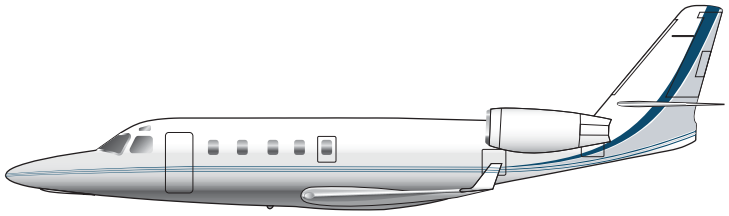
Gulfstream G100



SERVICE BULLETIN

NUMBER 100-28-297

SUBJECT

FUEL (ATA 28) – MAIN LANDING GEAR WHEEL WELL FUEL LINES - INSPECTION AND ADDITION OF LOOP CLAMPS BETWEEN FUEL LINES AND ELECTRICAL HARNESSES

JANUARY 21, 2010

Gulfstream®
AEROSPACE LP

SERVICE BULLETIN

FUEL - MAIN LANDING GEAR WHEEL WELL FUEL LINES - INSPECTION AND ADDITION OF LOOP CLAMPS BETWEEN FUEL LINES AND ELECTRICAL HARNESSES

PLANNING INFORMATION

1. Effectivity

Aircraft serial numbers 004 and 011 through 158

2. Concurrent Requirement

None

3. Reason

Recently, a G100 operator reported that remnants of sponge-rubber padding were found attached by cable tie-wraps to the fuel lines in the Main Landing Gear (MLG) wheel well. This padding is not approved for installation and was not intended to provide clearance / separation between the fuel lines and electrical harnesses. In addition, under some cable tie-wraps, corrosion was present, caused by moisture being trapped within the open sponge rubber shells.

4. Description

This service bulletin provides instructions to remove the sponge-rubber padding from the fuel lines, inspect for corrosion, and treat and / or replace damaged fuel lines as required. Additionally, instructions are provided to install loop clamps to achieve a minimum clearance of 0.5 inches (12.7 mm), between the fuel lines and electrical harnesses.

5. Compliance

Compliance with this service bulletin is mandatory at the next suitable planned maintenance period within 24 months.

6. Approval

This service bulletin has been reviewed by the Civil Aviation Administration of Israel (CAAI). The design content herein complies with the applicable Civil Aviation Regulations and is CAAI approved.

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7. Manpower

The following information is for planning purposes only:

Estimated man-hours: 4 for inspection
14 for corrosion treatment if necessary
7 for clamping procedure if necessary

NOTE: Fuel line replacement if required, is not inclusive and will be quoted by the installing facility.

8. Weight and Balance

None

9. Electrical Load Data

No Change

10. Software Accomplishment Summary

None

11. References

Astra, Astra SPX and G100 Aircraft Maintenance Manual (AMM), Chapters 20, 24 and 28
Gulfstream Aerospace LP Modification G1-10031

NOTE: The design of MOD G1-10031 is configured to a standard type certificated configuration aircraft. Approval, by the local regulatory authority, of any deviation from the instructions contained in this service bulletin must be obtained, if required, in accordance with the relevant local regulations.

12. Other Publications Affected

Astra, Astra SPX and G100 AMM, Chapter 28
Astra, Astra SPX and G100 Illustrated Parts Catalog (IPC), Chapter 28

NOTE: Data concerning this service bulletin will be published in a future revision of the affected manual(s). This service bulletin will provide technical data until the revisions are published.

13. Interchangeability or Intermixability of Parts

None

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MATERIAL INFORMATION

14. Material - Price and Availability

The parts required to accomplish this service bulletin are available by contacting Spare Parts Sales at 800-810-GULF (4853) or 912-965-4178.

15. Warranty Coverage - Component

None

16. Material Necessary for Each Aircraft

NOTE: The parts listed in this section can be substituted with equivalent Israel Aerospace Industries (IAI) approved parts. If equivalent part(s) is used, it must be accompanied by documentation from IAI stating equivalence.

A. Material to be Procured:

New Part No.	Keyword	Old Part No.	Qty.
AS21919WCF04	Loop Clamp	-	A/R
AS21919WCF05	Loop Clamp	-	A/R
AS21919WCF16	Loop Clamp	-	A/R
AS21919WCF20	Loop Clamp	-	A/R
AS21919WCF24	Loop Clamp	-	A/R
NAS1149C0332R	Flat Washer	-	A/R
MS27039C1-09	Screw	-	A/R
MS21042L3	Nut	-	A/R
TA4070M0808	90 Deg. Bracket	-	A/R

NOTE: MS21919WCF clamps may be substituted for AS21919WCF clamps.

B. Materials Supplied by Operator:

Abrasive Paper #400 grit or Scotch-Brite types 7447 (Rough) and 7448 (Fine) or equivalent
Acetone
Alodine 1200S or equivalent
Fluid-resistant epoxy primer-class 2, per BMS 10-11, type 1

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17. Reidentified Parts

None

18. Special Tooling

Concave mirror or a 10 X magnifying glass
Digital handheld ultrasonic thickness gauge or equivalent

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ACCOMPLISHMENT INSTRUCTIONS

CAUTION: PROTECT WIRE BUNDLES, CONNECTORS AND SURROUNDING STRUCTURE DURING ANY MAINTENANCE PROCEDURES FROM SHAVINGS, DEBRIS AND CONTAMINATION. MAINTAIN A PROPERLY CLEANED WORK AREA THROUGHOUT THE PROCEDURE TO ENSURE THE INTEGRITY OF THE AFFECTED COMPONENT/SYSTEM. VISUALLY INSPECT WORK AREA USING ADDITIONAL LIGHT AS NECESSARY TO VERIFY ABSENCE OF ANY DEBRIS PRIOR TO COMPLETION OF PROCEDURE. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO COMPONENTS AND/OR SYSTEMS.

1. Prepare aircraft for safe maintenance. Refer to AMM, Safe Ground Maintenance Procedure, Chapter 20.

CAUTION: MAKE SURE ELECTRICAL POWER IS DISCONNECTED FROM AIRCRAFT. FAILURE TO COMPLY MAY RESULT IN INJURY TO PERSONNEL AND/OR DAMAGE TO AIRCRAFT.

2. Disconnect external electrical power from aircraft. Refer to AMM, Chapter 24.

3. Remove left and right MLG doors (16 and 16A) to gain access to the fuel lines listed below. Refer to AMM, Chapter 28 and Figure 1:

P/N	Description and Function	DIA. X Wall Thk.
25W653120-539/-540	Wing tank vent - line connection from the fuselage to the bladder tank	1.00” x 0.035”
25W653120-637/-638	Main vent - line connection from the fuselage bladder tank to the NACA scoop	1.50” x 0.035”
25W653120-639/-640	Transfer line from the fuselage bladder tank to the wing tank	1.25” x 0.035”

4. Rework Procedure:

   A. Perform detailed inspection for presence of sponge-rubber padding in the wheel well area, particularly on the fuel lines noted in Step 3. Refer to Figure 2.

      (1) If sponge-rubber is present, perform the following (refer to Figure 2, Sheet 1):

         (a) Document the sponge-rubber with a digital camera. Send photos to Gulfstream Customer Support via email at midcabin.techops@gulfstream.com

(b) Cut all the cable tie-wraps attaching the sponge-rubber padding to the fuel lines.

(c) Remove and dispose of cable-tie wraps and remnants of padding.

NOTE: If there are any other fuel lines besides those indicated above that are also wrapped with sponge-rubber, remove the sponge-rubber from all affected fuel lines.

(2) Perform a detailed visual inspection for corrosion on the fuel lines in the areas where sponge-rubber has been used and perform the following as necessary (refer to Figure 2, Sheet 2):

(a) Remove corrosion using abrasive paper #400 grit or 3M Scotch-Brite Types 7447 (Rough) and 7448 (Fine) or equivalent. Blend the surrounding area to a ratio of 10:1 to the depth of the corrosion removed.

(b) Clean the reworked area with acetone and wipe dry.

(c) Ensure that all corrosion has been removed using a concave mirror or a ten (10) X magnifying glass.

(3) Measure the wall thickness of areas where corrosion has been removed using a digital handheld ultrasonic thickness gauge or equivalent.

(a) Replace any tubes if the minimum thickness is less than follows (refer to IPC, Chapter 28 and AMM, Chapter 28):

1 0.028” for tubes with a nominal thickness of 0.035” (P/Ns 25W653120-539/-540/-637/-638/-639/-640).

2 For others tubes in the immediate area that may have corrosion spots but with wall thickness of 0.028” rework to a minimum thickness of 0.022”.

B. Treat reworked areas with Alodine type 1200S or equivalent.

C. Apply fluid-resistant epoxy primer-class 2, per BMS 10-11, type 1, to reworked areas.

5. Clamping procedure:

NOTE: Inspect the fuel lines and electrical harnesses for separation as depicted in Figure 3, Sheets 1 and 2. The possibility exists that some aircraft may be configured as shown in Figure 3.

A. Install loop clamps (5, 6 or 7) to suit the diameters for each fuel tube. Refer to Figure 3, Details A, B and C.

B. Install loop clamps (1 or 9) to suit the diameters for the electrical harnesses.

C. Secure the fuel line loop clamps and electrical harness loop clamps together using screws (4), P/N MS27039C1-09, washers (2), P/N NAS1149C0332R and nuts (3), P/N MS21042L3.

D. Where any electrical harnesses intersect or meet fuel tubes, use bracket angle (8), P/N TA4070M0808, to connect the loop clamps. Refer to Figure 3, Detail C.

6. Reinstall left and right MLG doors (16 and 16A). Refer to AMM, Chapter 28 and Figure 1.

7. Ensure work area is clean and clear of foreign objects (FOD).

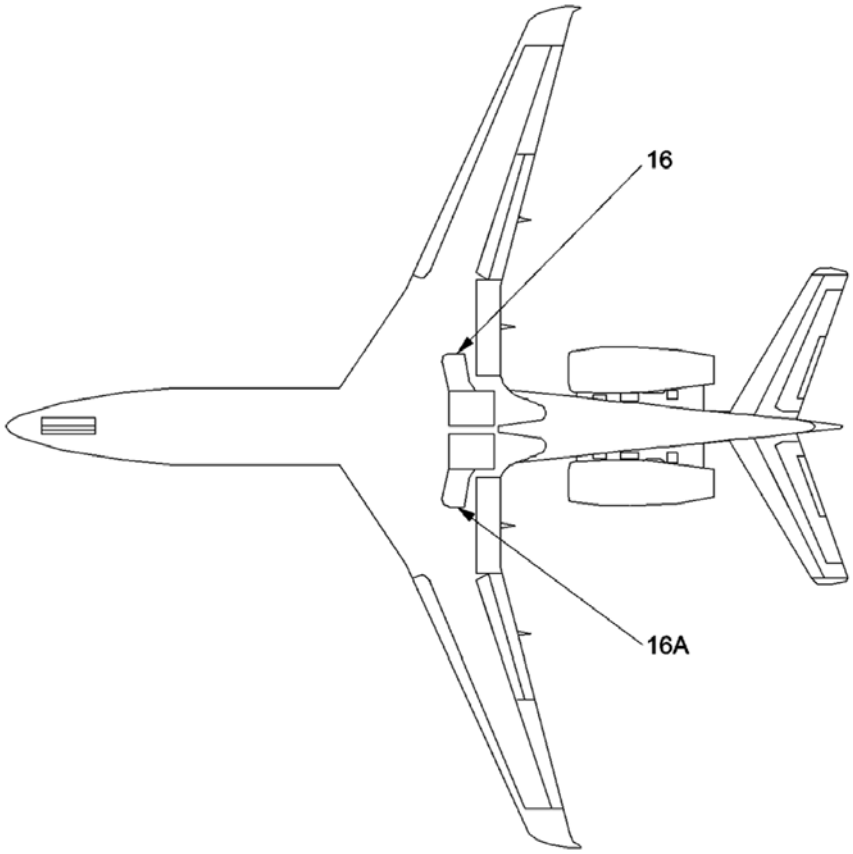
8. Record compliance with this service bulletin in the aircraft's permanent maintenance records and return aircraft to flight status.

9. Report compliance with this service bulletin to Gulfstream CMP via electronic transmittal or fill out and fax the attached service reply card.

NOTE: When reporting compliance with this service bulletin, ensure the questionnaire table within the service reply card is annotated.

If technical assistance is required, contact your area Gulfstream Field Service Representative or call Gulfstream Customer Support at 800-810-GULF (4853) or 912-965-4178 (fax 912-965-4184).

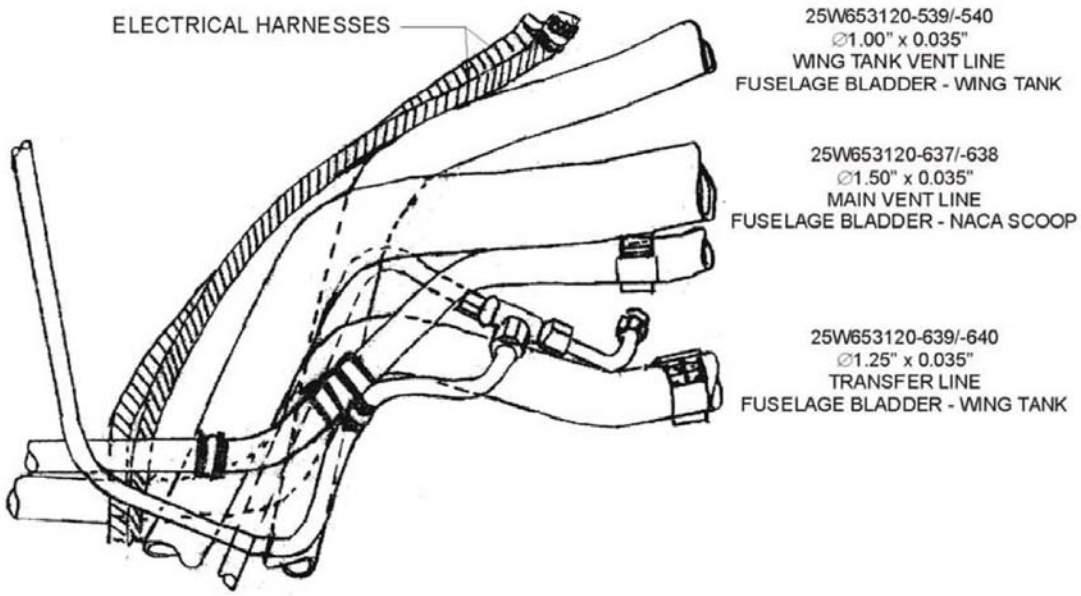
SERVICE BULLETIN



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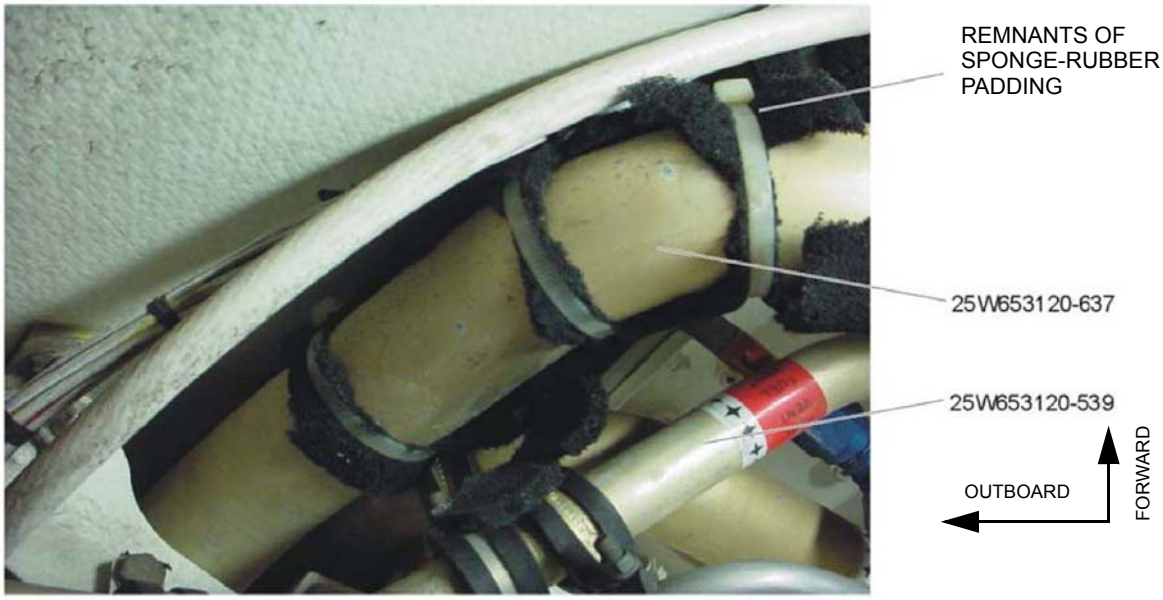
Landing Gear Access Doors
Figure 1

SERVICE BULLETIN



EXISTING CONDITION

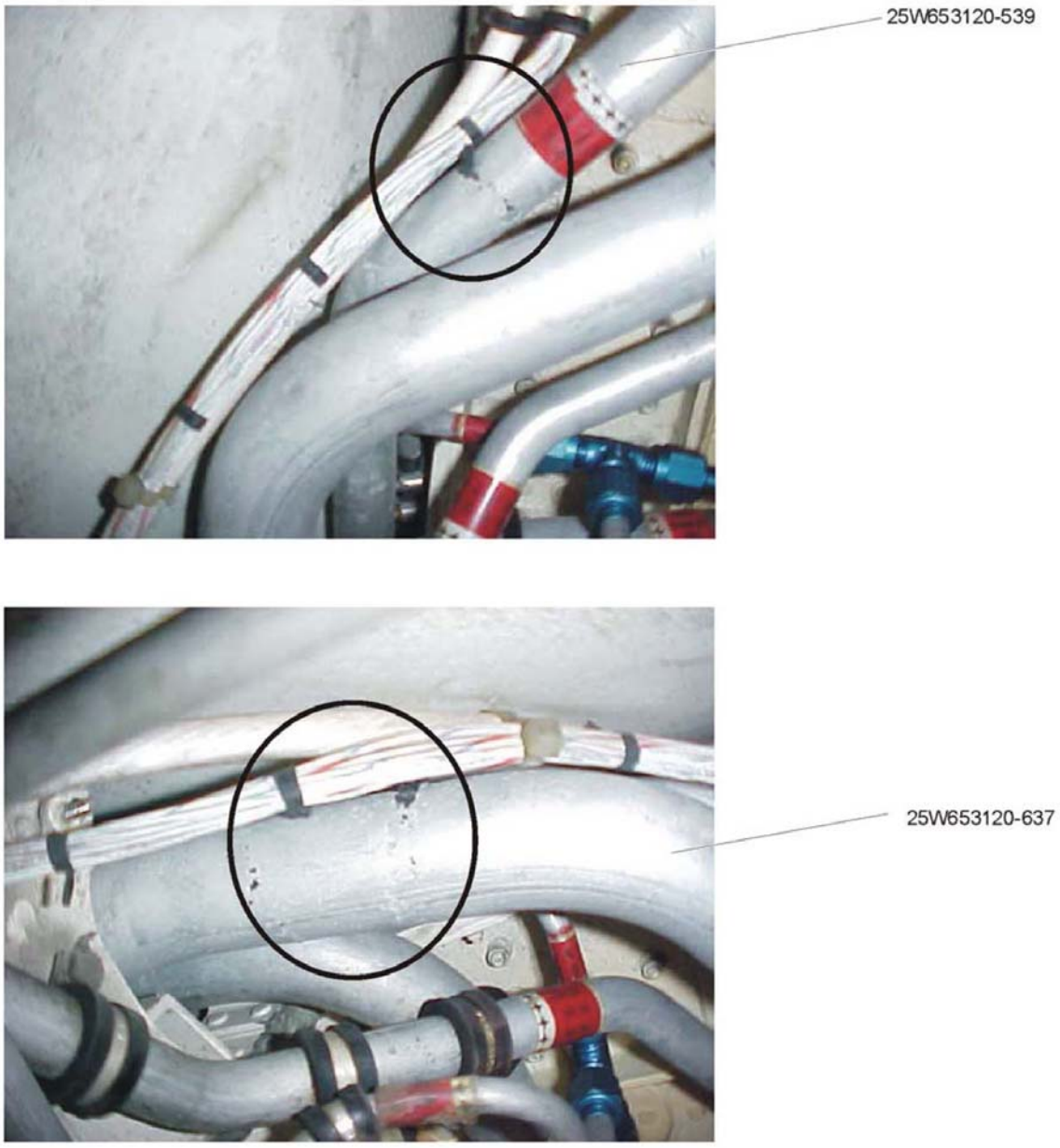
LEFT WHEEL WELL SHOWN RIGHT OPPOSITE



TYPICAL REMNANTS OF SPONGE-RUBBER PADDING

Wheel Well Inspection Area
Figure 2 (Sheet 1)

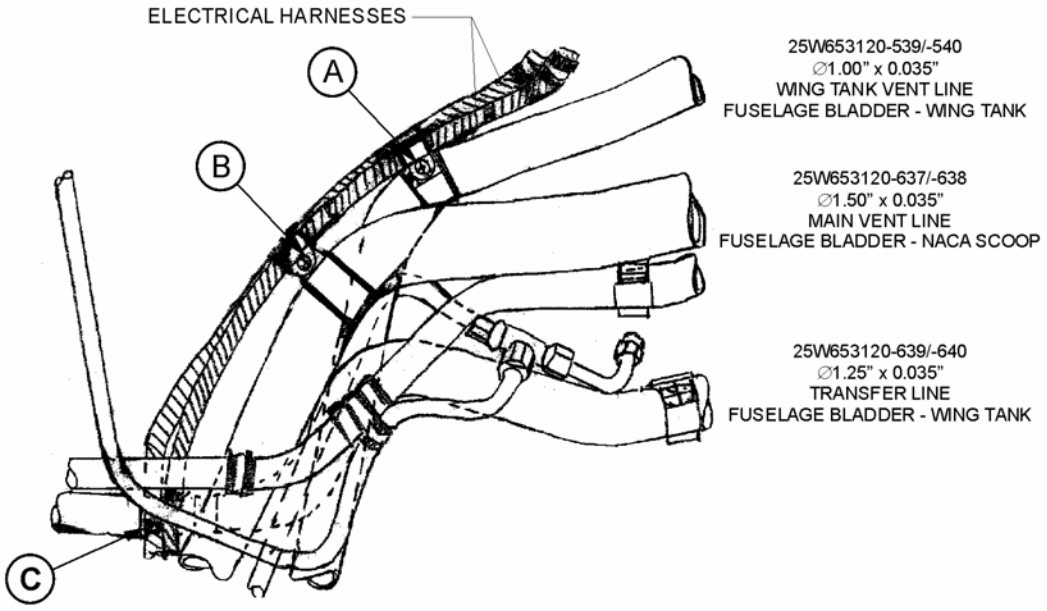
SERVICE BULLETIN



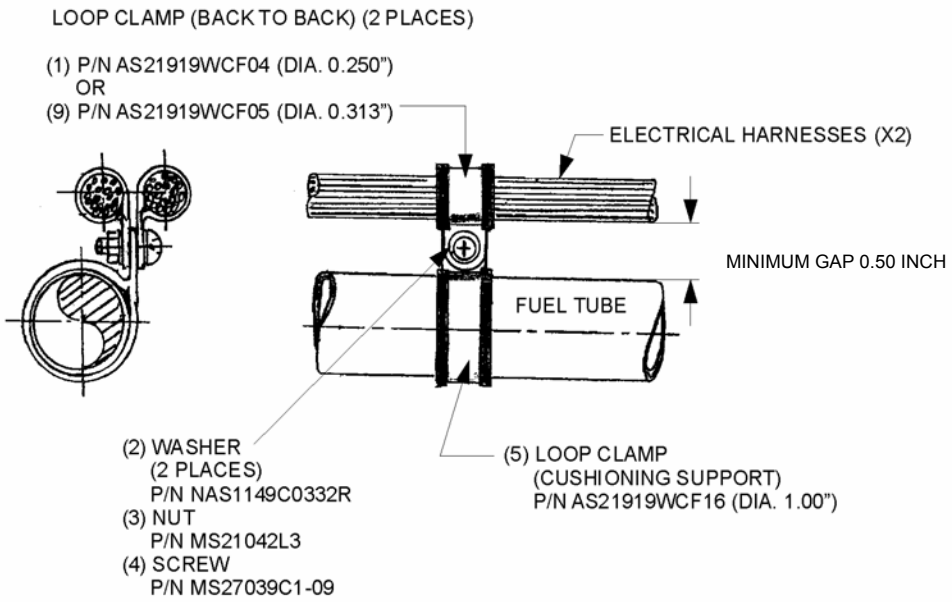
TYPICAL CORROSION SPOTS

Wheel Well Inspection Area
Figure 2 (Sheet 2)

SERVICE BULLETIN



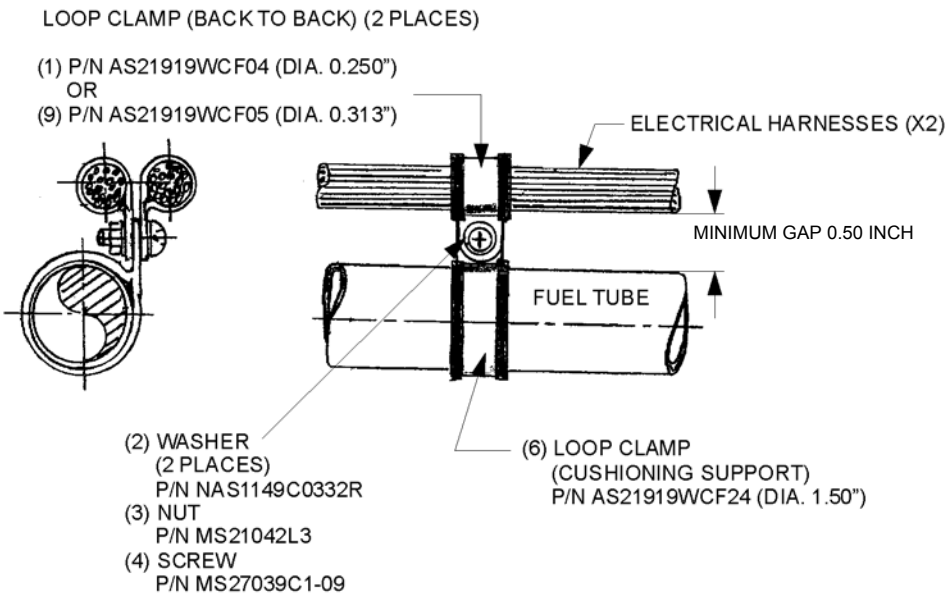
LOCATION OF CLAMPS ADDED



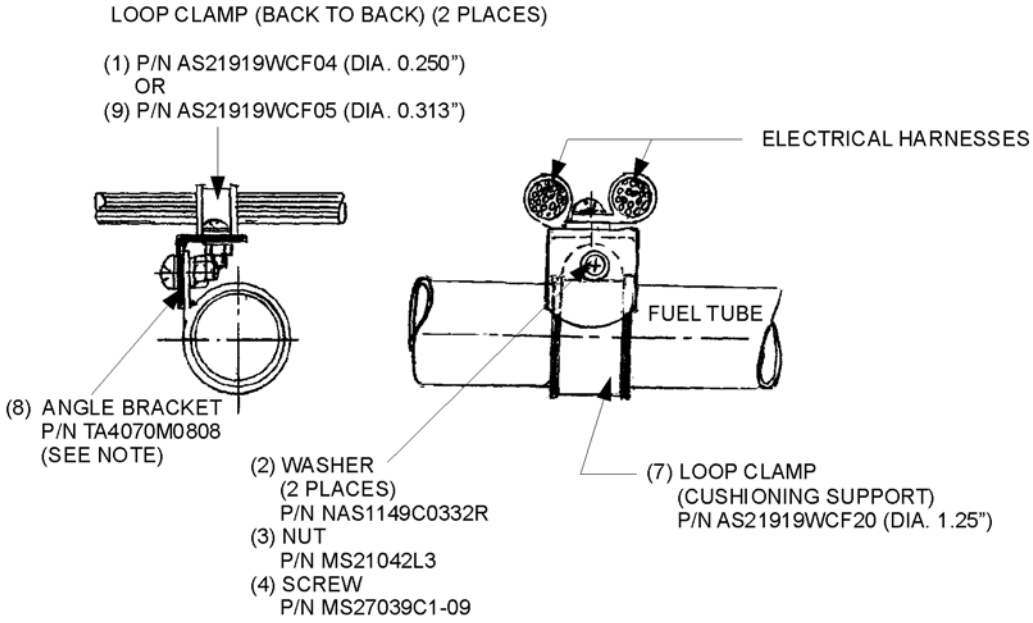
DETAIL A

Installation of Clamps
Figure 3 (Sheet 1)

SERVICE BULLETIN



DETAIL B



DETAIL C

NOTE: THIS ANGLE HAS TWO SLOTS FOR ADJUSTMENT.

SB100-28-297-03-S02

Installation of Clamps
Figure 3 (Sheet 2)

GULFSTREAM G100
SERVICE BULLETIN NO. 100-28-297
SERVICE REPLY CARD

PLEASE FAX THIS PAGE TO GULFSTREAM AEROSPACE CMP
FAX # 800-944-1775 or 912-963-0265.

THE FOLLOWING SERVICE BULLETIN HAS BEEN COMPLIED WITH:

SB CMP NUMBER	A/C	AIRCRAFT TYPE	COMPLIANCE DATE
982970		ASTRA / ASTRA SPX / Gulfstream G100	

AIRCRAFT HOURS: _____ **AIRCRAFT LANDINGS:** _____

PREVIOUSLY COMPLIED WITH: _____ **DATE:** _____

NOT APPLICABLE: _____ **DATE:** _____

Sponge Rubber Installed?	Yes	No
Left Wheel Well		
Right Wheel Well		
Corrosion Present on Fuel Tubes?		
Left Wheel Well		
Right Wheel Well		
Is Separation Between Fuel Tubes & Harnesses as Depicted in Figure 3, Sheets 1 & 2?		
Left Wheel Well		
Right Wheel Well		

SIGNATURE	TITLE / CERTIFICATE NUMBER	COMPANY

COMMENTS / SUGGESTIONS / ACTIONS TAKEN:

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