



A Textron Company

ALERT SERVICE BULLETIN

412-23-192

19 January 2023

MODEL AFFECTED: 412EP

SUBJECT: WIRE HARNESS INSTALLATION, MODIFICATION OF.

HELICOPTERS AFFECTED: Serial numbers 37002 through 37052 and 37054.
[Serial number 37053, and 37055 through 37999 will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: **PART I:** No later than 25 flight hours or 30 days after the release date of this bulletin
PART II: No later than 300 flight hours or 90 days after accomplishment of PART I.

DESCRIPTION:

Bell has discovered a possible wire chafing conditions for the items describe herein. For the affected helicopters due to an incorrect installation, there is a potential wire chafing condition in the left-hand door post at water line (WL) 38.60. Helicopters equipped with the Emergency Float retrofit Kit 412-704-138-101 (BHT-412-SI-108) may also have a wire chafing condition below the floor (WL 22.0) at STA 52.0 and STA 63.3.

Part I of this Bulletin requires inspection of the wiring harnesses described above for fouling, chafing and damage.

Part II of this Bulletin requires the clamping arrangement to be modified.

Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected helicopter.

APPROVAL:

The engineering design aspects of this bulletin are FAA approved.

CONTACT INFO:

For any questions regarding this bulletin, please contact:

Bell Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 1.0 man-hour are required to complete Part I of this bulletin. Approximately 3.0 man-hours are required to complete Part II of this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIAL:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>
NAS43DD3-24N	Spacer	1
NAS43DD3-32N	Spacer	1
AS21919WDG16Y	Clamp	1
NAS1801-3-16	Screw	1
NAS1801-3-26	Screw	1

Consumable Material:

None required

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-412-IPBS-EPI Illustrated Parts Breakdown Supplement
BHT-412-MMS-EPI Maintenance Manual Supplement
BHT-ALL-SPM Standard Practices Manual
BHT-ELEC-SPM Electrical Standard Practices Manual

PUBLICATIONS AFFECTED:

BHT-412-IPBS-EPI Illustrated Parts Breakdown Supplement

ACCOMPLISHMENT INSTRUCTIONS:

Part I. Wiring harness inspection

1. Prepare the helicopter for maintenance.
2. Refer to Figure 1, Detail A and View B, gain access to clamping arrangement in the left-hand door post at Water Line (WL) 38.60.
3. Inspect the wire harness (412-079-711) in the left-hand door post at WL 38.60 (View B) clamping arrangement for chafing damage with the structure.
4. Refer to Figure 1, View C, View D and View E, gain access to clamping arrangement below the floor (WL 22.0) at STA 52.0 and STA 63.3.
5. Inspect the wire harnesses (412-079-711 and 412-079-713) below the floor (WL 22.0) at STA 52.0 and 63.3 (View D and View E) clamping arrangement for chafing damage with the structure (lightening holes).

-NOTE-

For repair instructions refer to Electrical Standard Practices Manual (BHT-ELEC-SPM) or contact Product Support Engineering (PSE) via email (productsupport@bellflight.com). If contacting PSE, ASB number and helicopter serial number must be listed in the email subject line.

6. If damage or fouling with adjacent structure is found at steps 3, or 5 above it must be repaired before further flight. Repair damage and accomplish Part II of this ASB immediately.
7. If no damage or fouling with adjacent structure is found the helicopter can remain in service until Part II of this ASB is accomplished.
8. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with Part I of this Alert Service Bulletin.

Part II. Wiring harness installations modification

1. Prepare the helicopter for maintenance.
2. Refer to Figure 2, View A, gain access to clamping arrangement in the left-hand door post at Water Line (WL) 38.60.
3. Remove the existing clamping arrangement; nut (1, Figure 2, Detail B, Before Modification), spacer (2), clamps (3 and 4), washer (5) and screw (6). Retain nut (1) and washer (5). Discard spacer (2), clamps (3 and 4) and screw (6).
4. Install new clamping arrangement; nut (1, Figure 2, Detail B, After Modification), spacer (7), clamp (8), washer (5) and screw (9) to secure the two branches of the wire harness (412-079-711) in the single clamp (8).
5. Inspect and confirm wire harness (412-079-711) does not contact the structure at WL 38.60
6. Refer to Figure 2, View C, View D (Before Modification) and View E (Before Modification), gain access to clamping arrangement below the floor (WL 22.0) at STA 52.0 and STA 63.3.
7. Remove the existing (STA 52.0) clamping arrangement; screw (11, Figure 2, View D, Before Modification), washer (5), clamp (12), spacer (10) and clamp (13). Retain washer (5), spacer (10), clamps (12 and 13). Discard screw (11).
8. Reposition wire harnesses 412-079-711 and 412-079-713 and install new clamping arrangement; spacer (14, Figure 2, View D, After Modification), clamp (13), spacer (10), clamp (12), washer (5) and screw (15).
9. Inspect and confirm wire harnesses (412-079-711 and 412-079-713) do not contact the structure at STA 52.0.
10. Remove and retain existing (STA 63.3) clamping arrangement; screw (11, Figure 2, View E, Before Modification), washer (5), clamps (12 and 13) and spacer (16).

-NOTE-

To provide additional clearance with the surrounding structure, if required, the position of clamps (12 and 13) can be reversed, and spacer (16) can be replaced by a shorter spacer NAS43DD3-40N.

11. Reposition wire harnesses 412-079-711 and 412-079-713 and install new clamping arrangement using retained hardware; spacer (16, Figure 2, View E, After Modification), clamps (12 and 13), washer (5) and screw (11).
12. Inspect and confirm wire harnesses (412-079-711 and 412-079-713) do not contact the structure at STA 63.3.
13. Install any access panels or equipment removed during accomplishment of this Bulletin.
14. Make an entry in the helicopter logbook and historical service records indicating compliance with this Alert Service Bulletin.

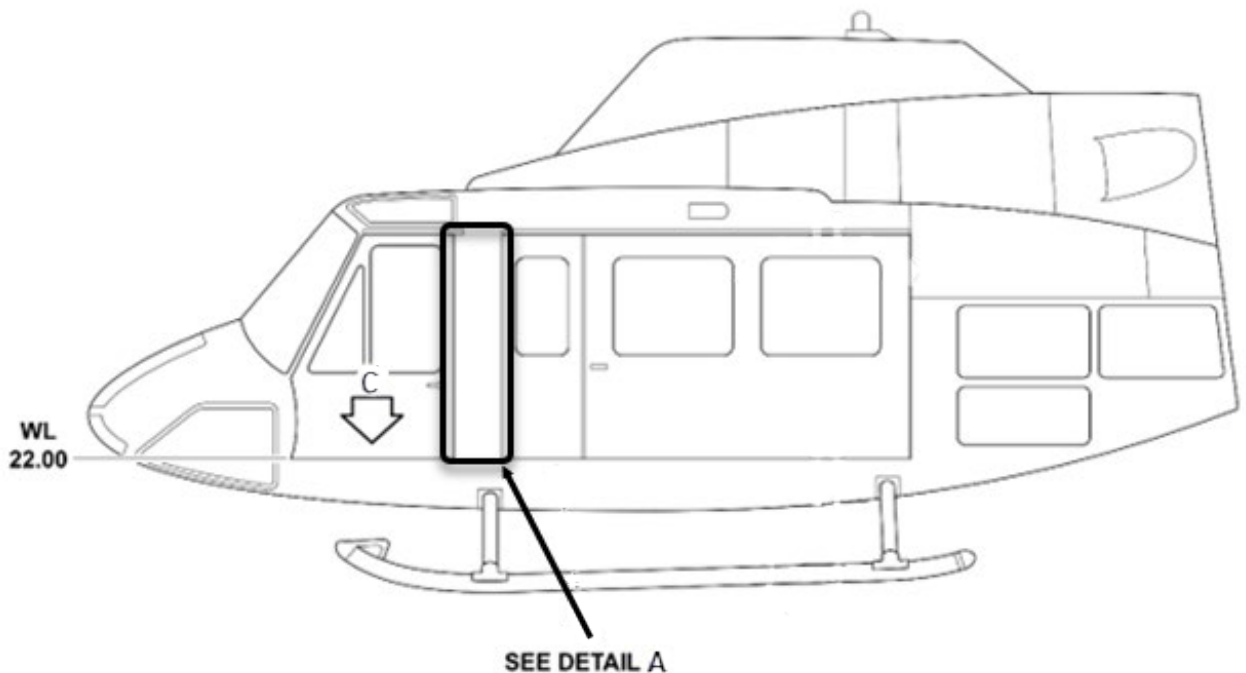
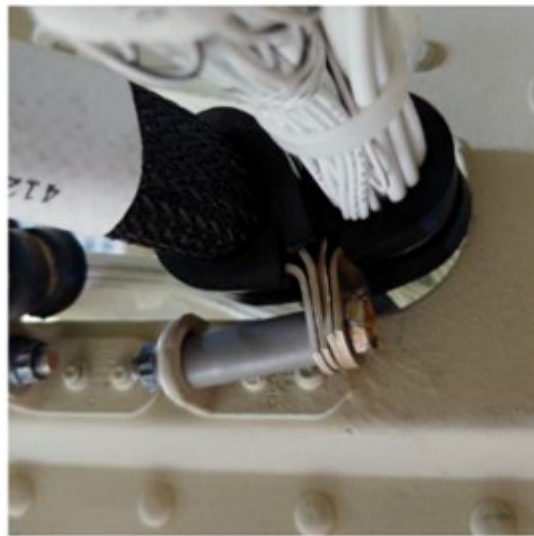
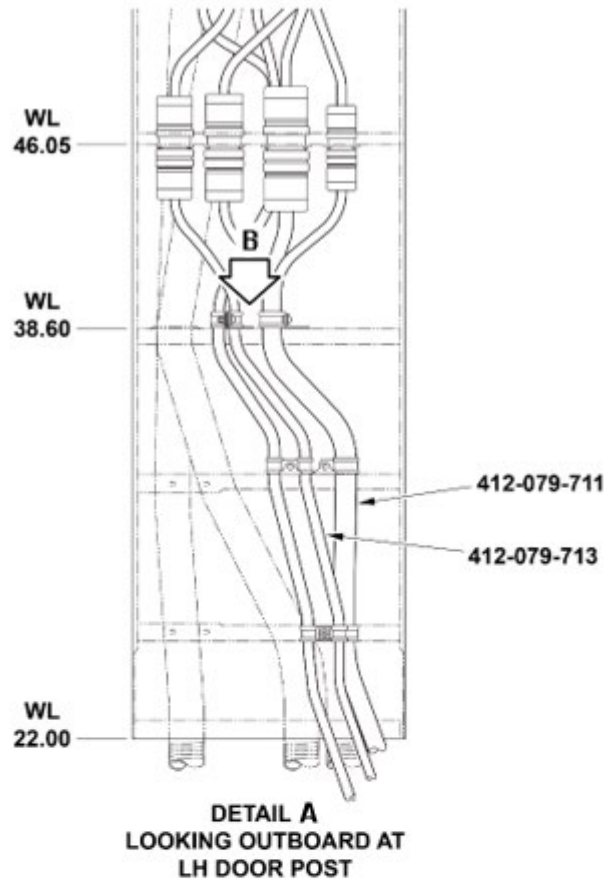
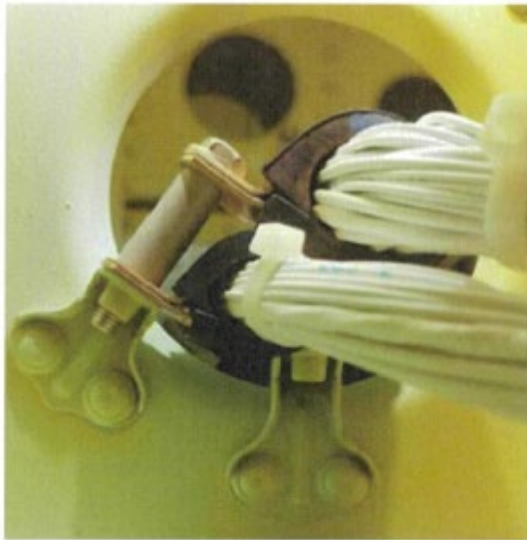
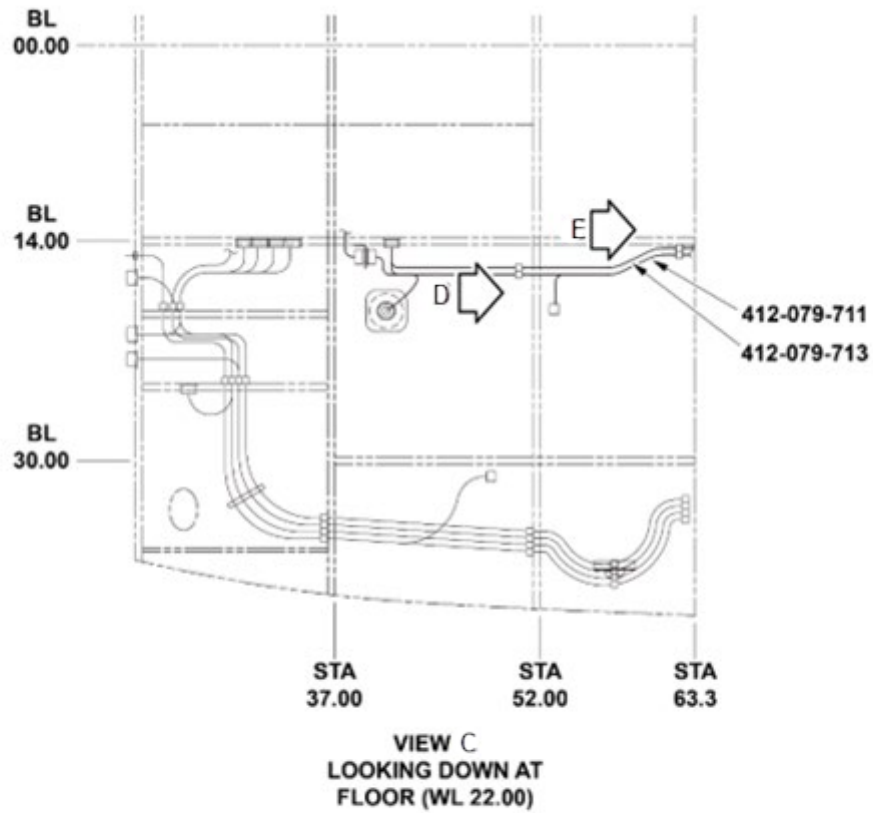


Figure 1 (Sheet 1 of 3) Location of possible low clearance or fouling condition.



VIEW B
LOOKING DOWN AT
WL 38.60

Figure 1 (sheet 2 of 3) Location of possible low clearance or fouling condition at the left door post.

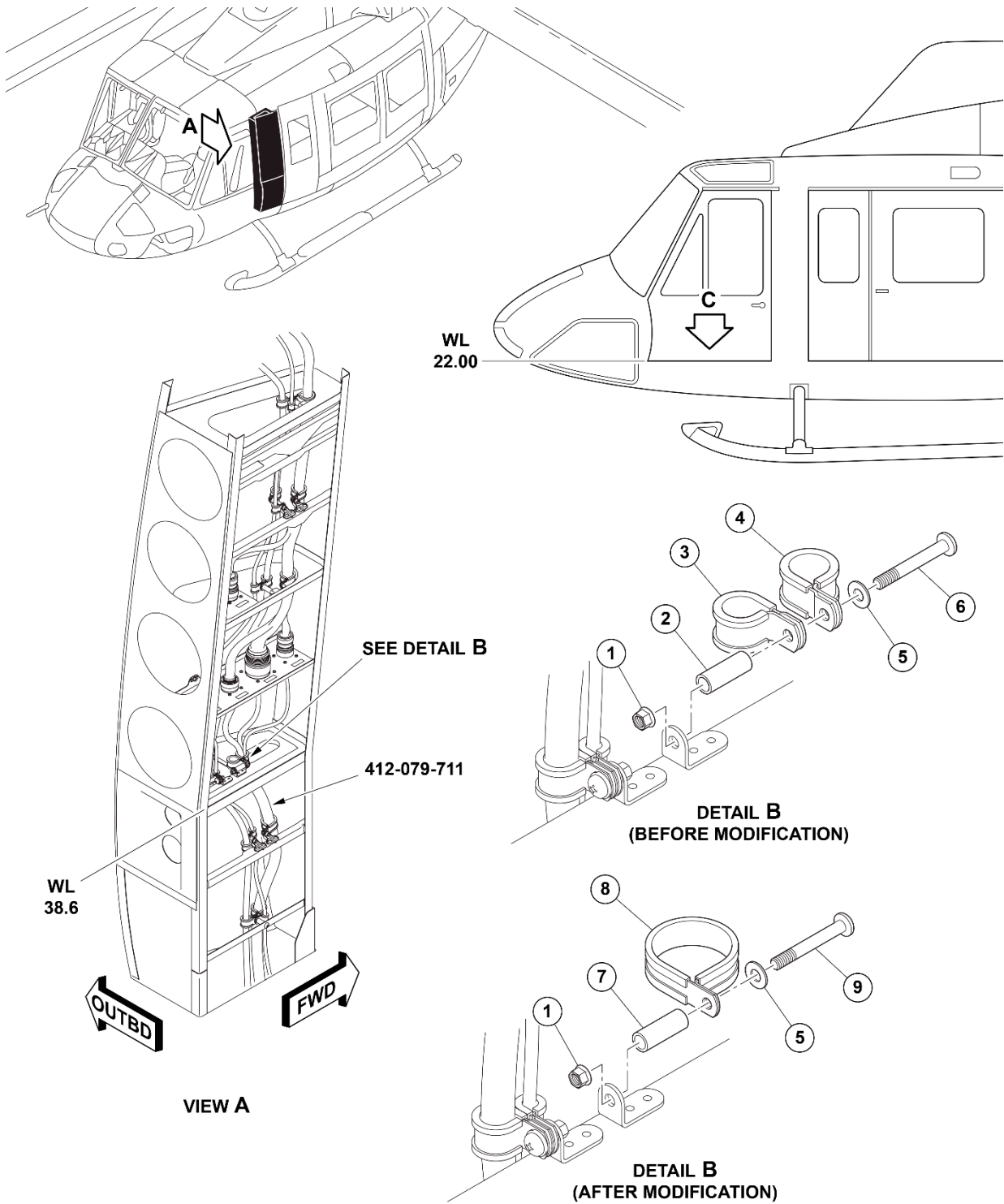


VIEW D
LOOKING AFT AT
STA 52.00



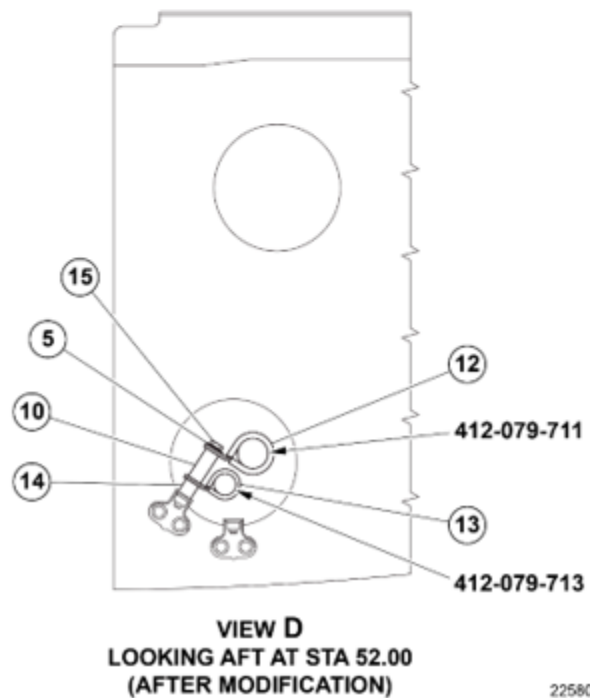
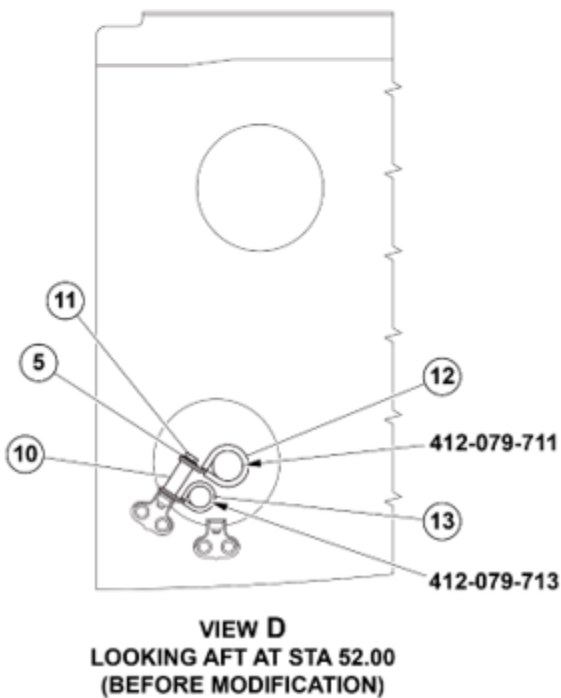
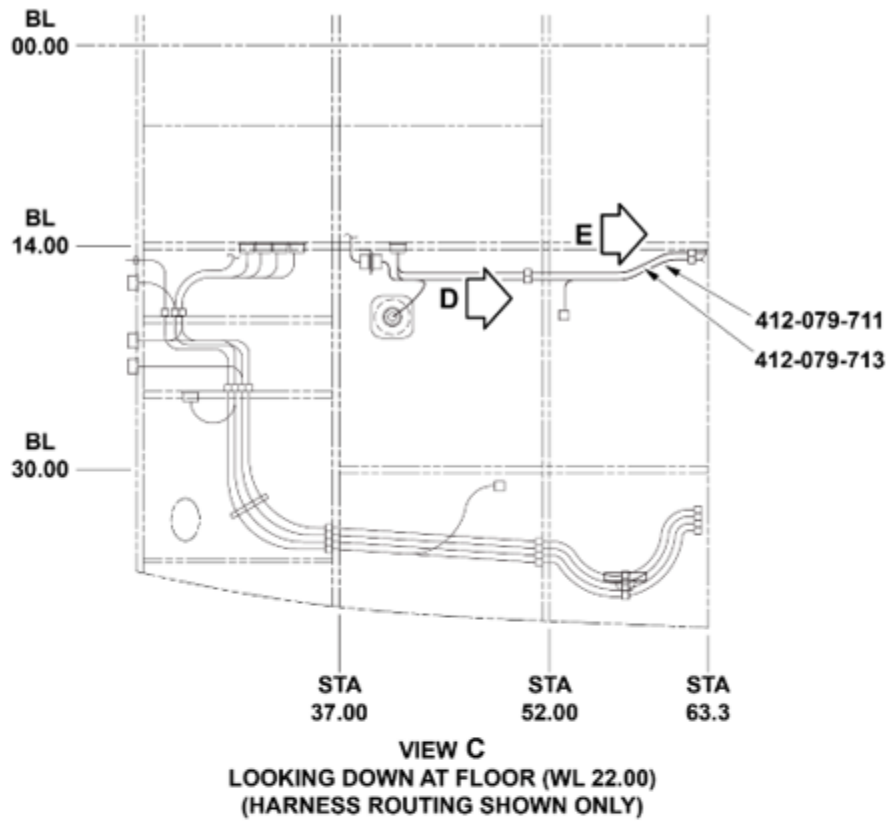
VIEW E
LOOKING AFT AT
STA 63.3

Figure 1 (sheet 3 of 3) Location of possible low clearance or fouling condition at STA 52.00 and STA 63.3



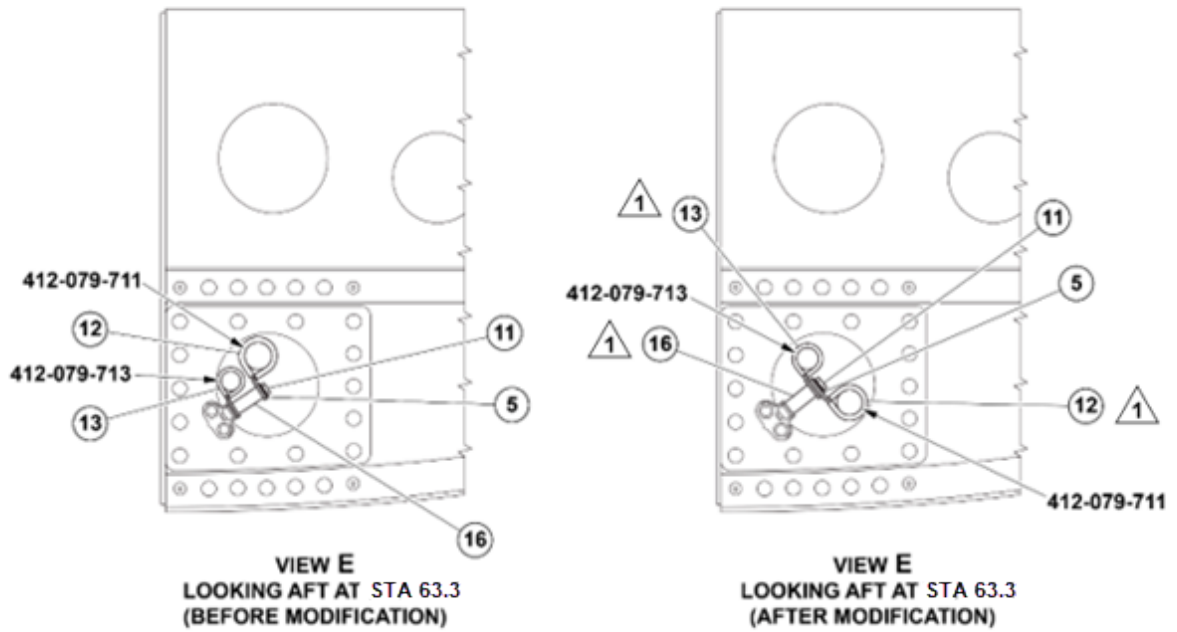
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Figure 2 (Sheet 1 of 3) Location of possible low clearance or fouling condition at the left door post.



22580_003b

Figure 2 (Sheet 2 of 3) Location of possible low clearance or fouling condition at STA 52.00.



- 1. Nut (NAS9926-3L)
- 2. Spacer
- 3. Clamp
- 4. Clamp
- 5. Washer (NAS1149D0332J)
- 6. Screw
- 7. Spacer (NAS43DD3-32N)
- 8. Clamp (AS21919WDG16Y)
- 9. Screw (NAS1801-3-16)
- 10. Spacer (NAS43DD3-48N)
- 11. Screw (NAS1801-3-20)
- 12. Clamp (AS21919WDG11Y)
- 13. Clamp (AS21919WDG07Y)
- 14. Spacer (NAS43DD3-24N)
- 15. Screw (NAS1801-3-26)
- 16. Spacer (NAS43DD3-48N)

NOTE

△ 1 Position of clamps (12 and 13) can be reversed and spacer (16) can be replaced by NAS43DD3-40N to ensure maximum clearance with the surrounding structure.

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Figure 2 (Sheet 3 of 3) Location of possible low clearance or fouling condition at STA 63.3.