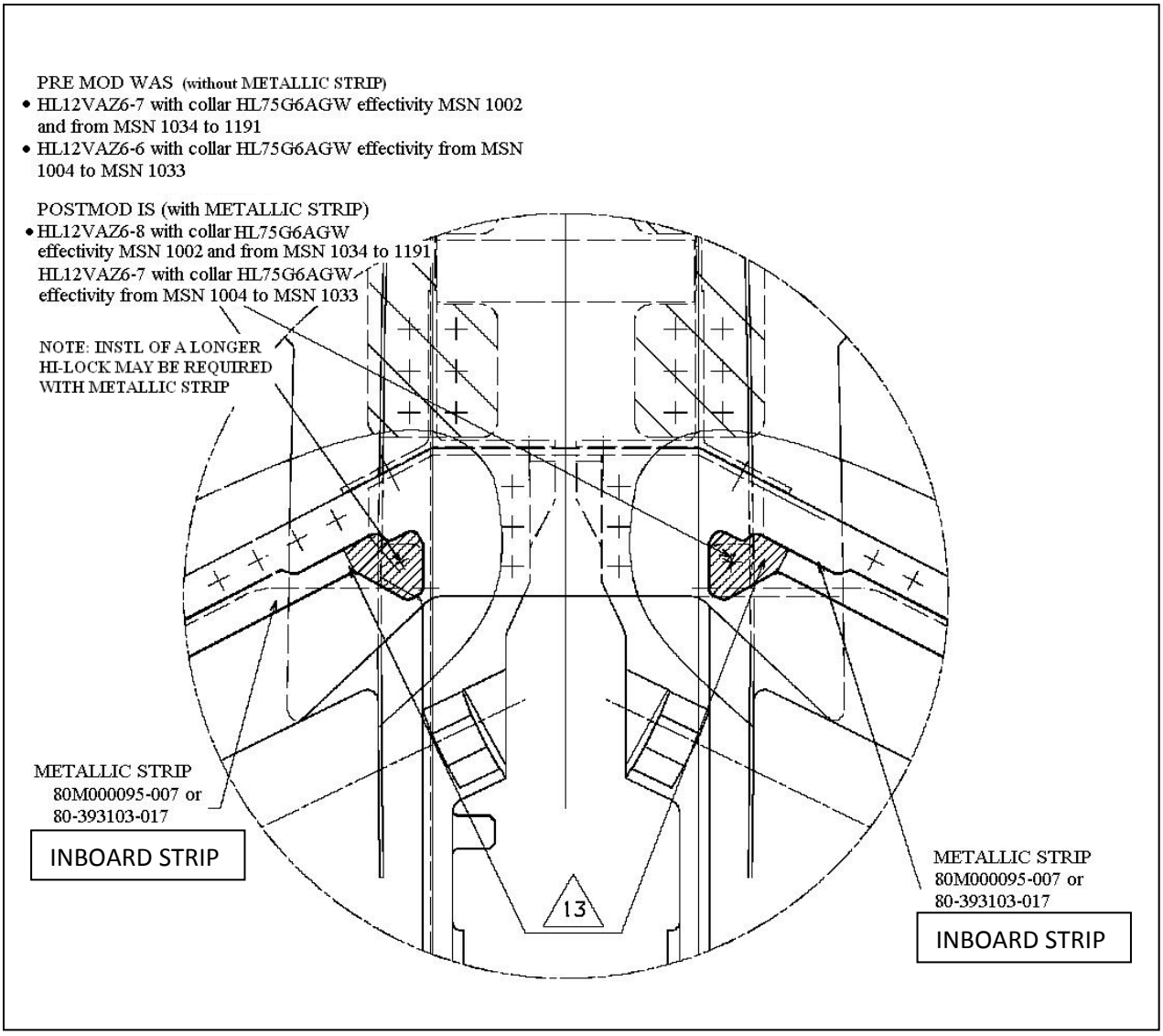


Fig. 12– Detail of inboard strip installation

3. MATERIAL INFORMATION

A. LIST OF MODIFICATION KIT COMPONENTS

Part/Number Specification	Supplier	Qty.	Designation
SB80-0262 REV3	**Piaggio**	**1**	**Kit, SB-80-0262 rev.3**
80-393103-405	Piaggio	2	Center hinge fitting (LH-RH) If required
80-393103-407	Piaggio	2	Outboard hinge fitting (LH-RH) If required
80M000095-001	Piaggio	2	Electrical Bonding Aluminum Strips (LH-RH, outboard)
80-393103-017 (*)	Piaggio	2	Electrical Bonding Aluminum Strips (LH-RH, inboard)

(*) P/N 80M000095-007 may be used as alternative to P/N 80-393103-017

B. LIST OF MATERIALS – OPERATOR SUPPLIED

Part/Number Specification	Supplier	Qty.	Designation
HL 13VAZ6-4	Standard	4	CSK Head HI Lock
HL 13VAZ6-5	Standard	8	CSK Head HI Lock
HL 13VAZ6-6	Standard	4	CSK Head HI Lock
HL 13VAZ6-7	Standard	4	CSK Head HI Lock
HL 13VAZ6-8	Standard	2	CSK Head HI Lock
HL12VAZ6-8	Standard	2	Hi Lock, protruded head
HL12VAZ6-9	Standard	2	Hi Lock, protruded head
HL12VAZ6-7	Standard	2	Hi Lock, protruded head
HL86W-6	Standard	18	Collar, Hi-Lock
HL75G6AGW	Standard	2	Collar, Hi-Lock
MBF 2120-6-300 (**)	Standard	4	Blind fastener Protruded head

Part/Number Specification	Supplier	Qty.	Designation
MBF 2120-6-350 (**)	Standard	4	Blind fastener Protruded head
NAS7603A6	Standard	4	Screw
NAS1149C0332R	Standard	4	Washer
MS21043-3	Standard	4	Nut
NASM20605R3W8	Standard	4	Rivet
EA934NA	Standard	AR	Epoxy Resin
EA956A / EA956B	Standard	AR	Epoxy Resin
1581-F161-108F50 (or equivalent)	Commercial	12”x12”	Fiber glass Pad (dry) Class I type 181

(**) MBF 3003-6-300 may be used as alternative to MBF 2120-6-300
MBF 3003-6-350 may be used as alternative to MBF 2120-6-350

C. LIST OF TOOLS

D. DISPOSAL OF REMOVED PART

Please contact:
PIAGGIO AERO INDUSTRIES S.p.A.
Via Cibrario, 4 – 16154 Genoa, Italy
Product Support Department

E. WARRANTY CREDIT PROGAM

N/A

4. WARNING - PROPRIETARY RIGHTS

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CONFIRMATION SLIP

Service Bulletin Accomplishment			**SB-80-0262 Rev.3**
A/C S/N:	A/C Flight Hours:	A/C LDGS:	A/C Registration:
Date:			
Accomplished by:			
Signature			

INSPECTION RESULTS

	YES	NO
Delamination detected (ref. to point 9) – LH center	**[ ]**	**[ ]**
Delamination detected (ref. to point 9) – LH outboard	**[ ]**	**[ ]**
Hinge fitting replaced (ref. to point 10) – LH center	**[ ]**	**[ ]**
Hinge fitting replaced (ref. to point 10) – LH outboard	**[ ]**	**[ ]**
Delamination detected (ref. to point 31) – RH center	**[ ]**	**[ ]**
Delamination detected (ref. to point 31) – RH outboard	**[ ]**	**[ ]**
Hinge fitting replaced (ref. to point 32) – RH center	**[ ]**	**[ ]**
Hinge fitting replaced (ref. to point 32) – RH outboard	**[ ]**	**[ ]**

WRONG PILOT HOLES

	DETECTED	NOT DETECTED
LH center (ref. to point 8)	**[ ]**	**[ ]**
LH outboard (ref. to point 8)	**[ ]**	**[ ]**
RH center (ref. to point 30)	**[ ]**	**[ ]**
RH outboard (ref. to point 30)	**[ ]**	**[ ]**

BONDING DATA

	MEASURED VALUE [milliohm]
LH center (ref. to point 23)	
LH outboard (ref. to point 23)	
RH center (ref. to point 45)	
RH outboard (ref. to point 45)	
G106 – metallic cover LH (ref. to point 47)	
G106 – metallic cover RH (ref. to point 47)	