# Commercial Airplanes



# 777 Service Bulletin

# **ALERT**

Number: 777-53A0075
Original Issue: January 14, 2015
Revision 1: December 14, 2015

ATA System: 5380

SUBJECT: FUSELAGE - Section 48 - Station 2370 Pivot Bulkhead Forward Outer Chord -

Inspection and Repair

Export of this technology is controlled under the United States Export Administration Regulations (EAR) (15 CFR 300-774). An export license may be required before it is used for development, production or use by foreign persons from specific countries. The controller of this data has the individual responsibility to abide by all export laws.

ECCN: 9E991

# **BOEING PROPRIETARY, CONFIDENTIAL AND/OR TRADE SECRET**

Copyright © 2015 Boeing. Unpublished Work. All Rights Reserved.

Treatment of this document and its content is governed by contract with Boeing. Rights to use this document are licensed on a per aircraft basis and such rights may not be transferable. For more information, contact The Boeing Company.

Boeing, the Boeing signature, the Boeing symbol, 707, 717, 727, 737, 747, 757, 767, 777, 787, Dreamliner, BBJ, DC-8, DC-9, DC-10, KC-10, KC-46, KDC-10, MD-10, MD-11, MD-80, MD-88, MD-90, P-8, Poseidon and Boeing liveries are all trademarks owned by The Boeing Company; and no trademark license is granted in connection with this document unless provided in writing by Boeing.

**BLANK PAGE** 

# **BOEING SERVICE BULLETIN 777-53A0075**

| ALE  | RT                | ALER   | T |
|------|-------------------|--|---|
|      |                   | Table of Contents  |   |
| Revi | sion <sup>-</sup> | Transmittal Sheet  | 5 |
|      |                   | /  |   |
| 1.   | •                 | NNING INFORMATION  |   |
| •    | Α.                | Effectivity  |   |
|      | ,                 | 1. Airplanes   |   |
|      |                   | 2. Spares Affected   |   |
|      | В.                | Concurrent Requirements  |   |
|      | Б.<br>С.          | Reason   |   |
|      | _                 |  |   |
|      | D.                | Description  |   |
|      | E.                | Compliance   |   |
|      | F.                | Approval   |   |
|      | G.                | Manpower   |   |
|      | Н.                | Weight and Balance Changes   |   |
|      | I.                | Electrical Load Data   | 6 |
|      | J.                | References   | 6 |
|      |                   | 1. Existing Data:  | 6 |
|      |                   | 2. Data Supplied with this Service Bulletin:   | 6 |
|      |                   | 3. Installation Drawings Used in the Preparation of this Service Bulletin:           | 7 |
|      | K.                | Publications Affected  | 7 |
|      | L.                | Interchangeability and Intermixability of Parts                                      | 7 |
|      | M.                | Software Accomplishment Summary  |   |
| 2.   | MAT               | TERIAL INFORMATION   |   |
|      | Α.                | Material - Price and Availability  |   |
|      | В.                | Industry Support Information   |   |
|      | C.                | Parts Necessary for Each Airplane  |   |
|      | О.                | 1. Kits/Parts  |   |
|      |                   |  |   |
|      |                   |  |   |
|      |                   |  |   |
|      |                   | 4. Parts Removed and Not Replaced  |   |
|      | D.                | Parts Necessary to Change Spares   |   |
|      | E.                | Special Tooling - Price and Availability   |   |
|      | F.                | Special Tooling Necessary to do this Service Bulletin                                |   |
| 3.   | ACC               | COMPLISHMENT INSTRUCTIONS  |   |
|      | A.                | GENERAL INFORMATION  | 7 |
|      | B.                | WORK INSTRUCTIONS  |   |
| FIGL | JRE 1             | 1: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL   | 3 |
| FIGU | JRE 2             | 2: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL  | 7 |
| FIGL | JRE 3             | 3: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION |   |
| FIGL | JRE 4             | 4: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFE            | С |
| EIQ! | וחר י             | INSPECTION   |   |
|      | JRE 5             |  |   |
|      | JRE 6             |  |   |
| FIGL | JRE 7             | 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL [Group 1]  |   |

# **BOEING SERVICE BULLETIN 777-53A0075**

| ALERT       | ALERT  |
|-------------|--|
| FIGURE 8:   | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL [Group 1]  |
| FIGURE 9:   | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL [Group 2]   |
| FIGURE 10:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL [Group 2]  |
| FIGURE 11:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION   |
| FIGURE 12:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION  |
| FIGURE 13:  | LEFT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION [Group 1]   |
| FIGURE 14:  | RIGHT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION [Group 1]  |
| FIGURE 15:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR [Group 1] . 125   |
| FIGURE 16:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR [Group 1] . 147  |
| FIGURE 17:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR [Group 2] . 167   |
| FIGURE 18:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR [Group 2] . 187  |
| FIGURE 19:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION  |
| FIGURE 20:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION   |
| FIGURE 21:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION   |
| FIGURE 22:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION  |
| FIGURE 23:  | LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION  |
| FIGURE 24:  | RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION   |
| FIGURE 25:  | LEFT SIDE - STA 2370 SKIN PANEL REMOVAL  |
| FIGURE 26:  | RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL   |
| APPENDIX A: | LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 1: DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD 243         |
| APPENDIX B: | LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 2: POST-REPAIR DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD |
| APPENDIX C: | BOEING PART DEMAND INTENT  |





# 777 Service Bulletin

# ALERT

Number: 777-53A0075
Original Issue: January 14, 2015
Revision Transmittal Sheet

Revision 1: December 14, 2015

ATA System: 5380

SUBJECT: FUSELAGE - Section 48 - Station 2370 Pivot Bulkhead Forward Outer Chord -

Inspection and Repair

This revision includes all pages of the service bulletin.

#### COMPLIANCE INFORMATION RELATED TO THIS REVISION

Federal Aviation Administration (FAA) Notice of Proposed Rule Making NPRM 2015-NM-026-AD, is related to this service bulletin.

Effects of this Revision on airplanes on which Original Issue was previously done:

None.

#### **REASON FOR REVISION**

This revision is sent to make changes identified during the validation of the Original Issue of this service bulletin and to clarify or correct issues identified by operators since the Original Issue.

As a part of a service bulletin validation program, this inspection was completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue before the release of Revision 1 of this service bulletin. The inspection completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue is equivalent to the release of Revision 1 of this service bulletin. Airplane WA174 has the configuration of a Group 2 airplane.

These sections were changed:

- 1. In Summary, Background, revised the description of the unsafe condition, revised the number of operator reports, added a service history table, added a description of the completed service bulletin validation.
- 2. In Summary, Action, revised the paragraph.
- 3. In Summary, Compliance, added FAA Notice of Proposed Rule Making (NPRM) reference.
- 4. In Summary, Manpower, added a reference to Paragraph 1.G., Manpower.
- 5. In Summary, Material Information, added "Operator Supplied Parts/Materials".
- 6. In Summary, revised the summary illustration.

7. In Paragraph 1.C., Reason, revised the description of the unsafe condition, revised the number of operator reports, added a service history table, added paragraphs to give a description of the completed service bulletin validation and to give the reason for this revision.

- 8. In Paragraph 1.D., Description, revised the paragraph, added paragraph to give the effects of this revision on airplanes on which Original Issue was previously done.
- 9. In Paragraph 1.E., Compliance, added NPRM reference, revised the paragraph above Table 1, revised Table 1 and Table 2.
- 10. In Paragraph 1.G., Manpower, revised the tables.
- 11. In Paragraph 1.H., Weight and Balance Changes, revised the table to give weight and balance changes.
- 12. In Paragraph 1.J., References, revised the reference list.
- 13. In Paragraph 2.A., Material Price and Availability, revised top kit dates and quantities, added Reorder Lead Time (ROLT) and revised price information.
- 14. In Paragraph 2.C.1., Kits/Parts, revised the top kit parts lists.
- In Paragraph 2.C.2., Parts and Materials Supplied by the Operator, deleted the duplicate paragraph above the table.
- 16. In Paragraph 2.C.3., Parts Modified and Reidentified, added table for Group 1 airplanes, added paragraph for Group 2 airplanes.
- 17. In Paragraph 3.A., General Information, deleted notes that are not applicable, revised note 17. and note 18.
- 18. In Paragraph 3.B., Work Instructions, revised the work instructions.
- 19. In Figure 5 and Figure 6, revised the illustrations and the fastener code table.
- In Figure 7, Figure 8, Figure 9 and Figure 10, revised the illustrations and the step table.
- 21. In Figure 11, Figure 12, Figure 13 and Figure 14, revised the illustrations.
- 22. In Figure 15, Figure 16, Figure 17, Figure 18, Figure 21, Figure 22, Figure 23 and Figure 24, revised the illustrations, the step table and the fastener code table.
- 23. Added Figure 25 and Figure 26 to give instructions for skin panel removal after the small crack repair was installed.
- 24. In Appendix A, revised the table and the flag note, revised the logic diagram.
- 25. In Appendix B, revised the table and the flag note.
- 26. In Appendix C, revised Part Demand Intent.

Vertical lines are put on the left edge of each page, except in Paragraph 1.A., Effectivity and format changes, to show the location of all content changes.

# **BOEING SERVICE BULLETIN 777-53A0075**

ALERT

Pages with no vertical lines have no changes.

# **REVISION HISTORY**

| Original Issue: | January 14, 2015  |
|-----------------|-------------------|
| Revision 1:     | December 14, 2015 |

**BLANK PAGE** 





# 777 Service Bulletin

# **ALERT**

Number: 777-53A0075 Summary

Original Issue: January 14, 2015 Revision 1: December 14, 2015

ATA System: 5380

SUBJECT: FUSELAGE - Section 48 - Station 2370 Pivot Bulkhead Forward Outer Chord -

Inspection and Repair

THIS BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN PARAGRAPH 1.A., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

#### **CONCURRENT REQUIREMENTS**

None.

#### **BACKGROUND**

This service bulletin is sent to give instructions for inspections of the left and right side forward outer chords of the Body Station (STA) 2370 pivot bulkhead for cracks. Cracks in the STA 2370 pivot bulkhead forward outer chords that are not found and repaired can become large and result in a severed forward outer chord. Since the horizontal stabilizer is attached to the STA 2370 bulkhead at two pivot locations, this damage could cause the loss of horizontal stabilizer control, resulting in loss of controllability of the airplane.

Two operators have reported finding cracks in the outer flanges of the left and right side forward outer chords of the STA 2370 pivot bulkhead on a total of eleven airplanes. The cracks were fatigue cracks caused by a stress concentration which is generated at the transition radius of the forward outer flange of the chord prior to the chord splice at the upper longeron.

Accomplishment of the inspections in this service bulletin will help ensure that STA 2370 pivot bulkhead forward outer chord cracks are found and repaired before they can become large and result in damage that could result in the loss of horizontal stabilizer control.

Boeing Service Bulletin (SB) 777-53-0076 gives instructions for a modification that is terminating action to the repeat inspections given in this service bulletin.

The table below shows the crack findings and related service data that have been reported to Boeing.

| Service History |               |              |                |                       |  |
|-----------------|---------------|--------------|----------------|-----------------------|--|
| Model           | Flight Cycles | Flight Hours | Crack Location | Crack Length (Inches) |  |
| 777-200         | 31,384        | 39,142       | Left Side      | 1.4 and 3.3           |  |
|                 |               |              | Right Side     | 2.93                  |  |

| Service History   |  |  |   |  |
|-------------------|--|--|---|--|
| Flight Cycles     | Flight Hours   | Crack Location   | Crack Length (Inches)   |  |
| 31,504            | 39,797   | Left Side  | 2.3   |  |
|                   |  | Right Side   | 2.2   |  |
| 32,181            | 38,758   | Left Side  | 2.5   |  |
|                   |  | Right Side   | 2.3   |  |
| 29,383            | 37,182   | Left Side  | 2.5   |  |
|                   |  | Right Side   | 2.5   |  |
| 24,653 34,291     | Left Side  | 2.2  |   |  |
|                   |  | Right Side   | 2.2   |  |
| 35,011            | 40,074   | Left Side  | 2.25  |  |
|                   |  | Right Side   | 2.2   |  |
| 0 24,251 33,568   | 33,568   | Left Side  | 2.5   |  |
|                   |  | Right Side   | 2.03  |  |
| 200 30,462 38,455 |  | Left Side  | 2.35  |  |
|                   |  | Right Side   | 2.2   |  |
| 200 30,826 39,166 | Left Side  | 2.2  |   |  |
|                   |  | Right Side   | 2.4   |  |
| 00 33,809 40,5    |  | Left Side  | 2.5   |  |
|                   |  | Right Side   | 2.4   |  |
| 300 17,530 63,940 |  | Left Side  | 1.2   |  |
|                   |  | Right Side   | 1.65  |  |
|                   | Flight Cycles 31,504 32,181 29,383 24,653 35,011 24,251 30,462 30,826 33,809 | Flight Cycles         Flight Hours           31,504         39,797           32,181         38,758           29,383         37,182           24,653         34,291           35,011         40,074           24,251         33,568           30,462         38,455           30,826         39,166           33,809         40,588 | Flight Cycles         Flight Hours         Crack Location           31,504         39,797         Left Side           Right Side         Right Side           29,383         37,182         Left Side           Right Side         Right Side           24,653         34,291         Left Side           Right Side         Right Side           24,251         33,568         Left Side           Right Side         Right Side           30,462         38,455         Left Side           Right Side         Right Side           30,826         39,166         Left Side           Right Side         Right Side           33,809         40,588         Left Side           Right Side         Right Side           17,530         63,940         Left Side |  |

Boeing Fleet Team Digest (FTD) 777 FTD 53-13001 is related to this service bulletin.

Boeing Service Related Problem (SRP) 777-SRP-53-0455 is related to this service bulletin.

As a part of a service bulletin validation program, this inspection was completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue before the release of Revision 1 of this service bulletin. The inspection completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue is equivalent to the release of Revision 1 of this service bulletin. Airplane WA174 has the configuration of a Group 2 airplane.

This table is provided to operators for planning purposes only. Refer to the applicable sections for more information.

| Planning Data   | Affected | Reference   |
|-----------------|----------|---|
| Spares Affected | No       | Paragraph 1.A.2., Spares Affected                       |
| AD Related      | Yes      | Paragraph 1.E., Compliance and Paragraph 1.F., Approval |

| Planning Data  | Affected | Reference   |  |  |
|--|----------|---|--|--|
| Weight and Balance Change  | Yes (a)  | Paragraph 1.H., Weight and Balance Changes                            |  |  |
| Electrical Load Changed  | No       | Paragraph 1.I., Electrical Load Data                                  |  |  |
| Publications Affected  | Yes      | Paragraph 1.K., Publications Affected                                 |  |  |
| Airplane Flight Operations Affected (Flight Crew Operations Manual and/or FAA Approved Airplane Flight Manual) | No       | Paragraph 1.K., Publications Affected                                 |  |  |
| Kits/Parts Required  | Yes      | Paragraph 2.C.1., Kits/Parts  |  |  |
| Operator Supplied Parts/Material   | Yes      | Paragraph 2.C.2., Parts and Materials Supplied by the Operator        |  |  |
| Special Tooling Required   | No       | Paragraph 2.F., Special Tooling Necessary to do this Service Bulletin |  |  |
| (a) Only if the repair was done.   |          |   |  |  |

### **ACTION (PRR 62777-97S)**

Do a Detailed and HFEC inspection of the Station 2370 pivot bulkhead forward chord in accordance with PART 1, for any crack.

If any crack is found, and no crack found is greater than 0.160 inch, do one of the following options on the affected side of the airplane:

- 1. Do the terminating action in accordance with SB 777-53-0076.
- 2. Do the repair of the Station 2370 pivot bulkhead forward chord in accordance with PART 2 and the post-repair Detailed and HFEC inspection in accordance with PART 3.

If any crack found is greater than 0.160 inch, do the terminating action in accordance with SB 777-53-0076.

If no crack is found, repeat PART 1, or do the terminating action in accordance with SB 777-53-0076.

#### **EFFECTIVITY**

777-200/-300 Airplanes. Refer to Paragraph 1.A.1., Airplanes, for the list of affected airplanes.

#### **COMPLIANCE**

Federal Aviation Administration (FAA) Notice of Proposed Rule Making NPRM 2015-NM-026-AD, is related to this service bulletin.

Refer to Paragraph 1.E., Compliance.

#### **INDUSTRY SUPPORT INFORMATION**

Boeing warranty remedies are available for airplanes in warranty as of November 20, 2013. Please refer to Paragraph 2.B., Industry Support Information. The warranty remedies will expire eight years from the original issue date of this service bulletin.

ALERT

#### **MANPOWER**

| Airplanes   | Total Task Hours | Elapsed Hours |
|---|------------------|---------------|
| All Airplanes - Inspection  | 14.50            | 10.50         |
| Group 1 Airplanes - Small Crack Repair - One Side of the airplane | 44.85            | 24.05         |
| Group 2 Airplanes - Small Crack Repair - One Side of the airplane | 43.10            | 22.30         |
| All Airplanes - Post-Repair Inspection                            | 10.50            | 8.50          |

Refer to Paragraph 1.G., Manpower.

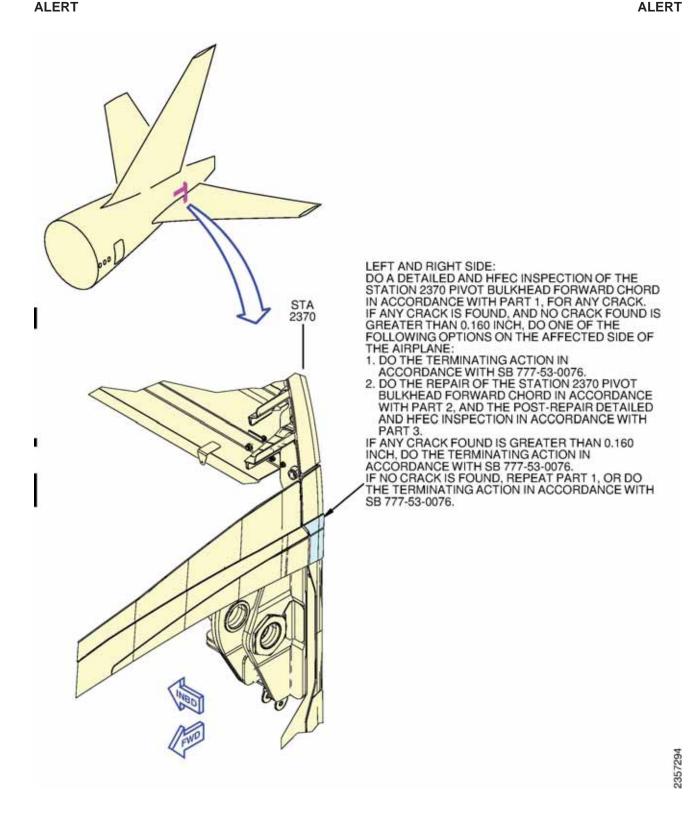
# **MATERIAL INFORMATION**

Boeing Supplied Kits/Parts.

Operator Supplied Parts/Materials.

Refer to Paragraph 2.A., Material - Price and Availability.

Operators are encouraged to complete the survey provided in APPENDIX C of this service bulletin to help Boeing predict the quantity and timing of the Boeing Supplied Kits/Parts.



**BLANK PAGE** 

# Commercial Airplanes



# 777 Service Bulletin

# **ALERT**

Number: 777-53A0075
Original Issue: January 14, 2015
Revision 1: December 14, 2015

ATA System: 5380

SUBJECT: FUSELAGE - Section 48 - Station 2370 Pivot Bulkhead Forward Outer Chord -

Inspection and Repair

THIS BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN PARAGRAPH 1.A., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

#### 1. PLANNING INFORMATION

#### A. Effectivity

# 1. Airplanes

This service bulletin is applicable to 777-200/-300 Airplanes, line numbers 1-244 in 2 Groups. The Variable Numbers and Group Information for the applicable airplanes is given below. An equivalent change is on subsequent production airplanes. Refer to PRR 62777-97S for data about this change.

Refer to Service Bulletin Index D624W001 Part 3 for Airplane Variable Number, Line Number, and Serial Number data.

| GROUP | CONFIGURATION | DESCRIPTION                                |
|-------|---------------|--|
| 1     | -             | 777 Airplanes, line numbers 1 through 40   |
| 2     | -             | 777 Airplanes, line numbers 41 through 244 |

Airplane Models:

777-200, 777-300

| Variable Number | Group |
|-----------------|-------|
| WA001 - WA017   | 1     |
| WA076 - WA080   | 1     |
| WA086 - WA087   | 1     |
| WA088 - WA093   | 2     |

| Variable Number | Group |
|-----------------|-------|
| WA101 - WA104   | 1     |
| WA116 - WA117   | 1     |
| WA118 - WA119   | 2     |
| WA131 - WA135   | 1     |
| WA136 - WA137   | 2     |
| WA171 - WA173   | 1     |
| WA174 - WA175   | 2     |
| WA196 - WA197   | 1     |
| WA198           | 2     |
| WA206 - WA212   | 2     |
| WA221 - WA223   | 2     |
| WA231 - WA232   | 2     |
| WA241 - WA245   | 2     |
| WB001 - WB020   | 2     |
| WB031           | 2     |
| WB051 - WB072   | 2     |
| WB101 - WB106   | 2     |
| WB121 - WB125   | 2     |
| WB131 - WB133   | 2     |
| WB151 - WB153   | 2     |
| WB161 - WB171   | 2     |
| WB181 - WB188   | 2     |
| WB231 - WB235   | 2     |
| WB271 - WB272   | 2     |
| WB276 - WB286   | 2     |
| WB291 - WB297   | 2     |
| WB306 - WB307   | 2     |
| WB311 - WB318   | 2     |
| WB336 - WB337   | 2     |
| WB366           | 2     |
| WB371 - WB383   | 2     |
| WB406           | 2     |
| WB411 - WB413   | 2     |
| L               | i.    |

| Variable Number | Group |
|-----------------|-------|
| WB416 - WB426   | 2     |
| WB446 - WB448   | 2     |
| WB501 - WB506   | 2     |
| WB531 - WB535   | 2     |
| WB551 - WB553   | 2     |
| WB591 - WB595   | 2     |
| WB601 - WB602   | 2     |
| WB611 - WB615   | 2     |

#### 2. Spares Affected

None.

#### **B.** Concurrent Requirements

None.

#### C. Reason

This service bulletin is sent to give instructions for inspections of the left and right side forward outer chords of the Body Station (STA) 2370 pivot bulkhead for cracks. Cracks in the STA 2370 pivot bulkhead forward outer chords that are not found and repaired can become large and result in a severed forward outer chord. Since the horizontal stabilizer is attached to the STA 2370 bulkhead at two pivot locations, this damage could cause the loss of horizontal stabilizer control, resulting in loss of controllability of the airplane.

Two operators have reported finding cracks in the outer flanges of the left and right side forward outer chords of the STA 2370 pivot bulkhead on a total of eleven airplanes. The cracks were fatigue cracks caused by a stress concentration which is generated at the transition radius of the forward outer flange of the chord prior to the chord splice at the upper longeron.

Accomplishment of the inspections in this service bulletin will help ensure that STA 2370 pivot bulkhead forward outer chord cracks are found and repaired before they can become large and result in damage that could result in the loss of horizontal stabilizer control.

Boeing Service Bulletin (SB) 777-53-0076 gives instructions for a modification that is terminating action to the repeat inspections given in this service bulletin.

The table below shows the crack findings and related service data that have been reported to Boeing.

| Service History |               |              |                |                       |
|-----------------|---------------|--------------|----------------|-----------------------|
| Model           | Flight Cycles | Flight Hours | Crack Location | Crack Length (Inches) |
| 777-200         | 31,384        | 39,142       | Left Side      | 1.4 and 3.3           |
|                 |               |              | Right Side     | 2.93                  |

| Service History |               |              |                |                       |
|-----------------|---------------|--------------|----------------|-----------------------|
| Model           | Flight Cycles | Flight Hours | Crack Location | Crack Length (Inches) |
| 777-200         | 31,504        | 39,797       | Left Side      | 2.3                   |
|                 |               |              | Right Side     | 2.2                   |
| 777-200         | 32,181        | 38,758       | Left Side      | 2.5                   |
|                 |               |              | Right Side     | 2.3                   |
| 777-200         | 29,383        | 37,182       | Left Side      | 2.5                   |
|                 |               |              | Right Side     | 2.5                   |
| 777-300         | 24,653        | 34,291       | Left Side      | 2.2                   |
|                 |               |              | Right Side     | 2.2                   |
| 777-200         | 35,011        | 40,074       | Left Side      | 2.25                  |
|                 |               |              | Right Side     | 2.2                   |
| 777-300         | 24,251        | 33,568       | Left Side      | 2.5                   |
|                 |               |              | Right Side     | 2.03                  |
| 777-200         | 30,462        | 38,455       | Left Side      | 2.35                  |
|                 |               |              | Right Side     | 2.2                   |
| 777-200         | 30,826        | 39,166       | Left Side      | 2.2                   |
|                 |               |              | Right Side     | 2.4                   |
| 777-200         | 33,809        | 40,588       | Left Side      | 2.5                   |
|                 |               |              | Right Side     | 2.4                   |
| 777-300         | 17,530        | 63,940       | Left Side      | 1.2                   |
|                 |               |              | Right Side     | 1.65                  |

Boeing Fleet Team Digest (FTD) 777 FTD 53-13001 is related to this service bulletin.

Boeing Service Related Problem (SRP) 777-SRP-53-0455 is related to this service bulletin.

As a part of a service bulletin validation program, this inspection was completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue before the release of Revision 1 of this service bulletin. The inspection completed on airplane WA174 by Service Bulletin 777-53A0075 Original Issue is equivalent to the release of Revision 1 of this service bulletin. Airplane WA174 has the configuration of a Group 2 airplane.

Revision 1 is sent to make changes identified during the validation of the Original Issue of this service bulletin and to clarify or correct issues identified by operators since the Original Issue.

#### D. Description

Do a Detailed and HFEC inspection of the Station 2370 pivot bulkhead forward chord in accordance with PART 1, for any crack.

If any crack is found, and no crack found is greater than 0.160 inch, do one of the following options on the affected side of the airplane:

- 1. Do the terminating action in accordance with SB 777-53-0076.
- 2. Do the repair of the Station 2370 pivot bulkhead forward chord in accordance with PART 2 and the post-repair Detailed and HFEC inspection in accordance with PART 3.

If any crack found is greater than 0.160 inch, do the terminating action in accordance with SB 777-53-0076.

If no crack is found, repeat PART 1, or do the terminating action in accordance with SB 777-53-0076.

Revision 1 - Effects of this Revision on airplanes on which Original Issue was previously done:

None.

The work in this service bulletin is done in the maintenance zone(s) given below.

#### Group 1:

| Affected Maintenance Zones |          |
|----------------------------|----------|
| Model                      | Zone     |
| 777-200                    | 313, 314 |

#### Group 2:

| Affected Maintenance Zones |          |  |
|----------------------------|----------|--|
| Model                      | Zone     |  |
| 777-200, 777-300           | 313, 314 |  |

### E. Compliance

Federal Aviation Administration (FAA) Notice of Proposed Rule Making NPRM 2015-NM-026-AD, is related to this service bulletin.

Do the required actions in accordance with Paragraph 3. Accomplishment Instructions.

When more than one OPTION is given for a CONDITION, do only one of the OPTION numbers. When more than one ACTION is given for a CONDITION number or an OPTION number, do all of the ACTION numbers for that CONDITION number or OPTION number.

Logic diagrams showing compliance tasks and compliance times are included as aids in APPENDIX A and APPENDIX B.

The conditions and associated actions given in the compliance tables below can be different on the left and right sides of the airplane. The actions done must obey the compliance times shown in the compliance tables for each side of the airplane. Because the conditions found may not be the same on both sides of the airplane, the required actions may be different between the left and right side of the airplane and can be done independently.

Table 1: Detailed and HFEC Inspection of the Station 2370 Pivot Bulkhead Forward Chord:

| Condition  | Action  | Compliance Tir<br>Occurs Later)      | ne (Whichever  | Repeat Interval (Not to Exceed) |
|--|---|--------------------------------------|--|---------------------------------|
| All Airplanes  | Do PART 1: STATION<br>2370 PIVOT BULKHEAD<br>FORWARD CHORD -<br>DET AND HFEC INSPEC-<br>TION for any crack.                     | Before 16,000<br>total flight cycles | Within 4,000<br>flight cycles or<br>1,125 days,<br>whichever oc-<br>curs first, after<br>the Original Is-<br>sue date of this<br>Service Bulletin. | -                               |
| CONDITION 1: NO FOR-<br>WARD CHORD CRACK IS<br>FOUND   | OPTION 1:<br>Repeat PART 1: STA-<br>TION 2370 PIVOT<br>BULKHEAD FORWARD<br>CHORD - DET AND<br>HFEC INSPECTION for<br>any crack. | -                                    |  | 12,000 flight cycles<br>(a)     |
|  | OPTION 2:<br>Do the terminating modifi-<br>cation in accordance with<br>Boeing Service Bulletin<br>777-53-0076. (a)             | Before further flig                  | ght  | (a)                             |
| CONDITION 2: ANY FOR-<br>WARD CHORD CRACK IS<br>FOUND, AND NO CRACK<br>FOUND IS GREATER<br>THAN 0.160 INCH | OPTION 2:<br>Do the terminating modifi-<br>cation in accordance with<br>Boeing Service Bulletin<br>777-53-0076. (a)             | Before further flig                  | ght  | -                               |
|  | OPTION 3 (ACTION 1):<br>Do PART 2: STATION<br>2370 PIVOT BULKHEAD<br>FORWARD CHORD -<br>SMALL CRACK REPAIR.                     | Before further flig                  | ght  | -                               |
|  | OPTION 3 (ACTION 2):<br>Do PART 3: STATION<br>2370 PIVOT BULKHEAD<br>FORWARD CHORD -<br>POST-REPAIR DET AND<br>HFEC INSPECTION. | Refer to Table 2                     |  | -                               |

# **ALERT**

Table 1: Detailed and HFEC Inspection of the Station 2370 Pivot Bulkhead Forward Chord:

| Condition   | Action   | Compliance Time (Whichever Occurs Later) | Repeat Interval (Not to Exceed) |
|---|--|--|---------------------------------|
| CONDITION 3: ANY FOR-<br>WARD CHORD CRACK<br>FOUND IS GREATER<br>THAN 0.160 INCH.                 | Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076. (a)  | Before further flight                    | -                               |
| CONDITION 6: NO FOR-<br>WARD CHORD UPPER<br>LOCATION OR ADJA-<br>CENT STRUCTURE<br>CRACK IS FOUND | Continue to do the small<br>crack repair in accor-<br>dance with PART 2:<br>STATION 2370 PIVOT<br>BULKHEAD FORWARD<br>CHORD - SMALL<br>CRACK REPAIR.         | Before further flight                    | -                               |
| CONDITION 7: ANY FOR-<br>WARD CHORD UPPER<br>LOCATION OR ADJA-<br>CENT STRUCTURE                  | ACTION 1: Contact The Boeing Company for repair instructions and do the repair.  | Before further flight                    | -                               |
| CRACK IS FOUND  | ACTION 2: Continue to<br>do the small crack repair<br>in accordance with PART<br>2: STATION 2370 PIVOT<br>BULKHEAD FORWARD<br>CHORD - SMALL<br>CRACK REPAIR. | Before further flight                    | -                               |

<sup>(</sup>a) Modification in accordance with Boeing Service Bulletin 777-53-0076 is terminating action to the repeat inspections in this service bulletin.

<u>Table 2: Post-Repair Detailed and HFEC Inspection of the STA 2370 Pivot Bulkhead Forward Chord:</u>

| Condition   | Action   | Compliance Time       | Repeat Interval (Not to Exceed) |
|---|--|-----------------------|---------------------------------|
| All airplanes previously repaired in accordance with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR | Do PART 3: STATION<br>2370 PIVOT BULKHEAD<br>FORWARD CHORD -<br>POST-REPAIR DET AND<br>HFEC INSPECTION for<br>any crack. | tion of the repair in | -                               |

Table 2: Post-Repair Detailed and HFEC Inspection of the STA 2370 Pivot Bulkhead Forward Chord:

| Condition   | Action  | Compliance Time       | Repeat Interval (Not to Exceed) |  |
|---|---|-----------------------|---------------------------------|--|
| CONDITION 4: NO FOR-<br>WARD CHORD CRACK IS<br>FOUND DURING POST-<br>REPAIR INSPECTION  | OPTION 4: Repeat PART<br>3: STATION 2370 PIVOT<br>BULKHEAD FORWARD<br>CHORD -POST-REPAIR<br>DET AND HFEC INSPEC-<br>TION for any crack. | -                     | 12,000 flight cycles<br>(a)     |  |
|   | OPTION 2: Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076. (a)                                   | Before further flight | (a)                             |  |
| CONDITION 5: ANY FOR-<br>WARD CHORD CRACK IS<br>FOUND DURING POST-<br>REPAIR INSPECTION   | Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076. (a)   | Before further flight | -                               |  |
| (a) Modification in accordance with Boeing Service Bulletin 777-53-0076 is terminating action to the repeat inspections in this service bulletin. |   |                       |                                 |  |

NOTE: PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION is for both sides of the airplane.

PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR is for one side of the airplane. It is possible to have an airplane with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR done on both sides.

PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION is for one side of the airplane. It is possible to have an airplane with PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION done on both sides.

PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION is for one side of the airplane. It is possible to have an airplane with PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION done on both sides.

#### F. Approval

This service bulletin was examined by the Federal Aviation Administration (FAA). The changes specified in this service bulletin comply with the applicable regulations and are FAA approved, as well as European Aviation Safety Agency (EASA)/Joint Aviation Authorities (JAA) approved for all EASA/JAA approved airplanes listed in the service bulletin effectivity. This service bulletin and its approval were based on the airplane in its original Boeing delivery configuration or as modified by other approved Boeing changes.

If an airplane has a non-Boeing modification or repair that affects a component or system also affected by this service bulletin, the operator is responsible for obtaining appropriate regulatory agency approval before incorporating this service bulletin.

#### G. Manpower

The tables below show an estimate of the task hours necessary to do this inspection for each airplane. This estimate is for direct labor only, done by an experienced crew. Adjust the estimate with operator task hour data if necessary. The estimate does not include lost time. These are some examples of lost time:

- Time to adjust to the workplace
- Time to schedule the work
- Time to inspect the work
- Time to cure the materials
- Time to make the parts
- Time to find the tools.

<u>Table 1: Manpower Information for PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION</u>

| Task  | Number of Persons | Task Hours | Elapsed Hours |  |
|---|-------------------|------------|---------------|--|
| Open Access   |                   |            |               |  |
| FIGURE 1  | 1                 | 2.00       | 2.00          |  |
| FIGURE 2  | 1                 | 2.00       | 2,00          |  |
| PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION |                   |            |               |  |
| FIGURE 3  | 1                 | 1.25       | 1.25          |  |
| FIGURE 4  | 1                 | 1.25       | 1.25          |  |
| Close Access  |                   |            |               |  |
| FIGURE 5  | 2                 | 4.00       | 2.00          |  |
| FIGURE 6  | 2                 | 4.00       | 2.00          |  |
| TOTAL FOR EACH A  | AIRPLANE          | 14.50      | 10.50         |  |

# Group 1:

<u>Table 2: Manpower Information for PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR</u>

| Task                              | Number of Persons | Task Hours | Elapsed Hours |
|-----------------------------------|-------------------|------------|---------------|
| FIGURE 7 (or FIG-<br>URE 8) (a)   | 2                 | 8.00       | 4.00          |
| FIGURE 11 (or FIG-<br>URE 12) (a) | 1                 | 1.50       | 1.50          |
| FIGURE 13 (or FIG-<br>URE 14) (a) | 1                 | 1.75       | 1.75          |

Group 1:

<u>Table 2: Manpower Information for PART 2: STATION 2370 PIVOT BULKHEAD FORWARD</u>
CHORD - SMALL CRACK REPAIR

| Task                              | Number of Persons  | Task Hours | Elapsed Hours |
|-----------------------------------|--------------------|------------|---------------|
| FIGURE 15 (or FIG-<br>URE 16) (a) | 2                  | 29.60      | 14.80         |
| FIGURE 23 (or FIG-<br>URE 24) (a) | 2                  | 4.00       | 2.00          |
| TOTAL FOR ONE SIE                 | DE OF THE AIRPLANE | 44.85      | 24.05         |

- (a) Figure 7, Figure 11, Figure 13, Figure 15 and Figure 23 are for the left side of the airplane. Figure 8, Figure 12, Figure 14, Figure 16 and Figure 24 are for the right side of the airplane.
- (b) This table shows the manpower information for small crack repair in accordance with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD -SMALL CRACK REPAIR, on one side of the airplane. If both sides of the airplane are repaired in accordance with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR, multiply the total manpower information by two, to obtain the total manpower for both sides of the airplane.

Group 2: 
<u>Table 3: Manpower Information for PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR</u>

| Task                              | Number of Persons  | Task Hours | Elapsed Hours |
|-----------------------------------|--------------------|------------|---------------|
| FIGURE 9 (or FIG-<br>URE 10) (a)  | 2                  | 8.00       | 4.00          |
| FIGURE 11 (or FIG-<br>URE 12) (a) | 1                  | 1.50       | 1.50          |
| FIGURE 17 (or FIG-<br>URE 18) (a) | 2                  | 29.60      | 14.80         |
| FIGURE 23 (or FIG-<br>URE 24) (a) | 2                  | 4.00       | 2.00          |
| TOTAL FOR ONE SIE (b)             | DE OF THE AIRPLANE | 43.10      | 22.30         |

(a) Figure 9, Figure 11, Figure 17 and Figure 23 are for the left side of the airplane. Figure 10, Figure 12, Figure 18 and Figure 24 are for the right side of the airplane.

Group 2: Table 3: Manpower Information for PART 2: STATION 2370 PIVOT BULKHEAD FORWARD **CHORD - SMALL CRACK REPAIR** 

| Tas | k   | Number of Persons  | Task Hours  | Elapsed Hours   |
|-----|---|--|---|---|
| (b) | with PART 2: ST<br>SMALL CRACK<br>plane are repaire<br>BULKHEAD FOR | the manpower informating the manpower informating the tendent of the manpower information and the tendent of the manpower information by two, to obtain the tendent of the manpower information by two, to obtain the tendent of the manpower information by two, to obtain the manpower information by two, to obtain the manpower information by two, to obtain the manpower information information and the manpower information an | JLKHEAD FORWA<br>of the airplane. If bo<br>PART 2: STATION :<br>LL CRACK REPAIR | th sides of the air-<br>2370 PIVOT<br>R, multiply the total |

Table 4: Manpower Information for PART 3: STATION 2370 PIVOT BULKHEAD FORWARD **CHORD - POST-REPAIR DET AND HFEC INSPECTION** 

| Task                    | Number of Persons | Task Hours | Elapsed Hours |  |  |  |  |  |  |  |
|-------------------------|-------------------|------------|---------------|--|--|--|--|--|--|--|
| Open Access             |                   |            |               |  |  |  |  |  |  |  |
| FIGURE 25               | 1                 | 2.00       | 2.00          |  |  |  |  |  |  |  |
| FIGURE 26               | 1                 | 2.00       | 2.00          |  |  |  |  |  |  |  |
| DET and HFEC Inspection |                   |            |               |  |  |  |  |  |  |  |
| FIGURE 19               | 1                 | 1.25       | 1.25          |  |  |  |  |  |  |  |
| FIGURE 20               | 1                 | 1.25       | 1.25          |  |  |  |  |  |  |  |
| Close Access            |                   |            |               |  |  |  |  |  |  |  |
| FIGURE 21               | 2                 | 2.00       | 2.00          |  |  |  |  |  |  |  |
| FIGURE 22               | 2                 | 2,00       | 2.00          |  |  |  |  |  |  |  |
| TOTAL FOR EACH A        | AIRPLANE          | 10.50      | 8.50          |  |  |  |  |  |  |  |

NOTE: PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION is for both sides of the airplane.

PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR is for one side of the airplane. It is possible to have an airplane with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR done on both sides.

PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION is for one side of the airplane. It is possible to have an airplane with PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION done on both sides.

PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION is for one side of the airplane. It is possible to have an airplane with PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION done on both sides.

Original Issue: January 14, 2015 Revision 1: December 14, 2015

# H. Weight and Balance Changes

| Airplane                         | Change in Weight (Pounds) | Change in Moment (Pound-Inches) |
|----------------------------------|---------------------------|---------------------------------|
| 777-200 - Repaired on one side   | +0.5                      | +1,183.5                        |
| 777-200 - Repaired on both sides | +1.0                      | +2,367.0                        |
| 777-300 - Repaired on one side   | +0.5                      | +1,278.0                        |
| 777-300 - Repaired on both sides | +1.0                      | +2,556.0                        |

#### I. Electrical Load Data

Not changed.

#### J. References

- 1. Existing Data:
  - a. Engineering Change Memo PRR 62777-97S
  - Boeing Service Bulletin 777-53-0076
  - c. Boeing Service Letter 777-SL-51-013
  - d. Boeing Service Related Problem (SRP) 777-SRP-53-0455
  - e. Federal Aviation Administration (FAA) Notice of Proposed Rule Making (NPRM) 2015-NM-026-AD
  - f. Service Bulletin Index D624W001
  - g. Standard Overhaul Practices Manual (SOPM) 20-10-03, 20-41-02, 20-41-05, 20-43-03, 20-50-01, 20-50-10, 20-50-19
  - h. 777 Aircraft Maintenance Manual (AMM) 07-11-01, 55-17-01
  - i. 777 Fleet Team Digest (FTD) 53-13001
  - j. 777 Non-Destructive Testing (NDT) Manual Part 6, 51-00-01, Part 6, 51-00-02
  - k. 777-200 Structural Repair Manual (SRM) 51-10-02, 51-20-01
  - I. 777-300 Structural Repair Manual (SRM) 51-10-02, 51-20-01
- 2. Data Supplied with this Service Bulletin:

None.

3. Installation Drawings Used in the Preparation of this Service Bulletin:

| Drawing Number | Title  |
|----------------|--|
| 148W2010       | Bulkhead Instl - Upr, Pivot and Skin, STA 2370 |
| 148W2910       | Fairing Instl - Stabilizer Seal, UPR           |
| 148W9700       | Bulkhead Instl - Pivot, Integration, STA 2370  |

The table above lists applicable drawings used to prepare this service bulletin. The drawings are not necessary to make the specified changes, and are not supplied with this service bulletin. The drawings may not be applicable to all airplane configurations or operators.

#### K. Publications Affected

#### 1. Publications:

| Publication                  | Chapter-Section |
|------------------------------|-----------------|
| 777 Structural Repair Manual | 53-80           |

2. Damage Tolerance Based Structural Inspections:

Boeing has evaluated the repairs and/or changes in this service bulletin for effects on Fatigue Critical Structure (FCS) and for changes to Damage Tolerance Inspections (DTI) required in the Maintenance Program. This service bulletin affects FCS. DTI requirements for the structure affected are contained in Paragraph 1.E., Compliance of this service bulletin.

#### L. Interchangeability and Intermixability of Parts

Accomplishment of this service bulletin does not affect interchangeability or intermixability of parts.

### M. Software Accomplishment Summary

Not affected.

**BLANK PAGE** 

ALERT

#### 2. MATERIAL INFORMATION

#### A. Material - Price and Availability

Boeing can supply the kits shown in Paragraph 2.C., Parts Necessary for Each Airplane. Operators are encouraged to share schedule requirements with Boeing for incorporation of the service bulletin. The kits are subject to the terms and conditions of the Boeing standard purchase order acknowledgment. Prices are in United States Dollars. Terms: Net 30 days.

Reference this service bulletin and submit your purchase order by one of these methods:

- 1. Order on-line via ATA Spec 2000 or The Boeing PART Page
- 2. Fax to (206) 662-7145

# REFER TO THE BOEING PART PAGE ON MYBOEINGFLEET.COM OR CONTACT FIRST RESPONDER AT FR@BOEING.COM FOR THE LATEST REORDER LEAD TIME (ROLT) AND PRICE INFORMATION

| Kit Number   | Name  | Date                | QTY | ROLT as of the<br>Revision 1 date of<br>this Service Bul-<br>letin (Calendar<br>Days) | Unit Price as of<br>the Revision 1<br>date of this Ser-<br>vice Bulletin (US<br>Dollars) |  |  |  |  |  |  |
|--|---|---------------------|-----|---|--|--|--|--|--|--|--|
| 005W0016-10  | Top Kit - STA 2370<br>Pivot Bulkhead Forward  | January 12,<br>2016 | 11  | 266   | 241.00   |  |  |  |  |  |  |
|  | Outer Chord - Inspection Restoration  | February 9,<br>2016 | 10  |   |  |  |  |  |  |  |  |
|  |   | March 8, 2016       | 10  |   |  |  |  |  |  |  |  |
| 005W0016-11<br>(a)   | Top Kit - STA 2370<br>Pivot Bulkhead Forward<br>Outer Chord, Left -<br>Small Crack  | January 12,<br>2016 | 10  | 525   | 13,574.00  |  |  |  |  |  |  |
| 005W0016-12<br>(b)   | Top Kit - STA 2370<br>Pivot Bulkhead Forward<br>Outer Chord, Right -<br>Small Crack | January 12,<br>2016 | 10  | 790   | 13,574.00  |  |  |  |  |  |  |
| (a) This top kit is for the repair on the left side of the airplane. |   |                     |     |   |  |  |  |  |  |  |  |
| (b) This top kit is  | (b) This top kit is for the repair on the right side of the airplane.               |                     |     |   |  |  |  |  |  |  |  |

Operators are encouraged to complete the survey provided in APPENDIX C of this service bulletin to help Boeing predict the quantity and timing of the Boeing Supplied Kits/Parts.

# **B.** Industry Support Information

Boeing warranty remedies are available for 777 airplanes in warranty as of November 20, 2013. For task hour reimbursement for airplanes in warranty as of that date, send a warranty claim to Boeing Fleet Support Contracts - Warranty. The kits for airplanes in warranty as of that date will be supplied at no charge. Send a purchase order for the kits to Boeing Material Management. Please refer to this service bulletin number and reference the airplane variable numbers in your purchase order. The warranty remedies will expire eight years from the original issue date of this service bulletin.

#### C. Parts Necessary for Each Airplane

#### 1. Kits/Parts

To get the kits/parts shown below, refer to Paragraph 2.A., Material - Price and Availability.

**NOTE:** One top kit and the items shown in Paragraph 2.C.2., Parts and Materials Supplied by the Operator, are necessary for each airplane, except as noted in Paragraph 2.A., Material - Price and Availability.

#### **ALL**

| Kit 005W0016    |     |     |     |  |  |                |  |
|-----------------|-----|-----|-----|--|--|----------------|--|
| New Part Number |     | Qty |     | Name   | <b>Existing Part</b>                               | Notes          |  |
|                 | -10 | -11 | -12 |  | Number   |                |  |
| 005W0016-10     | -   |     |     | Top Kit - STA 2370<br>Pivot Bulkhead<br>Forward Outer<br>Chord - Inspection<br>Restoration   | -  | (a)            |  |
| 005W0016-11     |     | -   |     | Top Kit - STA 2370<br>Pivot Bulkhead<br>Forward Outer<br>Chord, Left - Small<br>Crack Repair |  | (b)            |  |
| 005W0016-12     |     |     | -   | Top Kit - STA 2370<br>Pivot Bulkhead<br>Forward Outer<br>Chord, Right- Small<br>Crack Repair |  | (c)            |  |
| 148W0015-12     |     | 1   | 1   | SHIM   | -  | -              |  |
| 148W0015-13     |     | 1   | 1   | SHIM   | -  | -              |  |
| 148W0015-14     |     | 2   | 2   | SHIM   | -  | -              |  |
| 148W2204-5      | -   | 1   | -   | SPLICE ANGLE   | 148W2204-1<br>(Group 1)<br>148W2204-3<br>(Group 2) | (d) (e)<br>(f) |  |

| New Part Number | Qty |     |     | Name                     | <b>Existing Part</b>                               | Notes          |
|-----------------|-----|-----|-----|--------------------------|--|----------------|
|                 | -10 | -11 | -12 |                          | Number   |                |
| 148W2204-6      | -   |     | 1   | SPLICE ANGLE             | 148W2204-2<br>(Group 1)<br>148W2204-4<br>(Group 2) | (d) (e)<br>(f) |
| 148W7143-5      |     | 1   | 1   | SHIM LAMINATED           | -  | -              |
| 148W7143-6      |     | 1   | 1   | SHIM LAMINATED           | -  | -              |
| 148W7143-7      |     | 1   | 1   | SHIM LAMINATED           | -  | -              |
| 148W7143-11     |     | 1   | 1   | SHIM LAMINATED           | -  | -              |
| 148W7143-13     |     | 1   | 1   | SHIM LAMINATED           | -  | -              |
| 148W9710-15     |     | 1   | 1   | RADIUS FILLER            | -  | -              |
| BACB30MY10K10X  |     | 6   | 6   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY10K13X  |     | 6   | 6   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY10K7X   |     | 8   | 8   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K11X   |     | 14  | 14  | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K4X    |     | 11  | 16  | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K5X    |     | 11  | 8   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K6X    |     | 18  | 18  | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K7X    |     | 8   | 8   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K8X    |     | 5   | 5   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30MY8K9X    |     | 1   | 1   | BOLT, PROTRUD-<br>ING HD | -  | (g)            |
| BACB30NW6K5X    | 4   | 2   | 2   | BOLT, 100 DEG<br>HEX DR  | -  | (g)            |
| BACB30NW8K10X   |     | 28  | 28  | BOLT, 100 DEG<br>HEX DR  | -  | (g)            |

| New Part Number | Qty |     |     | Name                     | Existing Part | Notes |
|-----------------|-----|-----|-----|--------------------------|---------------|-------|
|                 | -10 | -11 | -12 |                          | Number        |       |
| BACB30NW8K12X   |     | 4   | 4   | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NW8K5X    | 14  | 3   | 3   | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NW8K6X    | 2   | 1   | 1   | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NW8K7X    |     | 3   | 3   | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NW8K8X    |     | 5   | 5   | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NW8K9X    | 8   | 31  | 31  | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NX10K11X  |     | 3   | 3   | BOLT, PROTRUD-<br>ING HD | -             | (g)   |
| BACB30NX10K14X  |     | 13  | 13  | BOLT, PROTRUD-<br>ING HD | -             | (g)   |
| BACB30NX6K5X    |     | 4   | 4   | BOLT, PROTRUD-<br>ING HD | -             | (g)   |
| BACB30NZ10K15X  |     | 12  | 12  | BOLT, 100 DEG<br>HEX D   | -             | (g)   |
| BACB30NZ10K16X  |     | 16  | 16  | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30NZ8K12X   |     | 10  | 10  | BOLT, 100 DEG<br>HEX DR  | -             | (g)   |
| BACB30YN10K15X  |     | 12  | 12  | BOLT, HEX DRIVE          | -             | (g)   |
| BACB30YN10K16X  |     | 16  | 16  | BOLT, HEX DRIVE          | -             | (g)   |
| BACB30YN8K12X   |     | 8   | 8   | BOLT, HEX DRIVE          | -             | (g)   |
| BACC30BH10      |     | 44  | 44  | COLLAR                   | -             | -     |
| BACC30BH8       |     | 10  | 10  | COLLAR                   | -             | -     |
| BACC30M10       |     | 20  | 20  | COLLAR                   | -             | -     |
| BACC30M6        | 4   | 6   | 6   | COLLAR                   | -             | -     |
| BACC30M8        | 24  | 132 | 132 | COLLAR                   | -             | -     |
| BACN10HR12CD    |     | 2   | 2   | SELF-LOCKING<br>NUT      | -             | -     |

| Kit 005W0016    |     |     |     |                      |                      |       |  |
|-----------------|-----|-----|-----|----------------------|----------------------|-------|--|
| New Part Number | Qty |     |     | Name                 | <b>Existing Part</b> | Notes |  |
|                 | -10 | -11 | -12 |                      | Number               |       |  |
| BACN10HR162CD   |     | 2   | 2   | SELF-LOCKING<br>NUT  | -                    | -     |  |
| BACN10HR6CD     |     | 5   | 5   | SELF-LOCKING<br>NUT  | -                    | -     |  |
| BACN10HR8CD     |     | 3   | 3   | NUT                  | -                    | -     |  |
| BACN10YR4CD     |     | 16  | 16  | NUT                  | -                    | -     |  |
| BACN10YR5CD     |     | 28  | 28  | NUT                  | -                    | -     |  |
| BACR15CE5KE5    | 6   | 3   | 3   | RIVET, 100 DEG       | -                    | (g)   |  |
| BACR15CE5KE6    | 12  | 6   | 6   | RIVET, 100 DEG       | -                    | (g)   |  |
| BACR15CE5KE8    | 2   | 1   | 1   | RIVET, 100 DEG       | -                    | (g)   |  |
| BACR15FV81KE13  |     | 27  | 27  | RIVET                | -                    | (g)   |  |
| BACS40R007B064F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R007B077F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R008B041F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R008B062F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R016B037F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R017B037F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R019B056F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R021B049F | •   | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R023B053F |     | 1   | 1   | SHIM, LAMINAT-<br>ED | -                    | -     |  |
| BACS40R029B065F |     | 1   | 1   | SHIM,LAMINATED       | -                    | -     |  |
| BACS40R033B052F |     | 1   | 1   | SHIM-LAMINATED       | -                    | -     |  |
| BACW10BP12CD    |     | 2   | 2   | WASHER, PLAIN        | -                    | -     |  |
| BACW10BP12DP    |     | 2   | 2   | WASHER, PLAIN        | -                    | -     |  |
| BACW10BP16CD    |     | 2   | 2   | WASHER, PLAIN        | -                    | -     |  |

| Kit 005W0016   |          |         |         |                         |                      |       |  |  |
|--|----------|---------|---------|-------------------------|----------------------|-------|--|--|
| New Part Number  | Qty      |         |         | Name                    | <b>Existing Part</b> | Notes |  |  |
|  | -10      | -11     | -12     |                         | Number               |       |  |  |
| BACW10BP16DP   |          | 2       | 2       | WASHER, PLAIN           | -                    | -     |  |  |
| BACW10BP41DP   |          | 8       | 8       | WASHER, PLAIN           | -                    | -     |  |  |
| BACW10BP6CD  |          | 5       | 5       | WASHER, PLAIN           | -                    | -     |  |  |
| BACW10BP6DP  |          | 5       | 5       | WASHER                  | -                    | -     |  |  |
| BACW10BP8CD  |          | 3       | 3       | WASHER                  | -                    | -     |  |  |
| BACW10BP8DP  |          | 3       | 3       | WASHER                  | -                    | -     |  |  |
| NAS1149D0432J  |          | 8       | 8       | WASHER                  | -                    | -     |  |  |
| NAS1149D0463J  |          | 8       | 8       | WASHER                  | -                    | -     |  |  |
| NAS1149D0532J  |          | 28      | 28      | WASHER                  | -                    | -     |  |  |
| NAS1149D0563J  |          | 28      | 28      | WASHER                  | -                    | -     |  |  |
| (a) This top kit is fo   | or acce  | ss res  | toratio | n after inspection an   | d no crack findings. |       |  |  |
| (b) This top kit is for the repair on the left side of the airplane. |          |         |         |                         |                      |       |  |  |
| (c) This top kit is fo   | or the r | epair o | on the  | right side of the airpl | ane.                 |       |  |  |
| (d) Discard the exi  | sting p  | art.    |         |                         |                      |       |  |  |
| (a) This part is used in production                                  |          |         |         |                         |                      |       |  |  |

- (e) This part is used in production.
- (f) You cannot use the existing part to replace the new or changed part.
- (g) If grip length shown is not available at Boeing, fasteners supplied in kits may be one grip length longer than indicated. Also, if any fasteners part numbers listed are not available or have been superseded, substitute fasteners may be supplied in kits.

# 2. Parts and Materials Supplied by the Operator

The following parts or materials are necessary to do the change in this service bulletin. Parts and materials in the manuals given in Paragraph 1.J., References, can also be necessary. Examine operator part and material supply to make sure all necessary parts and materials are available.

| Part Number /<br>Specification                   | QTY    | Name                          | Notes |
|--|--------|-------------------------------|-------|
| BMS 3-23 (BMS 3-<br>29 and BMS 3-35<br>optional) | 1 pint | Corrosion Inhibiting Compound | (a)   |
| BMS 5-95   | 1 pint | Sealant                       | (a)   |
| BMS 10-11, Type I                                | 1 pint | Primer                        | (a)   |

| Part Number /<br>Specification |   | QTY | Name | Notes |  |  |  |
|--------------------------------|---|-----|------|-------|--|--|--|
| (a)                            | a) Refer to the Qualified Products List at the end of the Boeing Material Specification (BMS) |     |      |       |  |  |  |
|                                | for supplier dat  | a.  |      |       |  |  |  |

#### 3. Parts Modified and Reidentified

The parts shown below are changed as shown in this service bulletin. The quantity (QTY) is the number of parts changed on each airplane.

### Group 1:

| <b>Existing Part Number</b>  | QTY  | Name         | New Part Number | Notes   |  |  |  |  |
|--|--|--------------|-----------------|---------|--|--|--|--|
| 148W2204-5 (a)   | 1  | SPLICE ANGLE | (d)             | (c) (e) |  |  |  |  |
| 148W2204-6 (b)   | 1  | SPLICE ANGLE | (d)             | (c) (e) |  |  |  |  |
| (a) This part is include   | a) This part is included in top kit 005W0016-11. |              |                 |         |  |  |  |  |
| (b) This part is include   | o) This part is included in top kit 005W0016-12. |              |                 |         |  |  |  |  |
| (c) Make the change in accordance with this service bulletin.  |  |              |                 |         |  |  |  |  |
| d) There is no equivalent Boeing part number for the changed part. Identify on the part that the change in accordance with this service bulletin was made. |  |              |                 |         |  |  |  |  |
| e) This part is not used in production.  |  |              |                 |         |  |  |  |  |

#### Group 2:

None.

4. Parts Removed and Not Replaced

None.

D. Parts Necessary to Change Spares

None.

E. Special Tooling - Price and Availability

None.

F. Special Tooling Necessary to do this Service Bulletin

No special tools or equipment are necessary to do the change in this service bulletin. But, maintenance and overhaul tools in the manuals given in Paragraph 1.J., References, can be necessary. Examine operator tool supply to make sure all necessary tools are available.

**BLANK PAGE** 

### 3. ACCOMPLISHMENT INSTRUCTIONS

#### A. GENERAL INFORMATION

CAUTION: KEEP THE WORK AREA, WIRES AND ELECTRICAL BUNDLES CLEAN OF METAL PARTICLES OR CONTAMINATION WHEN YOU USE TOOLS. UNWANTED MATERIAL, METAL PARTICLES OR CONTAMINATION CAUGHT IN WIRE BUNDLES CAN CAUSE

DAMAGE TO THE BUNDLES. DAMAGED WIRE BUNDLES CAN CAUSE SPARKS OR

OTHER ELECTRICAL DAMAGE.

**NOTE:** 1. Manual titles are referred to by acronyms. Refer to Paragraph 1.J., References, for definition of the acronyms.

- Obey all of the warnings and cautions given in the specified manual sections.
- 3. Unless shown differently, these dimensions and tolerances are used:
  - Linear dimensions are in inches
  - Tolerance on linear dimensions, other than rivet and bolt edge margins, is plus or minus 0.03 inch
  - Tolerance on rivet and bolt edge margin is plus or minus 0.05 inch
  - Angular tolerance is plus or minus 2 degrees
  - Hole dimensions for standard solid rivets and fasteners are in Structural Repair Manual (SRM) Chapter 51
  - Torque Values:
    - Values for structural fasteners are given in 777 Structural Repair Manual, Chapter 51.
    - Values for airframe maintenance tasks are included in Chapter 20 of 777
       Airplane Maintenance Manual (AMM).
    - Values for electrical maintenance tasks are included in Chapter 20 of Standard Wiring Practices Manual (SWPM).
    - Values for engine maintenance tasks are included in Chapter 70 of 777
       Airplane Maintenance Manual (AMM).
    - Non-standard torque values for maintenance tasks are included in the applicable installation step.
- 4. Use the approved fastener, process and material substitutions in accordance with SRM Chapter 51.
- 5. If the length of any fastener specified in this service bulletin does not meet installation standards given in SRM Chapter 51, then a fastener of the same specification, or an approved substitute, with a length which meets the installation standards given in SRM Chapter 51 may be used. In addition, washers may be installed for fastener grip length in accordance with SRM Chapter 51. Refer to SOPM 20-50-01 for alternate full threaded fasteners (screws) needed for installation in this service bulletin.
- 6. A Detailed Inspection (DET) is defined as: An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate procedures may be required.

- 7. HFEC is used for a High Frequency Eddy Current Inspection.
- 8. These work instructions refer to procedures included in other Boeing documents. When the words "refer to" are used and the operator has an accepted alternative procedure, the accepted alternative procedure can be used. When the words "in accordance with" are included in the instruction, the procedure in the Boeing document must be used.
- Boeing Service Letter 777-SL-51-013, Damage Reporting and Repair Plan/Design Guidelines, is an acceptable procedure to request information from Boeing for additional structural repair instructions. The Service Letter describes what information must be provided to Boeing before a structural repair can be provided.
- 10. Refer to APPENDIX A and APPENDIX B for logic diagram(s). Logic diagrams are provided as an aid only. Information contained in Paragraph 1.E., Compliance is the primary source for compliance times. Information in Paragraph 3.B., Work Instructions is the primary source for tasks required for compliance.
- 11. The instructions in Paragraph 3.B., Work Instructions and the figures can include operation of tools or test equipment. Boeing Engineering Tool Drawings, the Illustrated Tool and Equipment Manual, and the Special Tool and Ground Handling Drawing Index contain data on versions of the tools or test equipment that you can use. It is permitted to use replaced tools. It is not permitted to use superseded tools.
- 12. If it is necessary to remove more parts for access, you can remove those parts. If you can get access without removing identified parts, it is not necessary to remove all of the identified parts. Jacking and shoring limitations must be observed.
- 13. Where the work instructions include installation of a kept part, a new or serviceable part with the same part number can be installed as an alternative to the kept part.
- 14. Use of colors in Figures is based on guidance from the ATA e-Business Program (ATA) iSpec 2200.
- 15. When more than one OPTION is given for a CONDITION, do only one of the OPTION numbers. When more than one ACTION is given for a CONDITION number or an OPTION number, do all of the ACTION numbers for that CONDITION number or OPTION number.
- 16. The compliance times for the actions in Paragraph 3.B., WORK INSTRUCTIONS are in Paragraph 1.E., Compliance.
- 17. The conditions and associated actions given in Paragraph 3.B., Work Instructions can be different on the left and right sides of the airplane. Because the conditions found may not be the same on both sides of the airplane, the required actions may be different between the left and right side of the airplane and can be done independently.
- 18. Some steps in the Work Instructions are labeled as Required for Compliance (RC). If this service bulletin is mandated by an Airworthiness Directive (AD), then the steps labeled as RC, including sub-steps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An Alternative Method of Compliance (AMOC) is required for any deviations to RC steps, including sub-steps

and identified figures. Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC. This is provided that the RC steps, including sub-steps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

#### **B. WORK INSTRUCTIONS**

1. Remove the skin panels in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 1  | FIGURE 2   |

- Do PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD DET AND HFEC INSPECTION, for any crack.
  - a. CONDITION 1: NO FORWARD CHORD CRACK IS FOUND
    - (1) OPTION 1: Repeat PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD DET AND HFEC INSPECTION for any crack.
    - (2) OPTION 2: Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076.
  - b. CONDITION 2: ANY FORWARD CHORD CRACK IS FOUND, AND NO CRACK FOUND IS GREATER THAN 0.160 INCH
    - (1) OPTION 2: Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076.
    - (2) OPTION 3:
      - (a) OPTION 3 (ACTION 1): Do PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR.
        - **NOTE:** PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD SMALL CRACK REPAIR can be done on the left and right side of the airplane at the same time.
      - (b) OPTION 3 (ACTION 2): Do PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION.
        - CONDITION 4: NO FORWARD CHORD CRACK IS FOUND DURING POST-REPAIR INSPECTION
          - a) OPTION 4: Repeat PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR DET AND HFEC INSPECTION.
          - OPTION 2: Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076.

- CONDITION 5: ANY FORWARD CHORD CRACK IS FOUND DURING POST-REPAIR INSPECTION
  - a) Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076.
- c. CONDITION 3: ANY FORWARD CHORD CRACK FOUND IS GREATER THAN 0.160 INCH
  - (1) Do the terminating modification in accordance with Boeing Service Bulletin 777-53-0076.
- 3. If not previously installed, install the skin panels in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 5  | FIGURE 6   |

4. Put the airplane back to a serviceable condition.

#### PART 1: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION

 RC - Do an inspection of the Pivot Bulkhead Forward Outer Chord, for any crack, in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 3  | FIGURE 4   |

#### PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR

Support the airplane using one of the options below:

### **OPTION 1:**

- Support the airplane on its landing gear.
- b. Remove the load from the pivot pin assembly on the side of the airplane where the small crack repair is done. Refer to 777 AMM 55-17-01 as an accepted procedure. Removal of the pivot pin assembly or pivot fitting bearing is not necessary. If the small crack repair is done on the left and right side of the airplane at the same time, make sure that the pivot pin assemblies are unloaded on the left and right side of the airplane at the same time.

### **OPTION 2:**

- a. Lift the airplane on the primary jacks A, B and C. Refer to 777 AMM 07-11-01 as an accepted procedure.
- b. Remove the load from the pivot pin assembly on the side of the airplane where the small crack repair is done. Refer to 777 AMM 55-17-01 as an accepted procedure. Removal of the pivot pin assembly or pivot fitting bearing is not necessary. If the small crack repair is done on the left and right side of the airplane at the same time, make sure that the pivot pin assemblies are unloaded on the left and right side of the airplane at the same time.

### 2. **Group 1:**

Get access to the repair area in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 7  | FIGURE 8   |

#### 3. **Group 2:**

Get access to the repair area in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 9  | FIGURE 10  |

- 4. RC Do PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE HFEC AND DET INSPECTION, for any crack.
  - CONDITION 6: NO FORWARD CHORD UPPER LOCATION OR ADJACENT STRUCTURE CRACK IS FOUND
    - (1) RC Continue to do the small crack repair in accordance with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD SMALL CRACK REPAIR.
  - b. CONDITION 7: ANY FORWARD CHORD UPPER LOCATION OR ADJACENT STRUCTURE CRACK IS FOUND
    - (1) RC ACTION 1: Contact The Boeing Company for repair instructions and do the repair.
    - (2) RC ACTION 2: Continue to do the small crack repair in accordance with PART 2: STATION 2370 PIVOT BULKHEAD FORWARD CHORD SMALL CRACK REPAIR.

### 5. **Group 1:**

RC - Modify the splice angle in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 13 | FIGURE 14  |

#### 6. **Group 1:**

RC - Repair the Station 2370 pivot bulkhead forward chord in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 15 | FIGURE 16  |

#### 7. **Group 2:**

RC - Repair the Station 2370 pivot bulkhead forward chord in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 17 | FIGURE 18  |

8. RC - Install the skin panels in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 23 | FIGURE 24  |

- Apply finish to the repaired area to match adjacent structure. Apply BMS 3-23 (BMS 3-29 and BMS 3-35 optional) corrosion inhibiting compound to the repaired area. Refer to SOPM 20-41-05 as an accepted procedure.
- 10. If the airplane was stabilized using OPTION 1, remove the horizontal stabilizer jacking equipment. Refer to 777 AMM 55-17-01 as an accepted procedure.
- 11. If the airplane was stabilized using OPTION 2,
  - Remove the horizontal stabilizer jacking equipment. Refer to 777 AMM 55-17-01 as an accepted procedure.
  - b. Lower the airplane off of the jacks. Refer to 777 AMM 07-11-01 as an accepted procedure.

### PART 3: STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION

1. Remove the skin panels in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 25 | FIGURE 26  |

2. RC - Do the DET and HFEC inspection in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 19 | FIGURE 20  |

3. RC - Install the skin panels in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 21 | FIGURE 22  |

4. Put the airplane back to a serviceable condition.

### PART 4: STATION 2370 PIVOT BULKHEAD FORWARD CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION

 RC - Inspect the pivot bulkhead forward chord and adjacent structure in accordance with the figures below:

| Left Side | Right Side |
|-----------|------------|
| FIGURE 11 | FIGURE 12  |

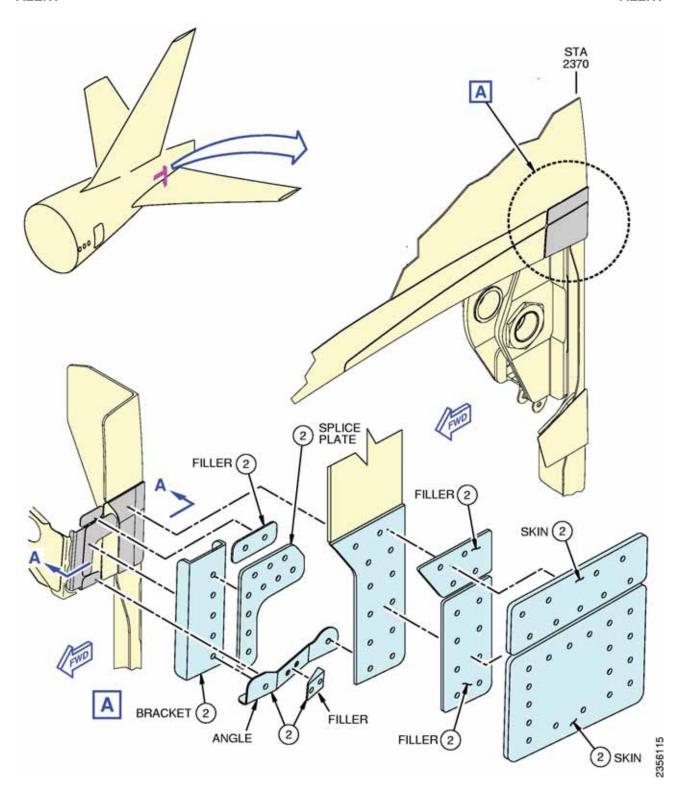
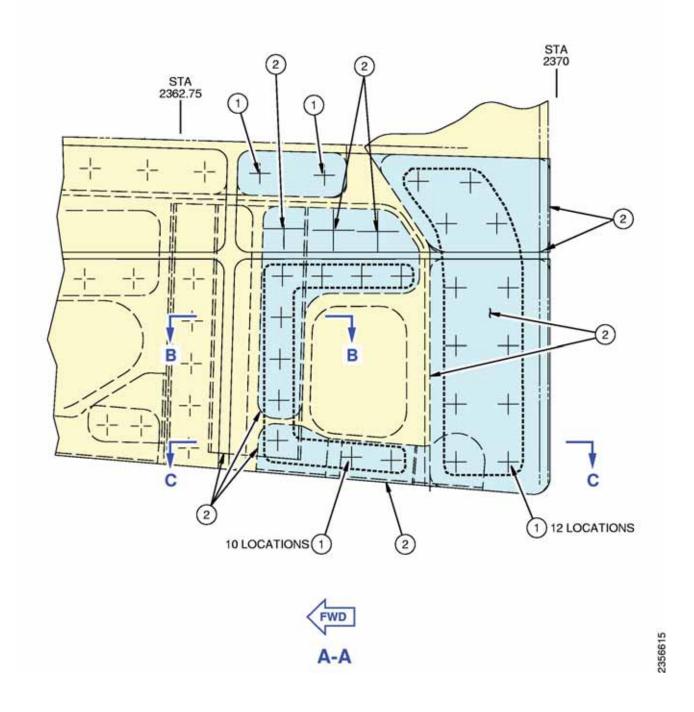
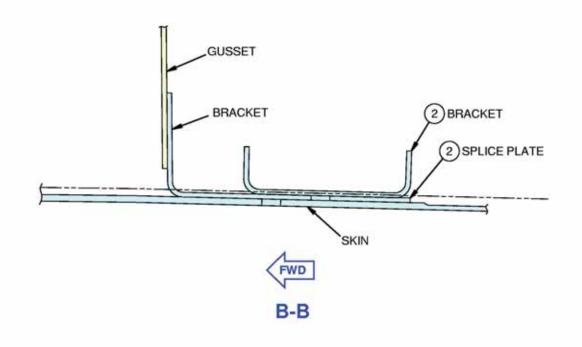
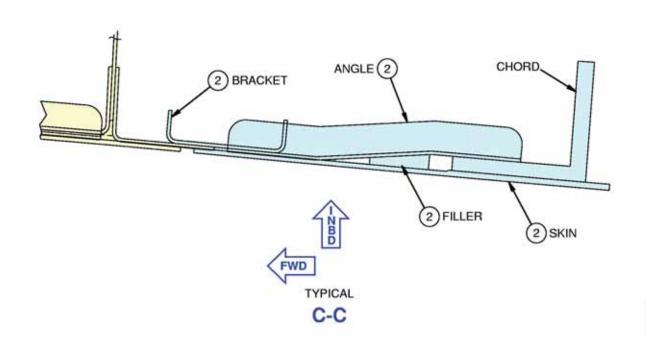


FIGURE 1: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 1 OF 4)



### FIGURE 1: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 2 OF 4)





# FIGURE 1: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 3 OF 4)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name                           | Identification | Qty | More Data |
|------|-------------|--------------------------------|----------------|-----|-----------|
| 1    | Remove      | FASTENER                       | -              | 24  |           |
| 2    | Remove/Keep | FASTENER                       | -              | 3   |           |
|      |             | SKIN                           | 148W2912-1     | 1   |           |
|      |             | SKIN                           | 148W2912-3     | 1   |           |
|      |             | FILLER                         | 148W2917-9     | 1   |           |
|      |             | FILLER                         | 148W2917-11    | 1   |           |
|      |             | FILLER                         | 148W2917-7     | 1   |           |
|      |             | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |             | FILLER                         | BACF3T03M14S8B | 1   |           |
|      |             | SPLICE PLATE                   | 148W2918-3     | 1   |           |
|      |             | BRACKET                        | 148W2920-1     | 1   |           |

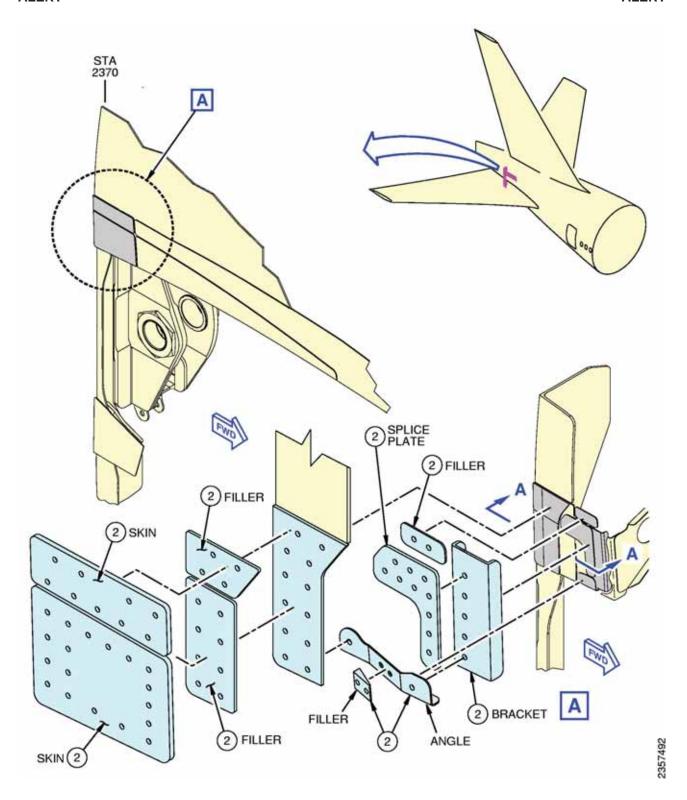


FIGURE 2: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 1 OF 4)

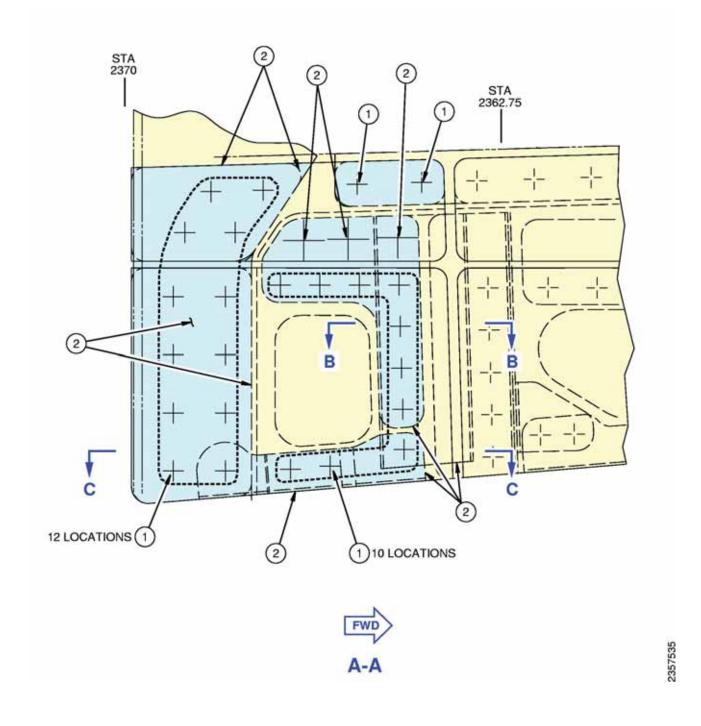
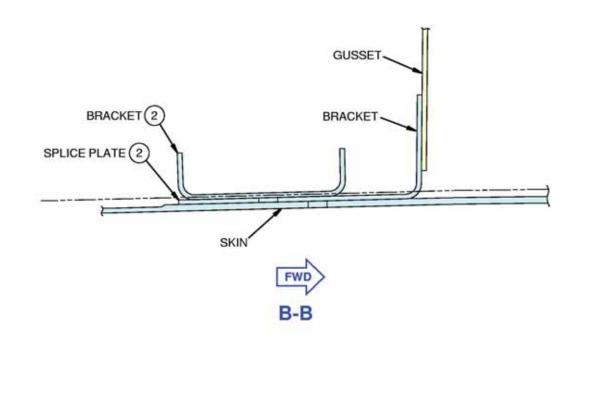


FIGURE 2: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 2 OF 4)



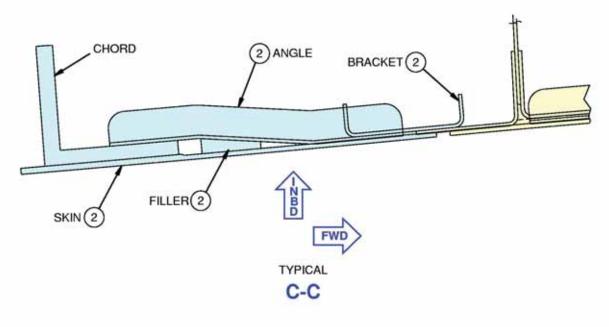


FIGURE 2: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 3 OF 4)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name                           | Identification | Qty | More Data |
|------|-------------|--------------------------------|----------------|-----|-----------|
| 1    | Remove      | FASTENER                       | -              | 24  |           |
| 2    | Remove/Keep | FASTENER                       | -              | 3   |           |
|      |             | SKIN                           | 148W2912-2     | 1   |           |
|      |             | SKIN                           | 148W2912-4     | 1   |           |
|      |             | FILLER                         | 148W2917-9     | 1   |           |
|      |             | FILLER                         | 148W2917-11    | 1   |           |
|      |             | FILLER                         | 148W2917-7     | 1   |           |
|      |             | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |             | FILLER                         | BACF3T03M14S8B | 1   |           |
|      |             | SPLICE PLATE                   | 148W2918-4     | 1   |           |
|      |             | BRACKET                        | 148W2920-2     | 1   |           |

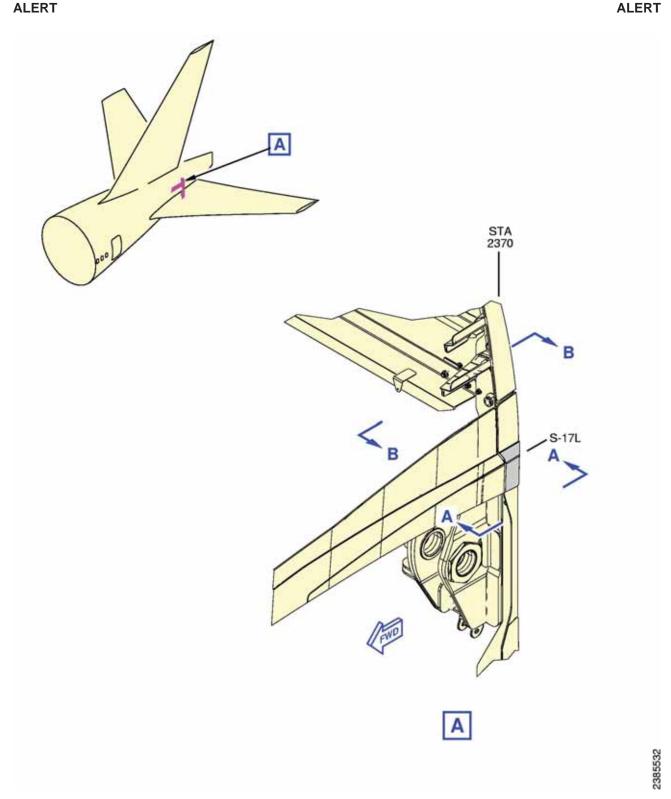


FIGURE 3: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC **INSPECTION** (SHEET 1 OF 4)

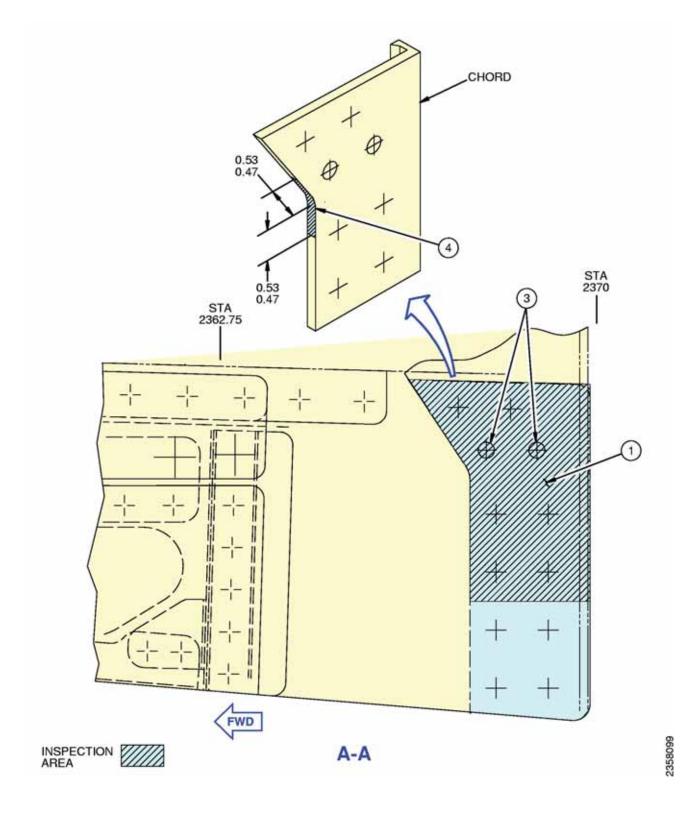
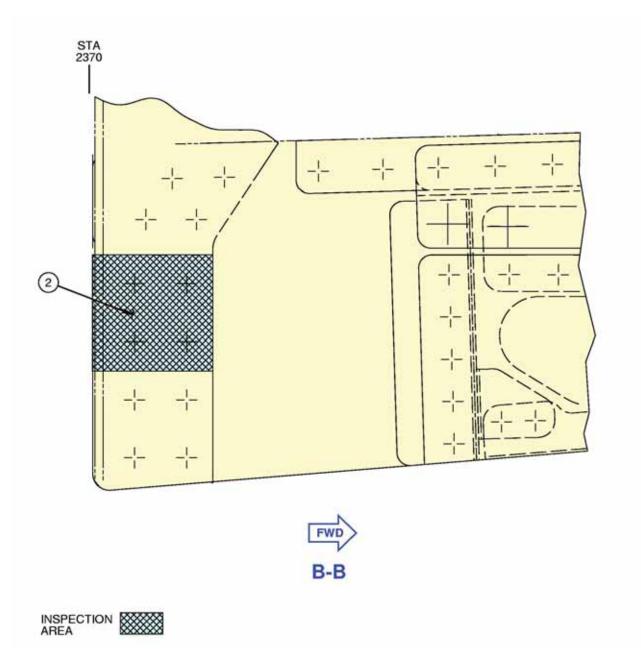


FIGURE 3: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 2 OF 4)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name   | Identification | Qty | More Data               |
|------|---------|--|----------------|-----|-------------------------|
| 1    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a DET for any crack. |

# FIGURE 3: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 3 OF 4)

Original Issue: January 14, 2015 Revision 1 December 14, 2015 2385518

### **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task    | Name   | Identification | Qty | More Data  |
|------|---------|--|----------------|-----|--|
| 2    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a DET for any crack.  |
| 3    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do an open hole HFEC inspection for any crack, in accordance with 777 NDT Manual Part 6, 51-00-02. |
| 4    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a surface HFEC inspection for any crack, in accordance with 777 NDT Manual Part 6, 51-00-01.    |

FIGURE 3: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 4 OF 4)

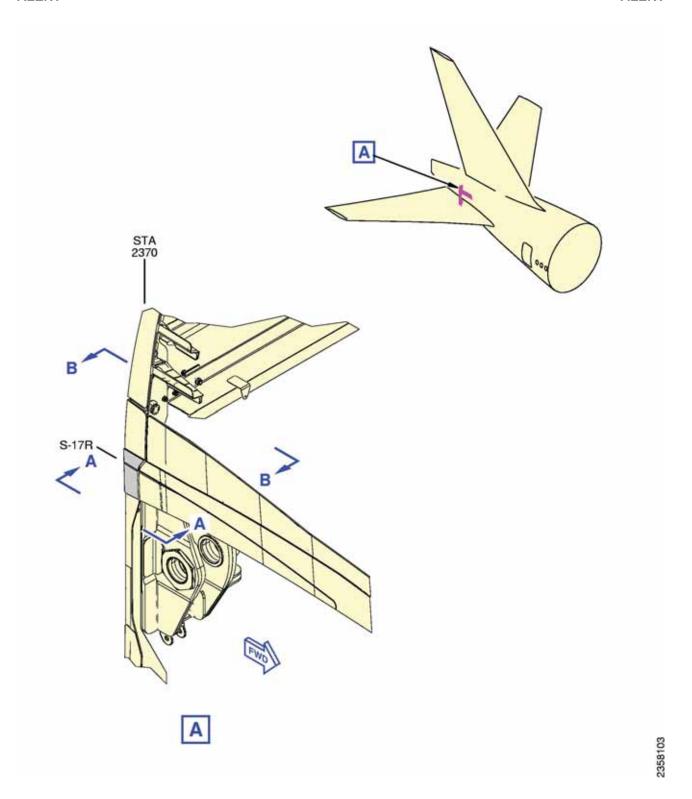


FIGURE 4: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 1 OF 4)

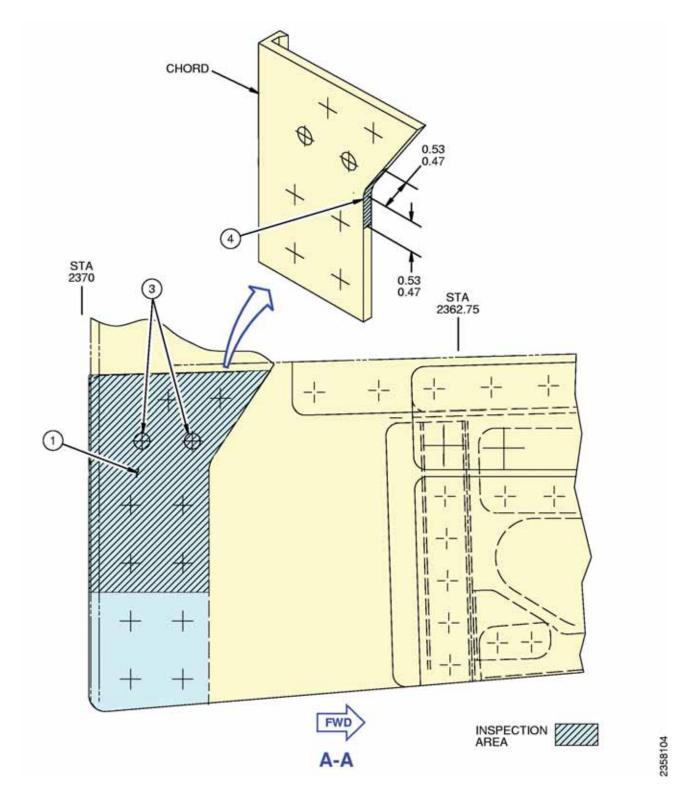
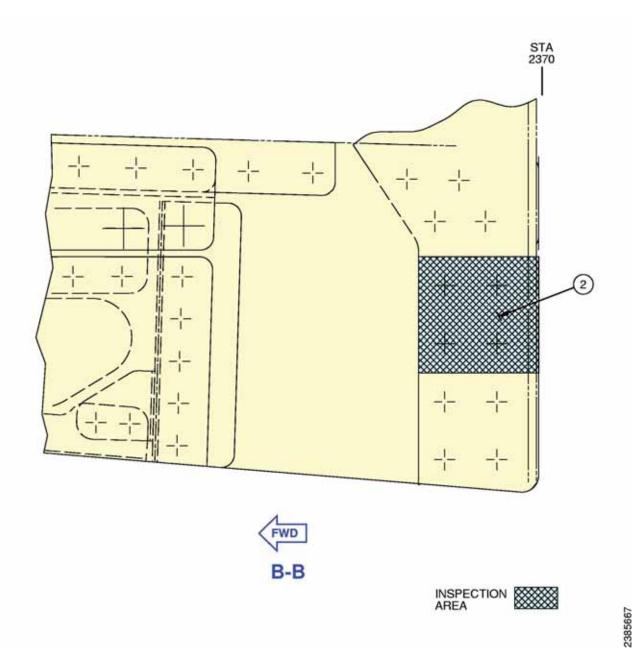


FIGURE 4: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 2 OF 4)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name   | Identification | Qty | More Data               |
|------|---------|--|----------------|-----|-------------------------|
| 1    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a DET for any crack. |

FIGURE 4: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 3 OF 4)

### **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task    | Name   | Identification | Qty | More Data  |
|------|---------|--|----------------|-----|--|
| 2    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a DET for any crack.  |
| 3    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do an open hole HFEC inspection for any crack, in accordance with 777 NDT Manual Part 6, 51-00-02. |
| 4    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do a surface HFEC inspection for any crack, in accordance with 777 NDT Manual Part 6, 51-00-01.    |

FIGURE 4: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - DET AND HFEC INSPECTION (SHEET 4 OF 4)

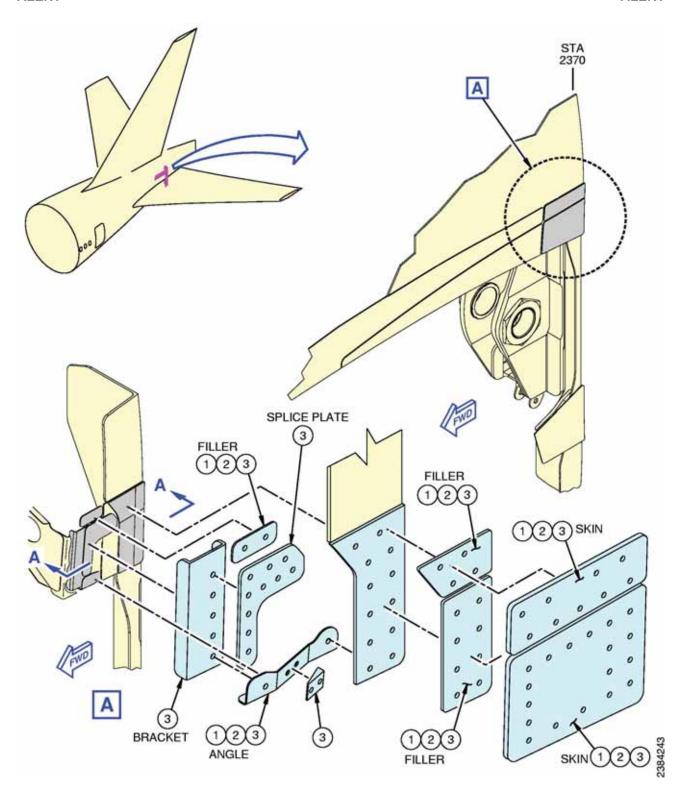
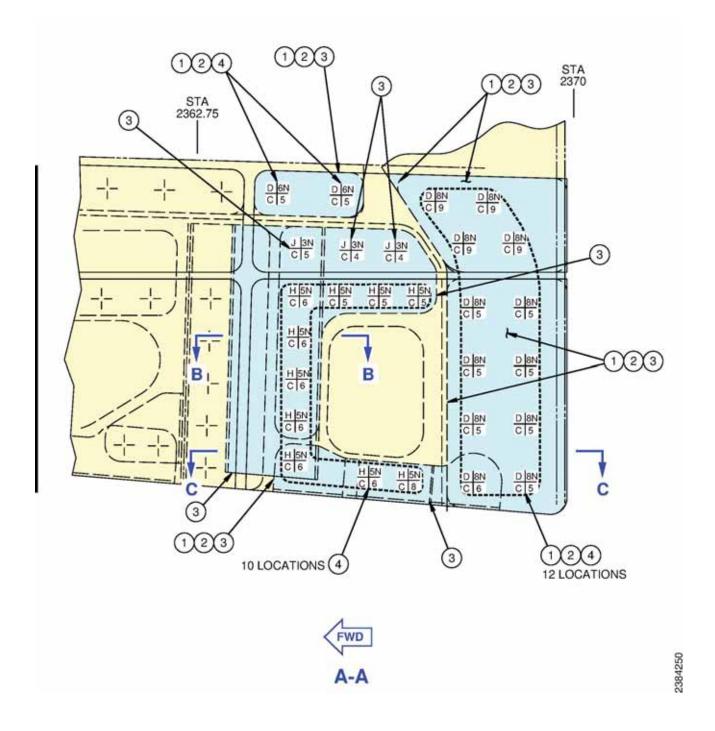
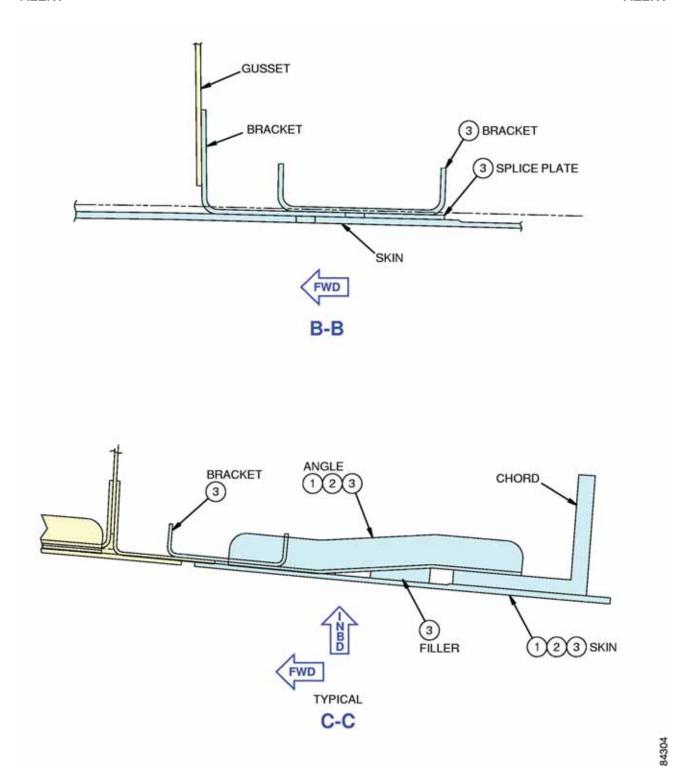


FIGURE 5: LEFT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 1 OF 5)



### FIGURE 5: LEFT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 2 OF 5)



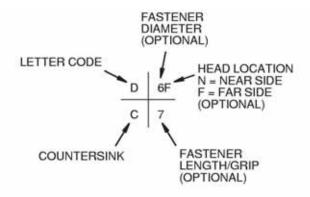
# FIGURE 5: LEFT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 3 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task             | Name                           | Identification | Qty | More Data  |
|------|------------------|--------------------------------|----------------|-----|--|
| 1    | Put/Hold         | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |  |
|      |                  | FILLER                         | 148W2917-9     | 1   |  |
|      |                  | FILLER                         | 148W2917-11    | 1   |  |
|      |                  | FILLER                         | 148W2917-7     | 1   |  |
|      |                  | SKIN                           | 148W2912-1     | 1   |  |
|      |                  | SKIN                           | 148W2912-3     | 1   |  |
|      | Drill/Ream       | HOLE                           | -              | 14  | Refer to the fastener table.                             |
| 2    | Re-<br>move/Keep | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |  |
|      |                  | FILLER                         | 148W2917-9     | 1   |  |
|      |                  | FILLER                         | 148W2917-11    | 1   |  |
|      |                  | FILLER                         | 148W2917-7     | 1   |  |
|      |                  | SKIN                           | 148W2912-1     | 1   |  |
|      |                  | SKIN                           | 148W2912-3     | 1   |  |
|      | Deburr           | HOLE                           | -              | -   |  |
| 3    | Install          | FILLER                         | 148W2917-9     | 1   | (a)  |
|      | (Kept)           | FILLER                         | 148W2917-11    | 1   | (a)  |
|      |                  | FILLER                         | 148W2917-7     | 1   | (a)  |
|      |                  | SPLICE PLATE                   | 148W2918-3     | 1   | (a)  |
|      |                  | BRACKET                        | 148W2920-1     | 1   | (a)  |
|      |                  | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   | (a)  |
|      |                  | FILLER                         | BACF3T03M14S8B | 1   | (a)  |
|      |                  | SKIN                           | 148W2912-1     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | SKIN                           | 148W2912-3     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | FASTENER                       | -              | 3   |  |
| 4    | Install<br>(New) | FASTENER                       | -              | 24  |  |

### FIGURE 5: LEFT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 4 OF 5)

| ,  | Step   | Task | Name | Identification | Qty | More Data |  |
|----|--|------|------|----------------|-----|-----------|--|
| (8 | (a) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure. |      |      |                |     |           |  |



#### **EXAMPLE OF FASTENER SYMBOL**

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name                    | Identification | Qty | Hole Dia           | More Data  |
|------|-------------------------|----------------|-----|--------------------|--|
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW6K5X   | 2   | 0.2026 -<br>0.2036 | (a)  |
|      | COLLAR                  | BACC30M6       | 2   | -                  |  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K5X   | 7   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K6X   | 1   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 4   | 0.2651 -<br>0.2661 | (a)  |
|      | COLLAR                  | BACC30M8       | 12  | -                  |  |
| Н    | RIVET, 100 DEG          | BACR15CE5KE5   | 3   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE6   | 6   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE8   | 1   | -                  |  |
| J    | BOLT                    | BACB30VF3K4    | 2   | -                  |  |
|      | BOLT                    | BACB30VF3K5    | 1   | -                  |  |
|      | NUTPLATE                | BACN10YF33CD   | -   | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |

(a) Install fasteners with BMS 5-95 sealant. Refer to SOPM 20-50-19, Method 2 as an accepted procedure.

### FIGURE 5: LEFT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 5 OF 5)

Original Issue: January 14, 2015 Revision 1 December 14, 2015 2314994

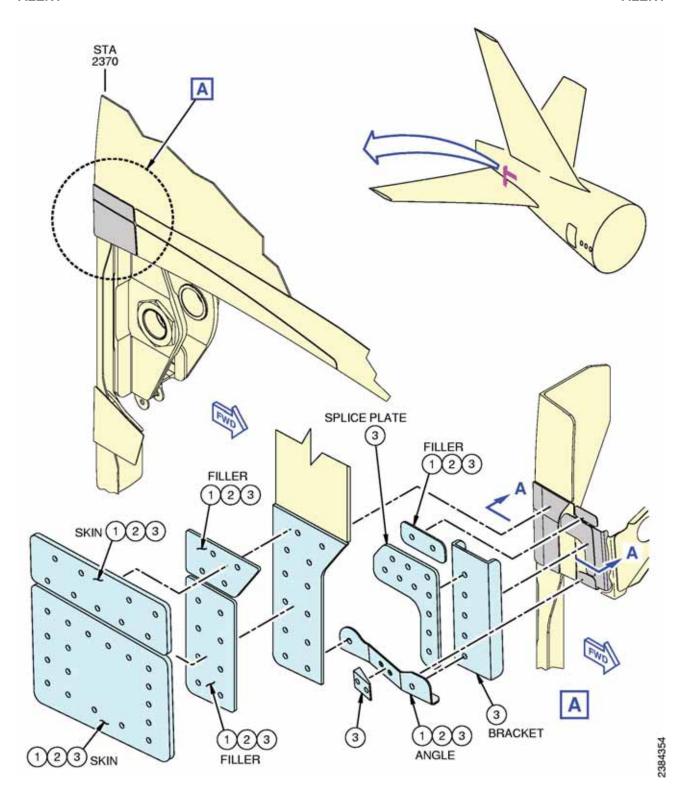
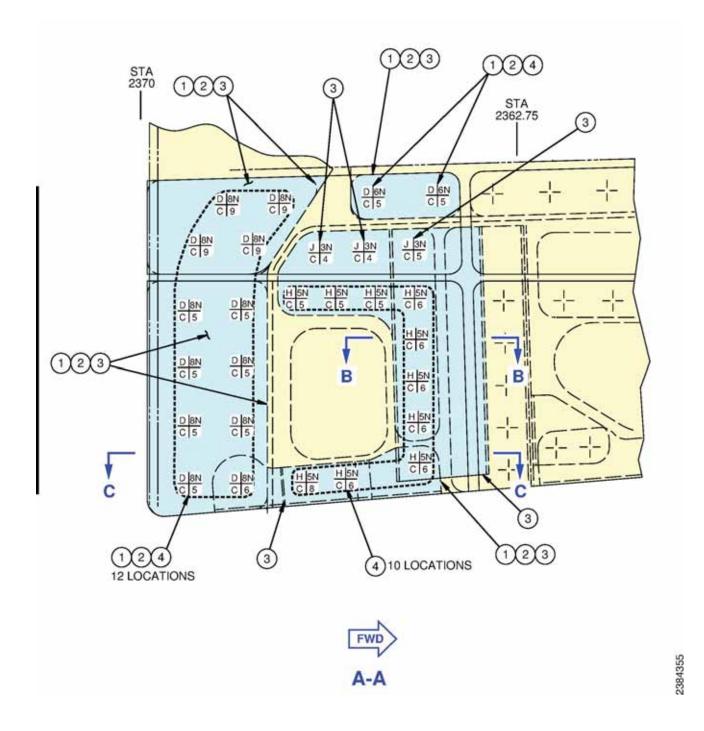
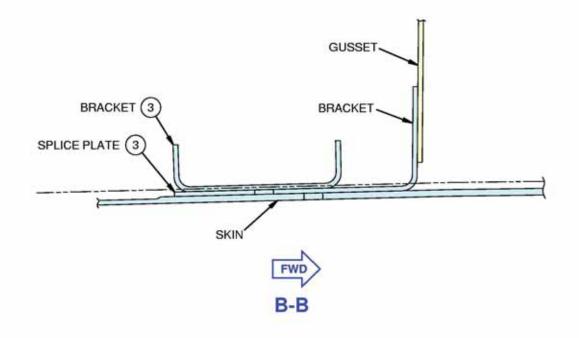
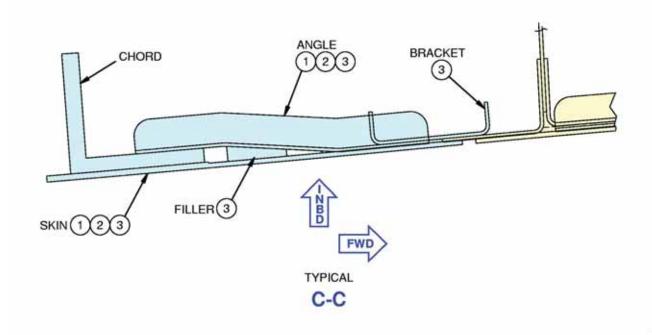


FIGURE 6: RIGHT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 1 OF 5)



### FIGURE 6: RIGHT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 2 OF 5)





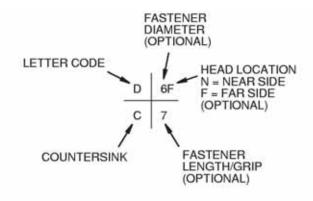
### FIGURE 6: RIGHT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 3 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task             | Name                           | Identification | Qty | More Data  |
|------|------------------|--------------------------------|----------------|-----|--|
| 1    | Put/Hold         | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |  |
|      |                  | FILLER                         | 148W2917-9     | 1   |  |
|      |                  | FILLER                         | 148W2917-11    | 1   |  |
|      |                  | FILLER                         | 148W2917-7     | 1   |  |
|      |                  | SKIN                           | 148W2912-2     | 1   |  |
|      |                  | SKIN                           | 148W2912-4     | 1   |  |
|      | Drill/Ream       | HOLE                           | -              | 14  | Refer to the fastener table.                             |
| 2    | Re-<br>move/Keep | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |  |
|      |                  | FILLER                         | 148W2917-9     | 1   |  |
|      |                  | FILLER                         | 148W2917-11    | 1   |  |
|      |                  | FILLER                         | 148W2917-7     | 1   |  |
|      |                  | SKIN                           | 148W2912-2     | 1   |  |
|      |                  | SKIN                           | 148W2912-4     | 1   |  |
|      | Deburr           | HOLE                           | -              | -   |  |
| 3    | Install          | FILLER                         | 148W2917-9     | 1   | (a)  |
|      | (Kept)           | FILLER                         | 148W2917-11    | 1   | (a)  |
|      |                  | FILLER                         | 148W2917-7     | 1   | (a)  |
|      |                  | SPLICE PLATE                   | 148W2918-4     | 1   | (a)  |
|      |                  | BRACKET                        | 148W2920-2     | 1   | (a)  |
|      |                  | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   | (a)  |
|      |                  | FILLER                         | BACF3T03M14S8B | 1   | (a)  |
|      |                  | SKIN                           | 148W2912-2     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | SKIN                           | 148W2912-4     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | FASTENER                       | -              | 3   |  |
| 4    | Install<br>(New) | FASTENER                       | -              | 24  |  |

FIGURE 6: RIGHT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 4 OF 5)

| Step   | Task   | Name | Identification | Qty | More Data |  |  |
|--------|--|------|----------------|-----|-----------|--|--|
| (a) Ap | (a) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure. |      |                |     |           |  |  |



### **EXAMPLE OF FASTENER SYMBOL**

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name                    | Identification | Qty | Hole Dia           | More Data  |
|------|-------------------------|----------------|-----|--------------------|--|
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW6K5X   | 2   | 0.2026 -<br>0.2036 | (a)  |
|      | COLLAR                  | BACC30M6       | 2   | -                  |  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K5X   | 7   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K6X   | 1   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 4   | 0.2651 -<br>0.2661 | (a)  |
|      | COLLAR                  | BACC30M8       | 12  | -                  |  |
| Н    | RIVET, 100 DEG          | BACR15CE5KE5   | 3   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE6   | 6   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE8   | 1   | -                  |  |
| J    | BOLT                    | BACB30VF3K4    | 2   | -                  |  |
|      | BOLT                    | BACB30VF3K5    | 1   | -                  |  |
|      | NUTPLATE                | BACN10YF33CD   | -   | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |

(a) Install fasteners with BMS 5-95 sealant. Refer to SOPM 20-50-19, Method 2 as an accepted procedure.

### FIGURE 6: RIGHT SIDE - STA 2370 SKIN PANEL INSTALLATION (SHEET 5 OF 5)

Original Issue: January 14, 2015 Revision 1 December 14, 2015 2314994

ALERT

This Figure applies only to: Group 1.

**ALERT** 

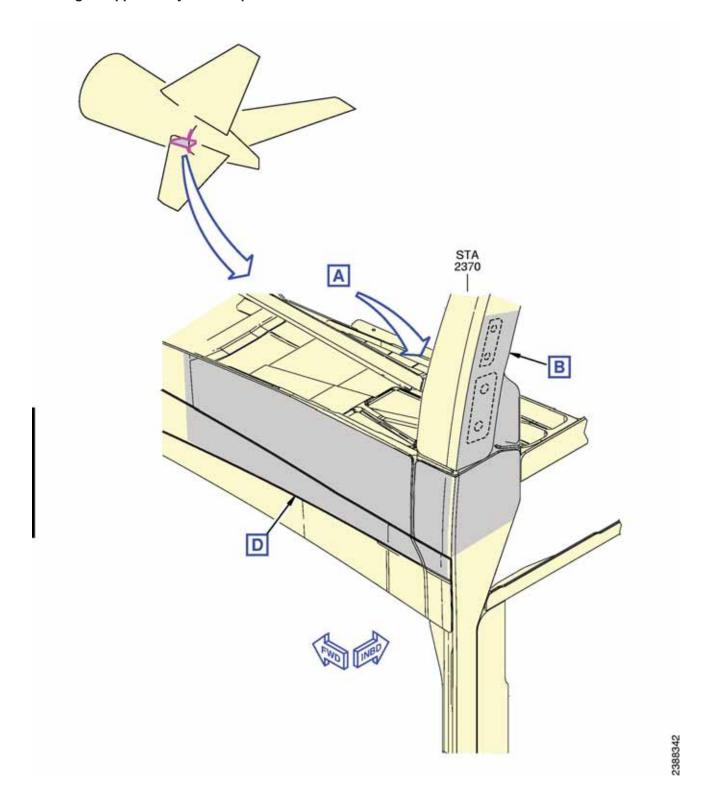


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 1 OF 10)

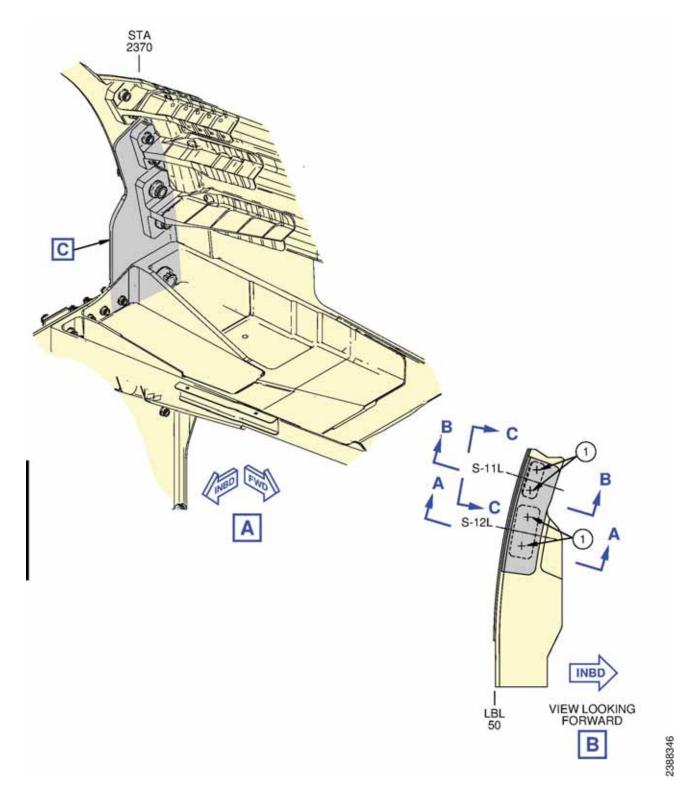


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 2 OF 10)

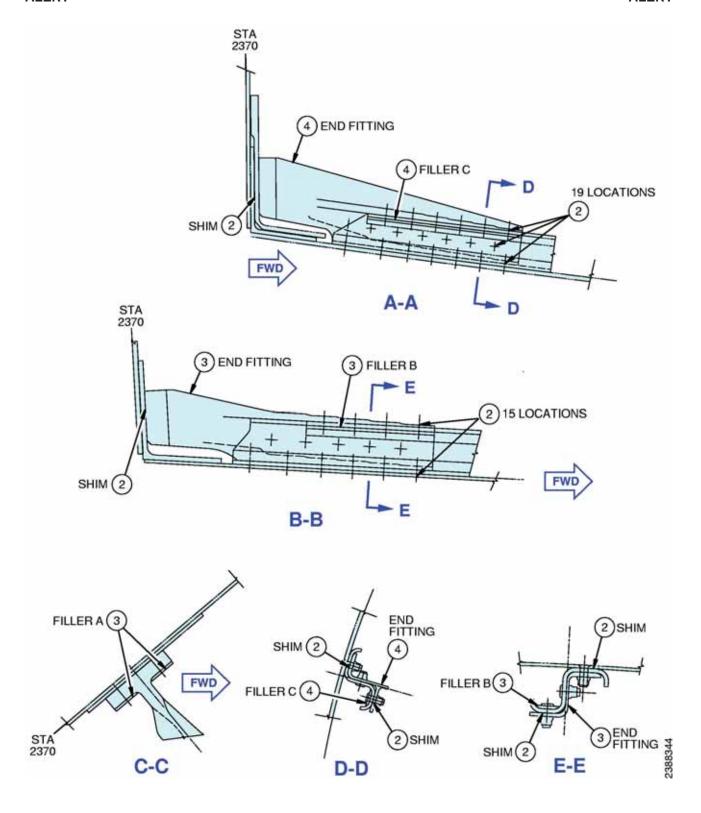


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 3 OF 10)

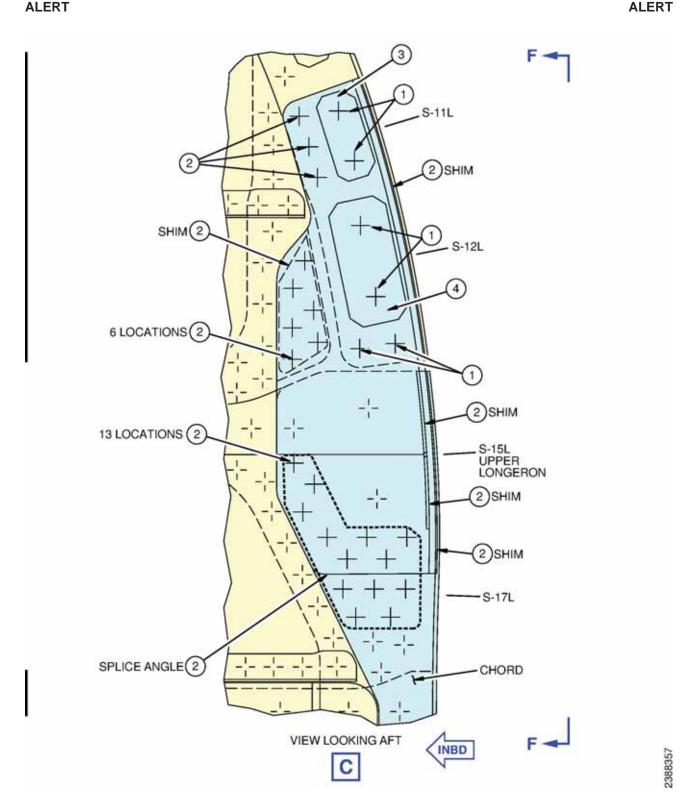


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 4 OF 10)

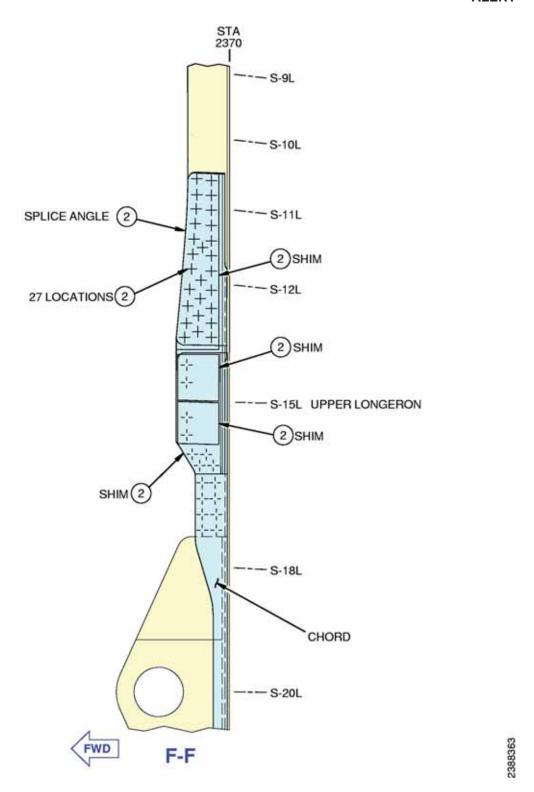


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 5 OF 10)

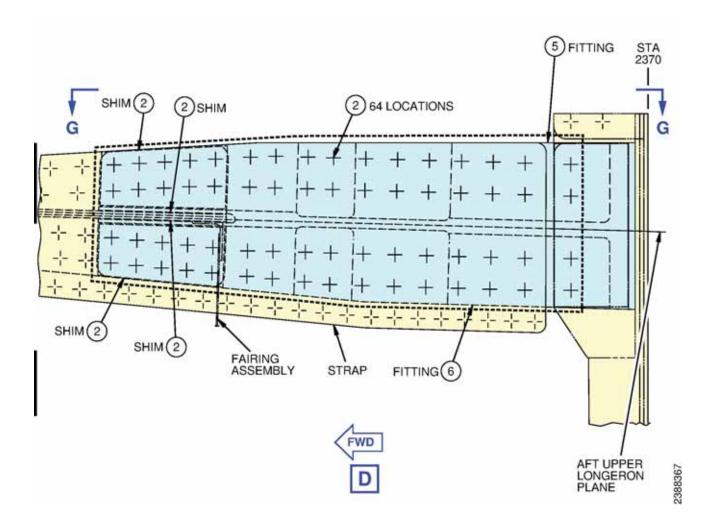


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 6 OF 10)

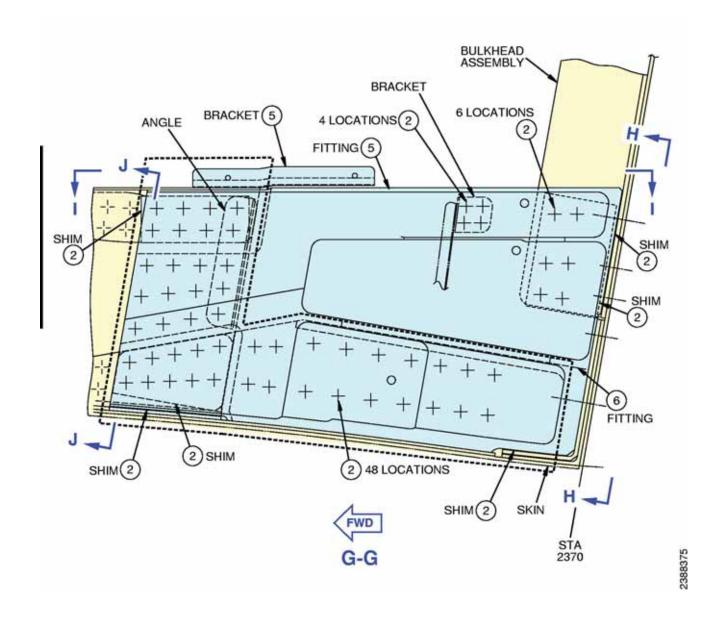


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 7 OF 10)

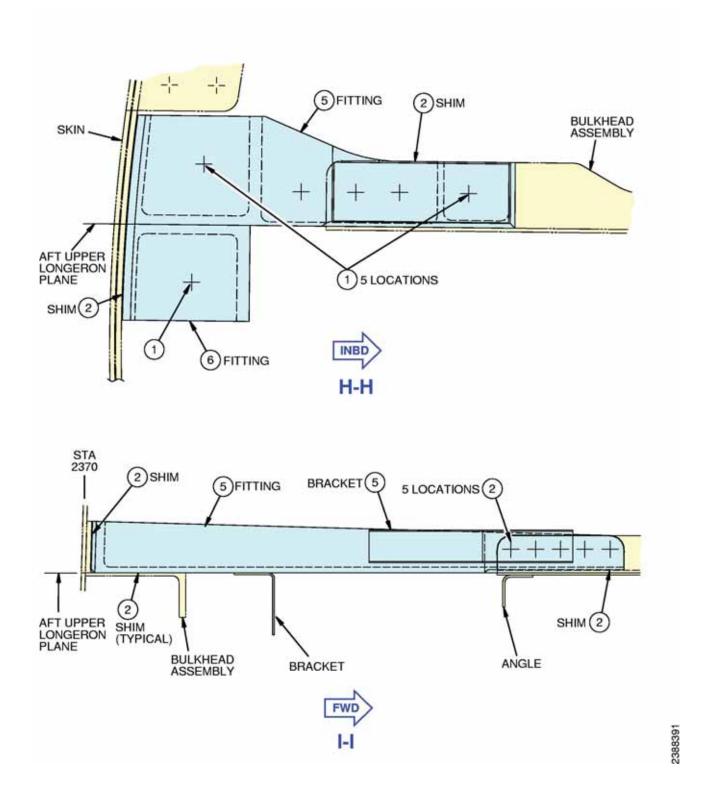
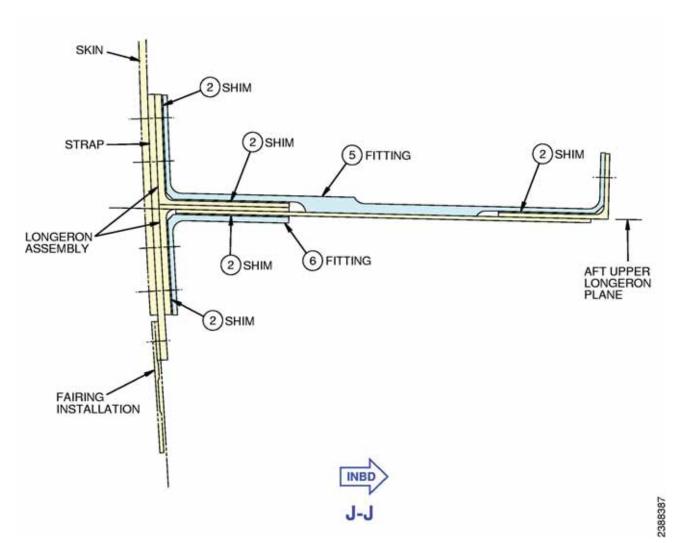


FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 8 OF 10)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name         | Identification  | Qty | More Data   |
|------|-------------|--------------|-----------------|-----|---|
| 1    | Remove/Keep | FASTENER     | -               | 12  | Make a note of the location of each removed fastener. |
| 2    | Remove      | FASTENER     | -               | 210 |   |
|      |             | SHIM         | -               | 18  |   |
|      |             | SPLICE ANGLE | 148W2204-( )    | 1   |   |
| 3    | Remove/Keep | END FITTING  | 148W2379-( )    | 1   |   |
|      |             | FILLER       | BACF3H14NP017HN | 2   | FILLER A  |
|      |             | FILLER       | BACF33C105-410F | 1   | FILLER B  |

## FIGURE 7: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 9 OF 10)

Original Issue: January 14, 2015 Revision 1 December 14, 2015

Export Controlled ECCN: 9E991 - BOEING PROPRIETARY - Copyright © Unpublished Work - See page 1 for details.

## **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task        | Name  | Identification  | Qty | More Data |
|------|-------------|---|-----------------|-----|-----------|
| 4    | Remove/Keep | END FITTING   | 148W2369-( )    | 1   |           |
|      |             | FILLER  | BACF33C105-620F | 1   | FILLER C  |
| 5    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, UPR | 148W2514-( )    | 1   |           |
|      |             | BRACKET   | 287W4809-291    | 1   |           |
| 6    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, FWD | 148W2515-( )    | 1   |           |

This Figure applies only to: Group 1.

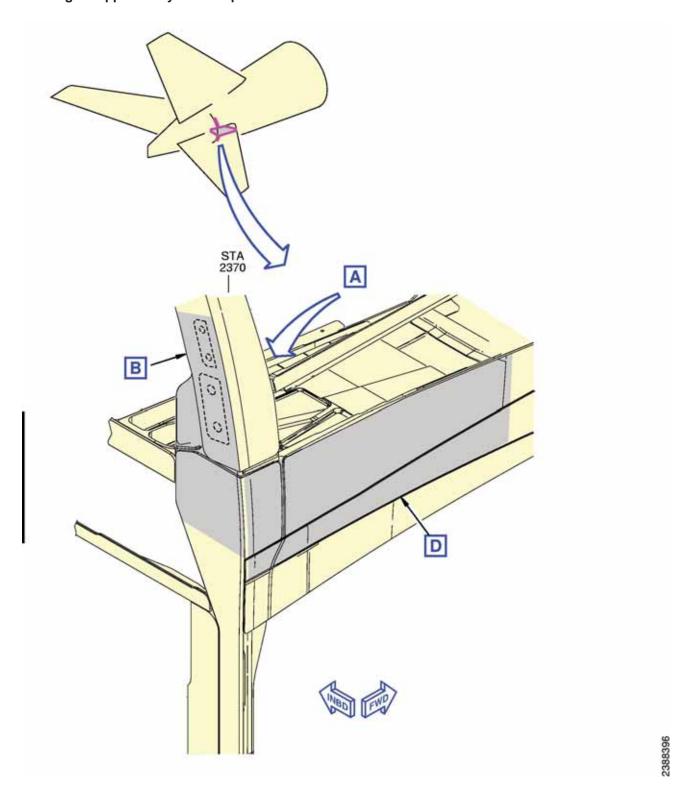


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 1 OF 10)

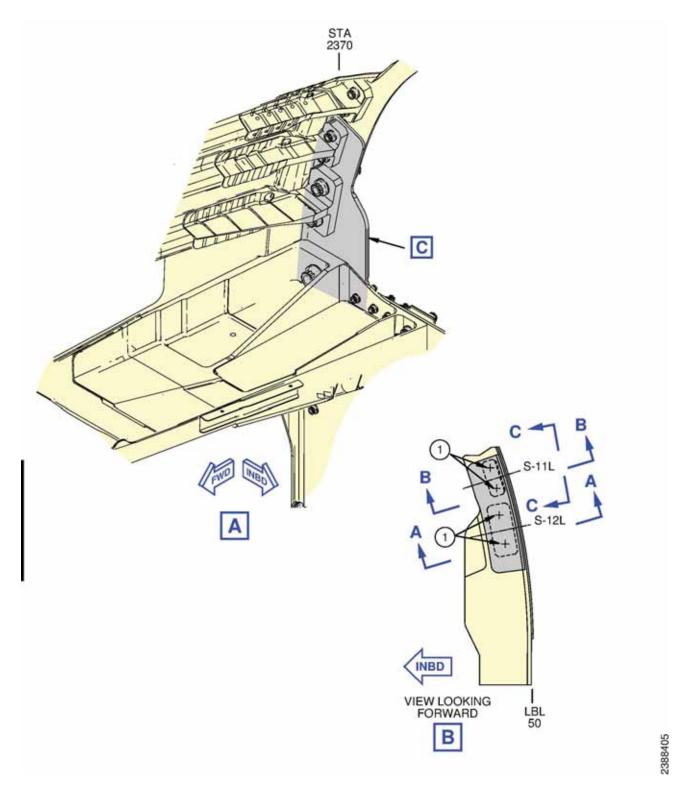


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 2 OF 10)

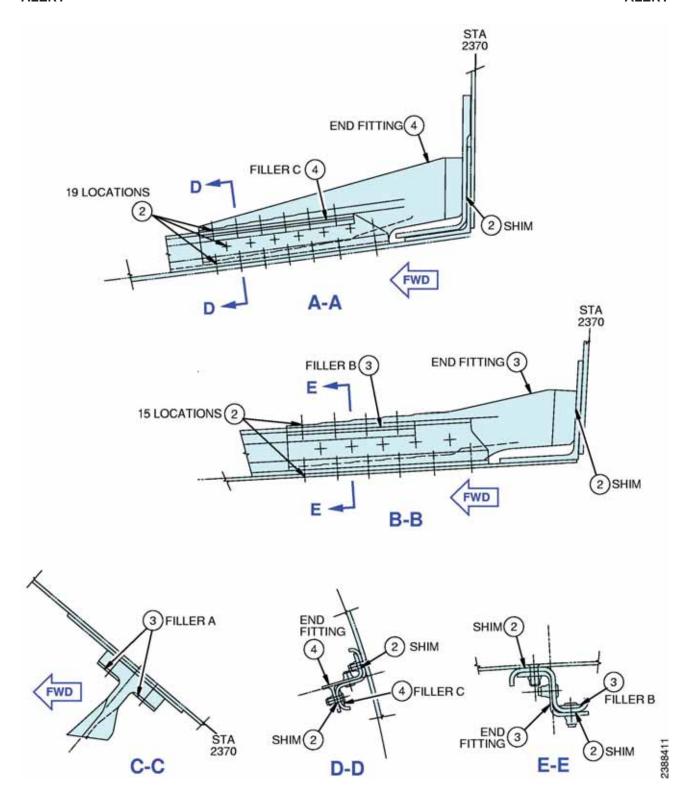


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 3 OF 10)

**ALERT** 

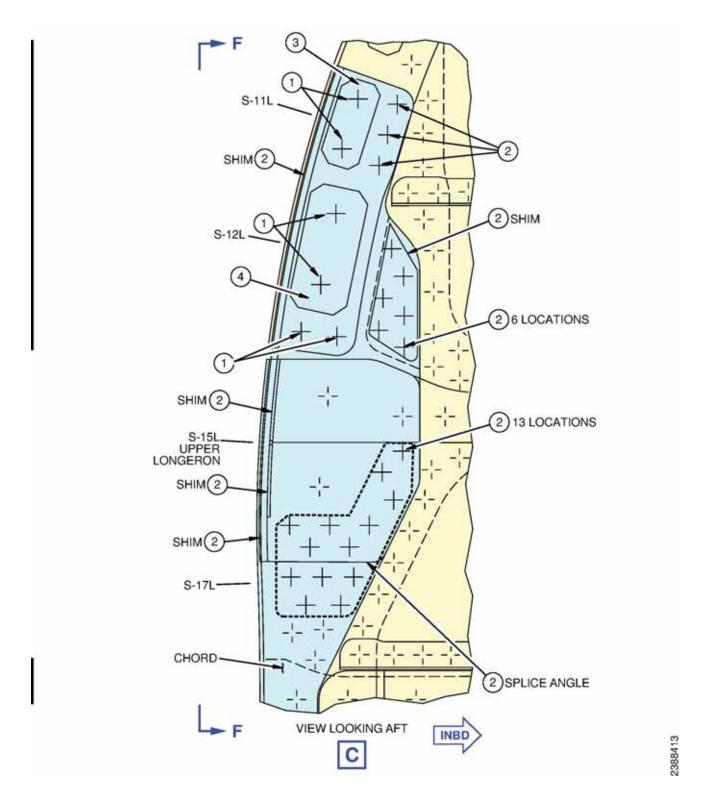


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 4 OF 10)

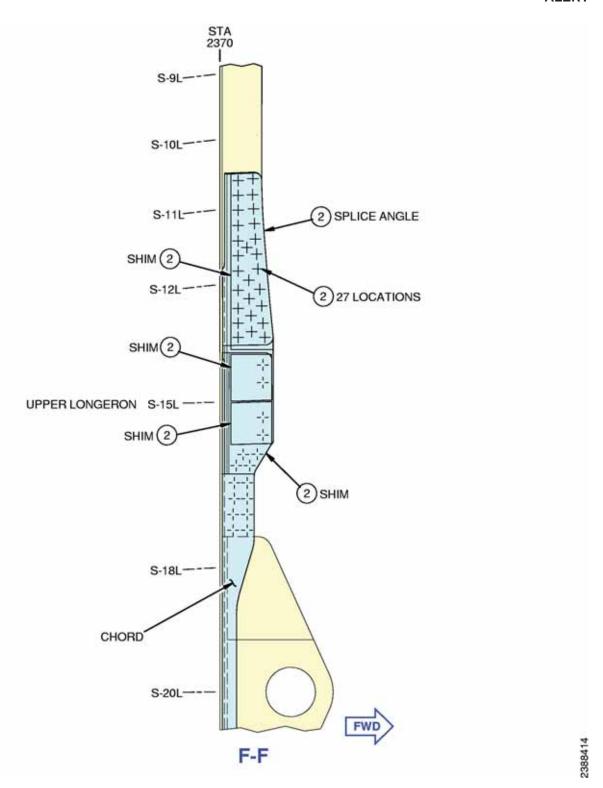


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 5 OF 10)

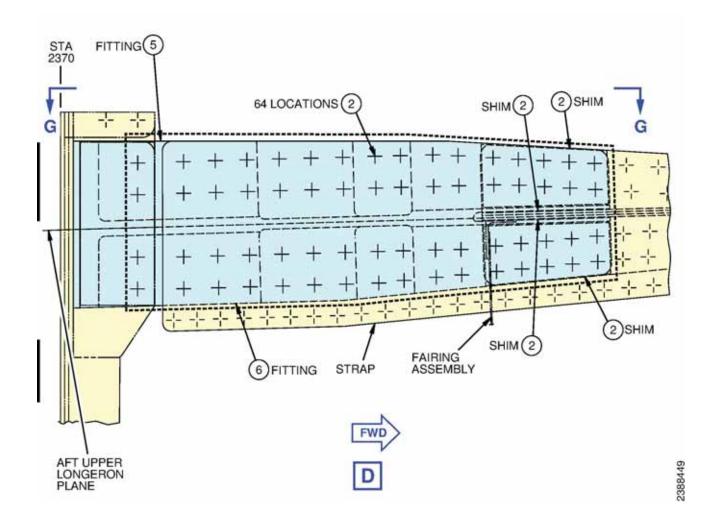


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 6 OF 10)

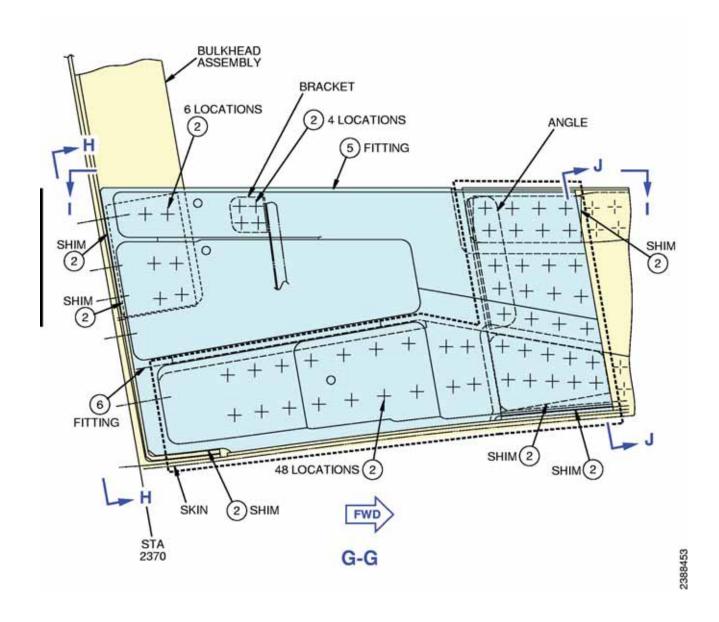


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 7 OF 10)

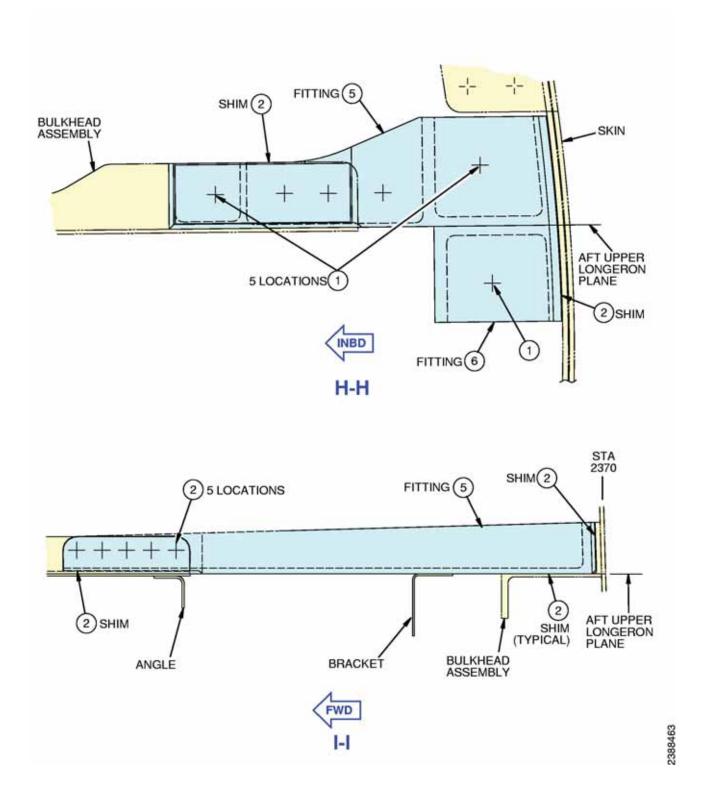
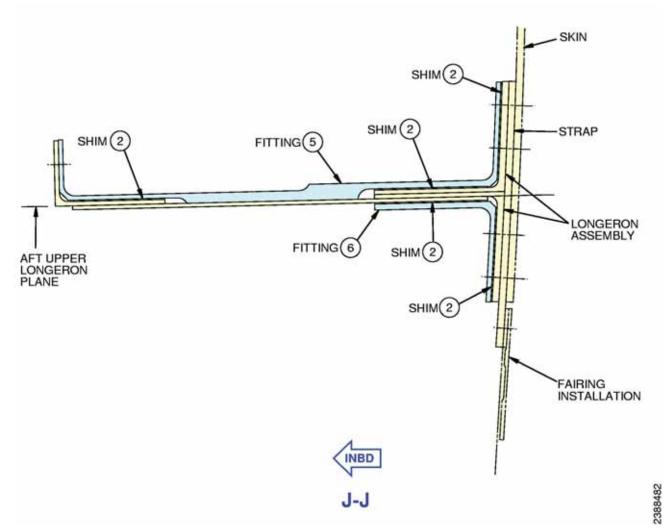


FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 8 OF 10)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name         | Identification  | Qty | More Data   |
|------|-------------|--------------|-----------------|-----|---|
| 1    | Remove/Keep | FASTENER     | -               | 12  | Make a note of the location of each removed fastener. |
| 2    | Remove      | FASTENER     | -               | 210 |   |
|      |             | SHIM         | -               | 18  |   |
|      |             | SPLICE ANGLE | 148W2204-( )    | 1   |   |
| 3    | Remove/Keep | END FITTING  | 148W2379-( )    | 1   |   |
|      |             | FILLER       | BACF3H14NP017HN | 2   | FILLER A  |
|      |             | FILLER       | BACF33C105-410F | 1   | FILLER B  |

# FIGURE 8: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 9 OF 10)

Original Issue: January 14, 2015 Revision 1 December 14, 2015

Export Controlled ECCN: 9E991 - BOEING PROPRIETARY - Copyright © Unpublished Work - See page 1 for details.

## **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task        | Name  | Identification  | Qty | More Data |
|------|-------------|---|-----------------|-----|-----------|
| 4    | Remove/Keep | END FITTING   | 148W2369-( )    | 1   |           |
|      |             | FILLER  | BACF33C105-620F | 1   | FILLER C  |
| 5    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, UPR | 148W2514-( )    | 1   |           |
| 6    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, FWD | 148W2515-( )    | 1   |           |

ALERT

This Figure applies only to: Group 2.

**ALERT** 

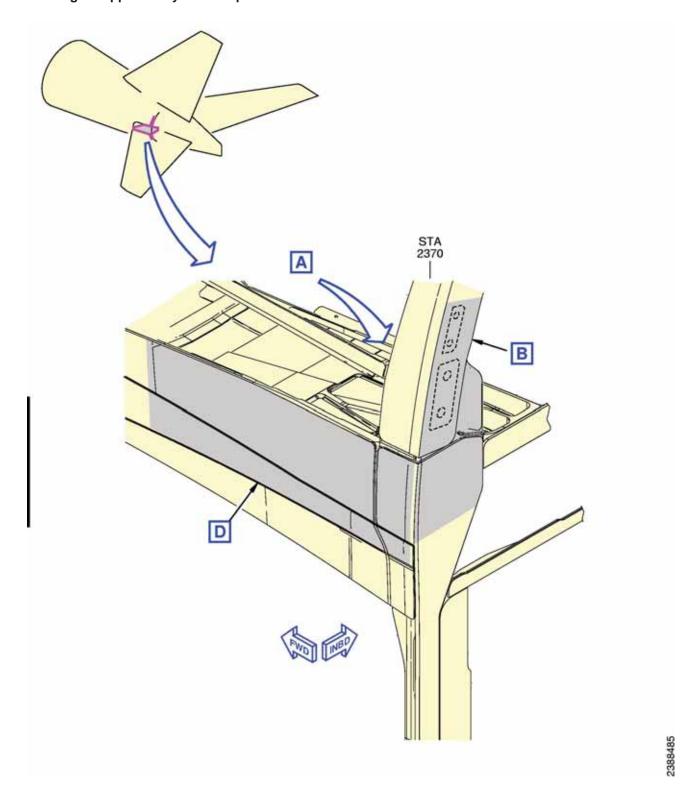


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 1 OF 10)

ALERT ALERT

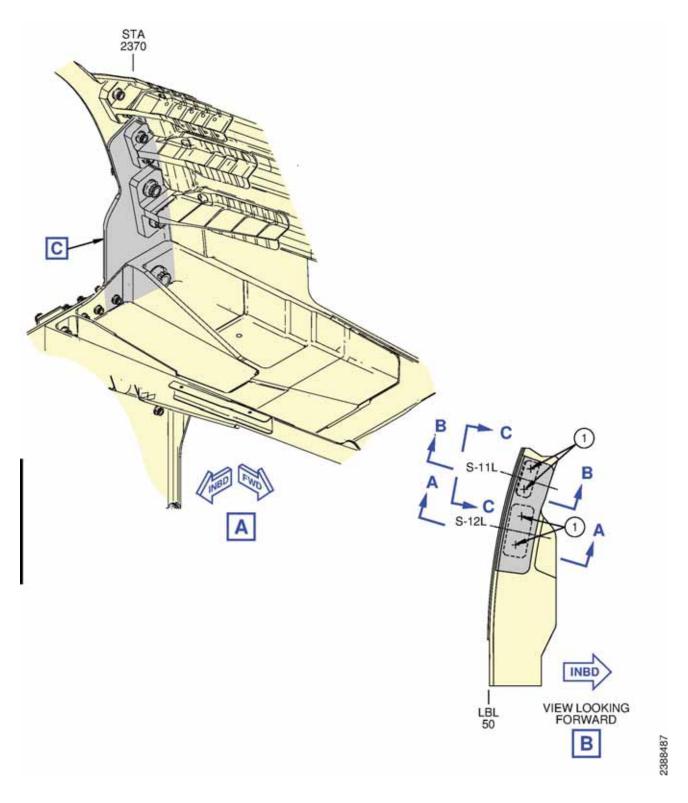


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 2 OF 10)

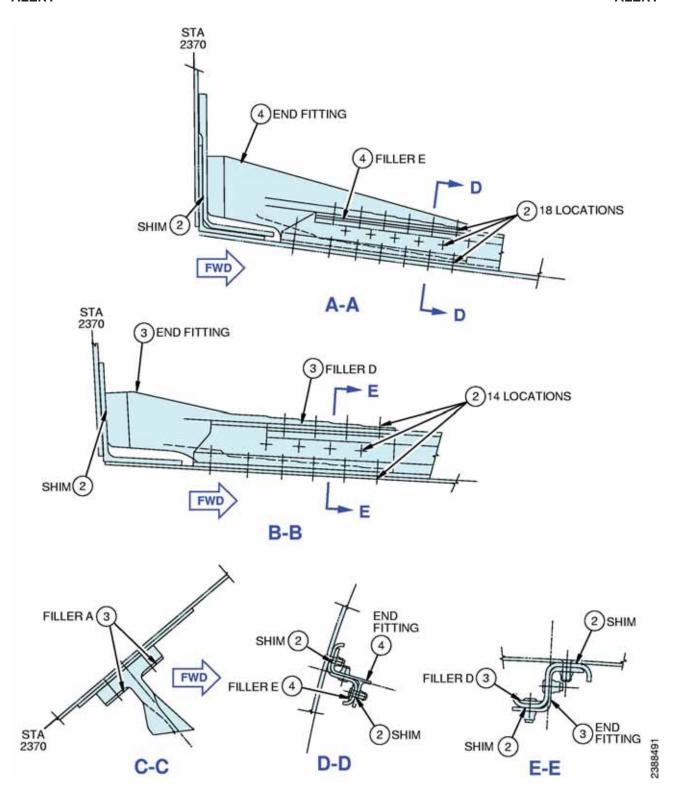


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 3 OF 10)

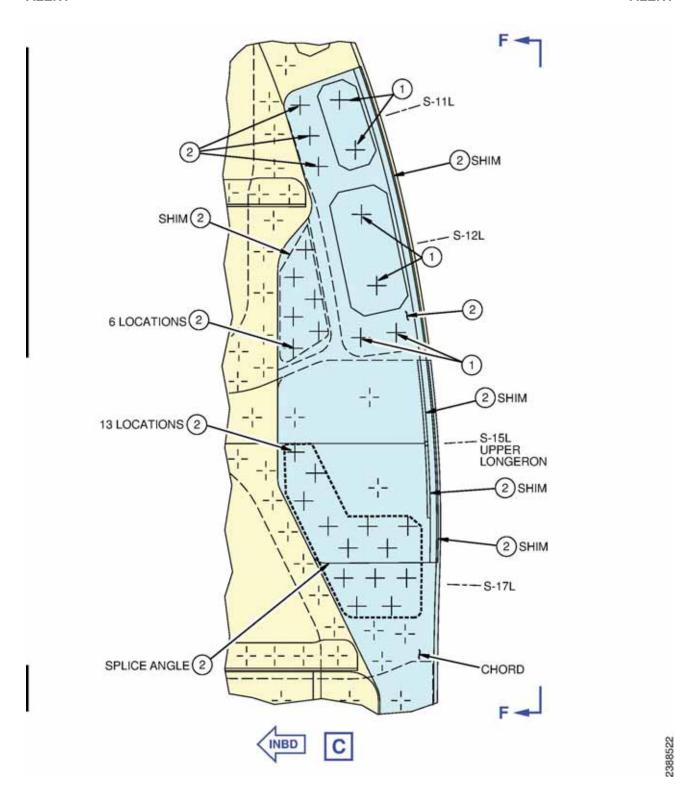


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 4 OF 10)

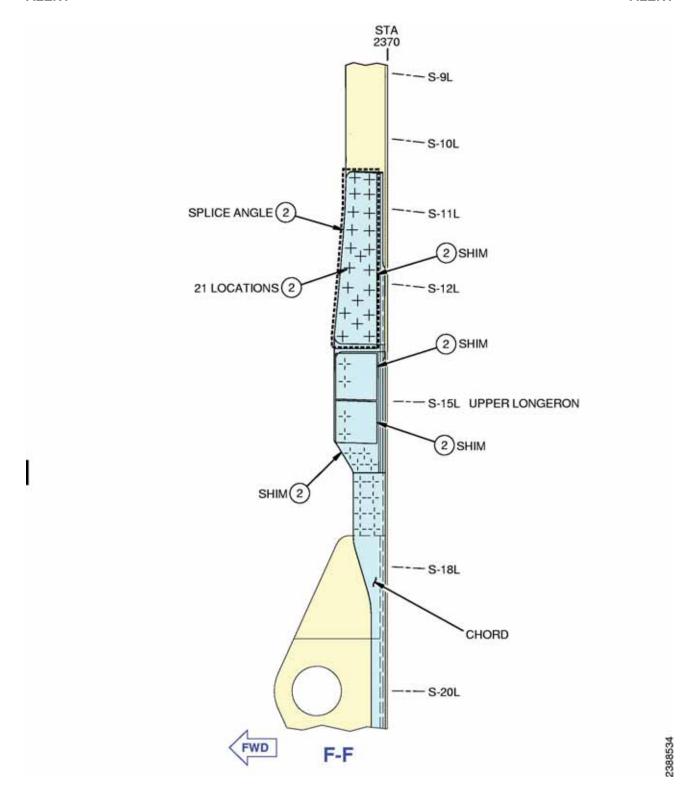


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 5 OF 10)

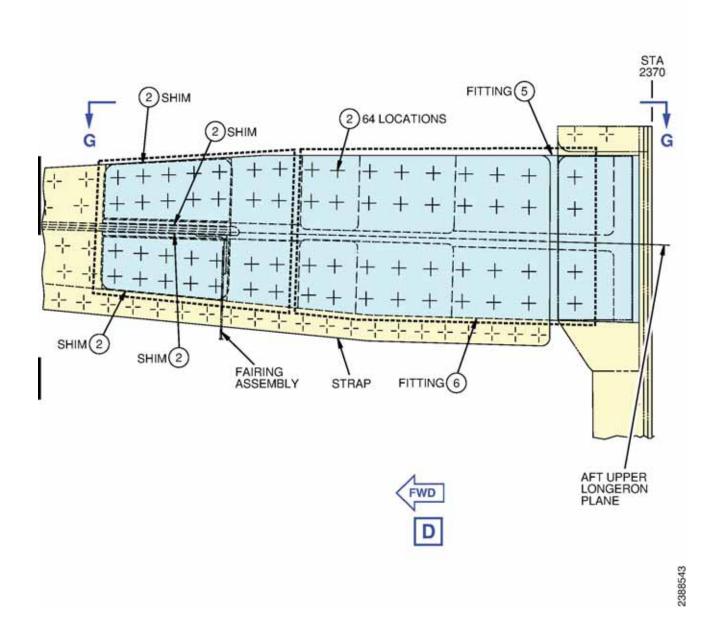


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 6 OF 10)

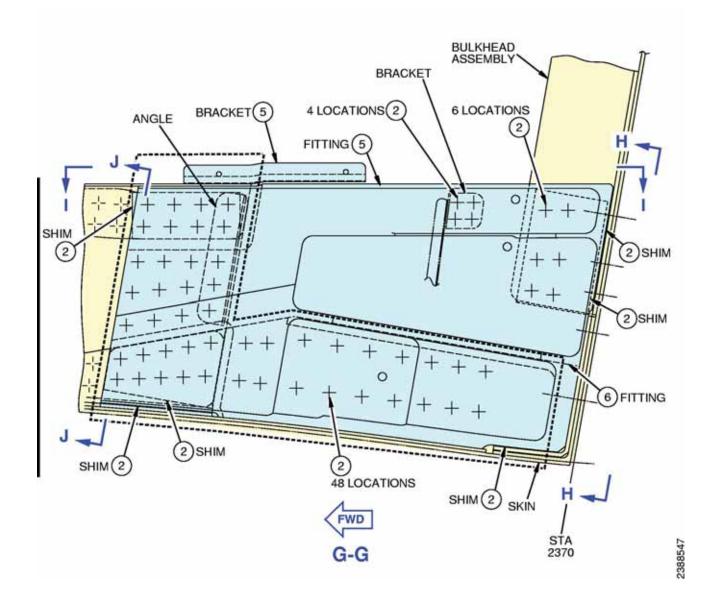


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 7 OF 10)

**ALERT** 

#### **ALERT**

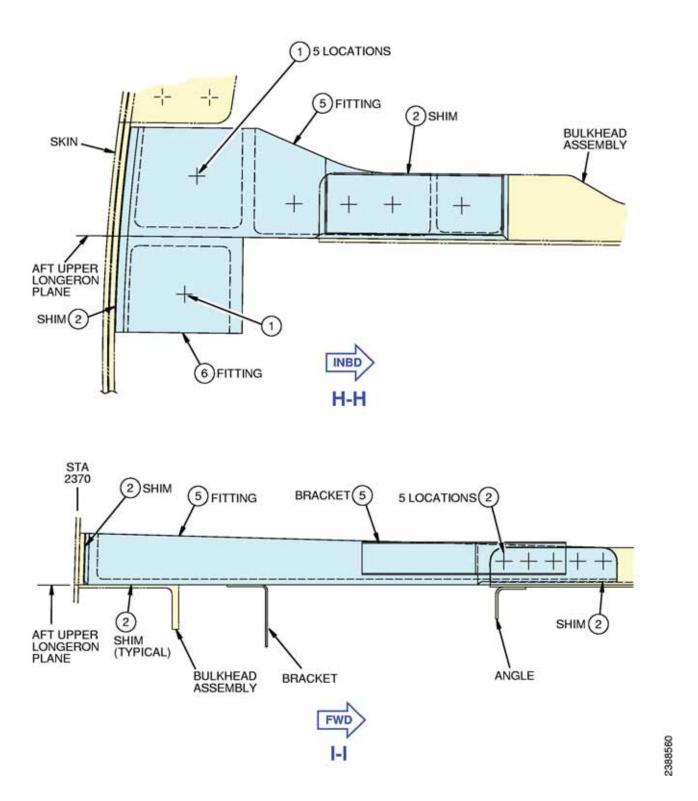
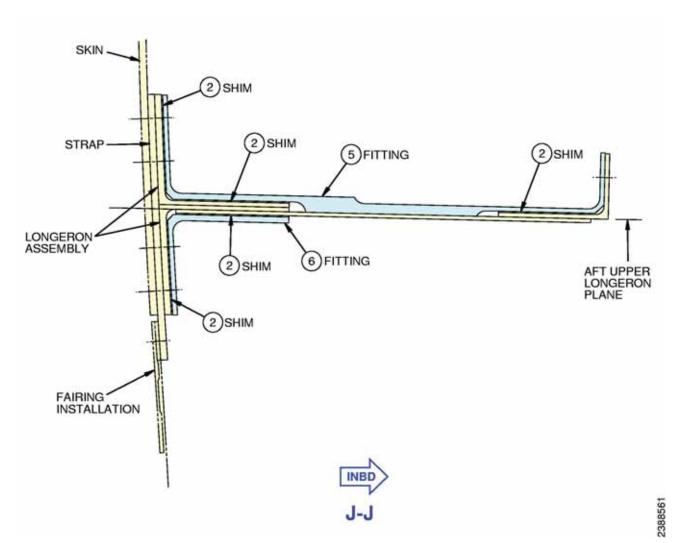


FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 8 OF 10)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name         | Identification  | Qty | More Data   |
|------|-------------|--------------|-----------------|-----|---|
| 1    | Remove/Keep | FASTENER     | -               | 12  | Make a note of the location of each removed fastener. |
| 2    | Remove      | FASTENER     | -               | 202 |   |
|      |             | SHIM         | -               | 19  |   |
|      |             | SPLICE ANGLE | 148W2204-( )    | 1   |   |
| 3    | Remove/Keep | END FITTING  | 148W2379-( )    | 1   |   |
|      |             | FILLER       | BACF3H14NP017HN | 2   | FILLER A  |
|      |             | FILLER       | 148W2328-1      | 1   | FILLER D  |

## FIGURE 9: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 9 OF 10)

## **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task        | Name  | Identification | Qty | More Data |
|------|-------------|---|----------------|-----|-----------|
| 4    | Remove/Keep | END FITTING   | 148W2369-( )   | 1   |           |
|      |             | FILLER  | 148W2328-2     | 1   | FILLER E  |
| 5    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, UPR | 148W2514-( )   | 1   |           |
|      |             | BRACKET   | 287W4809-291   | 1   |           |
| 6    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, FWD | 148W2515-( )   | 1   |           |

**ALERT** 

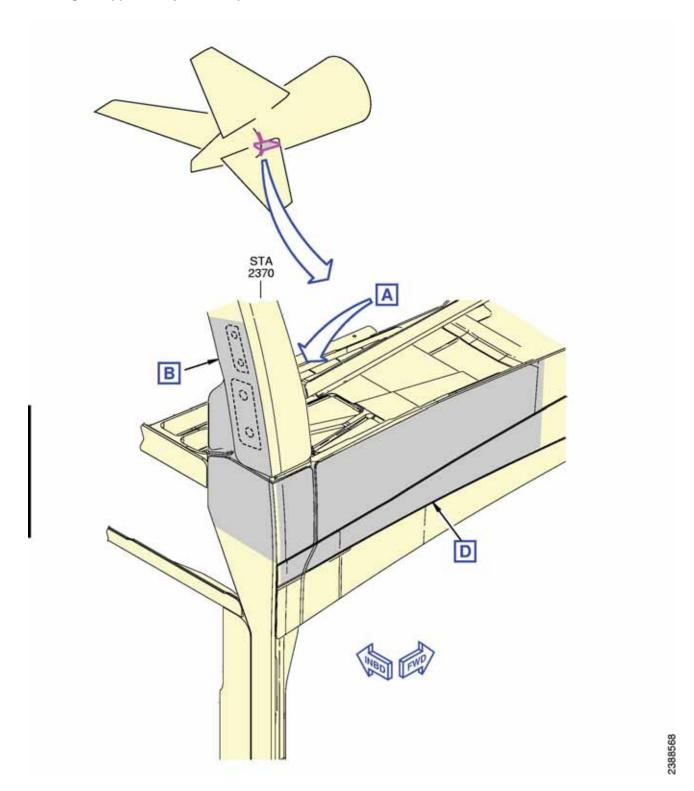


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 1 OF 10)

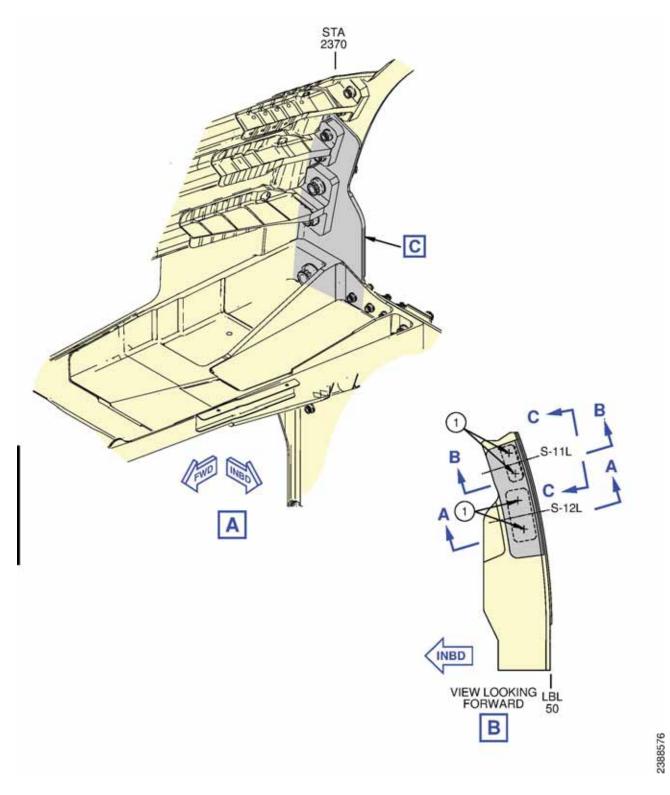


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 2 OF 10)

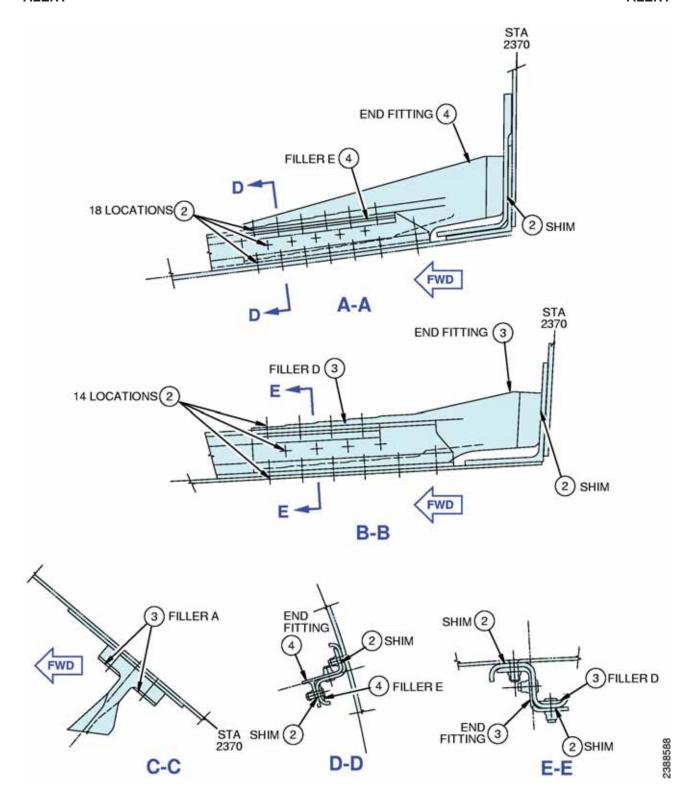


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 3 OF 10)

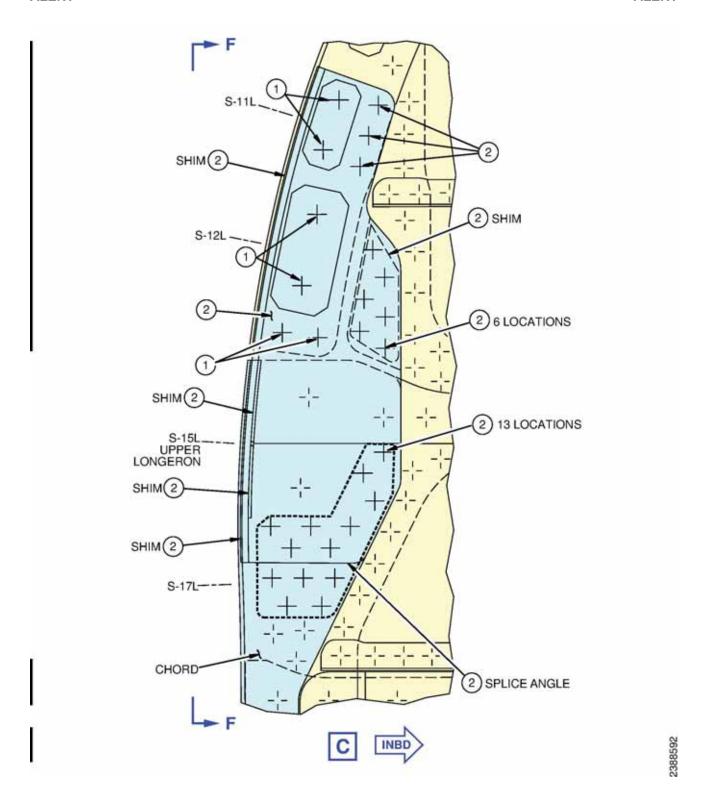


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 4 OF 10)

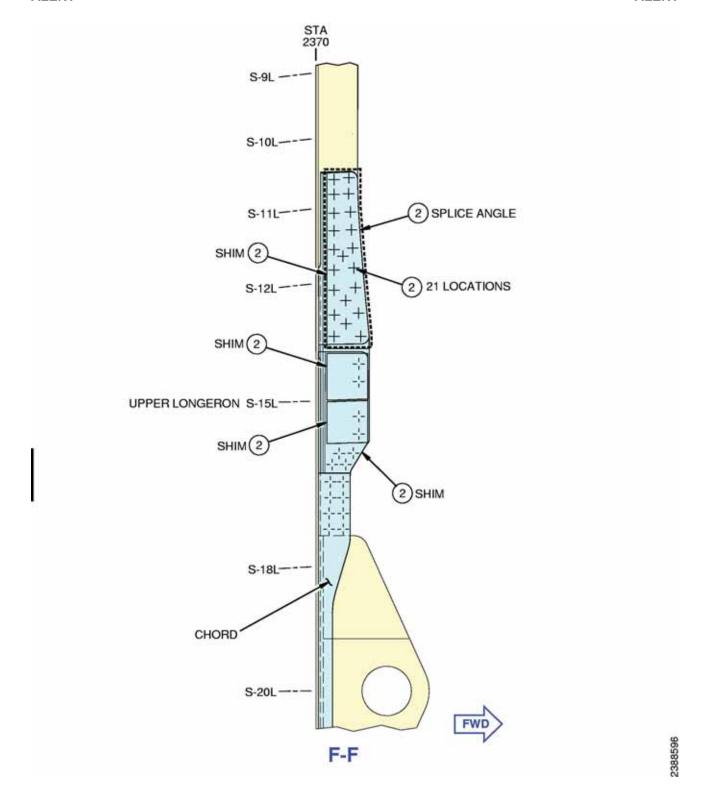
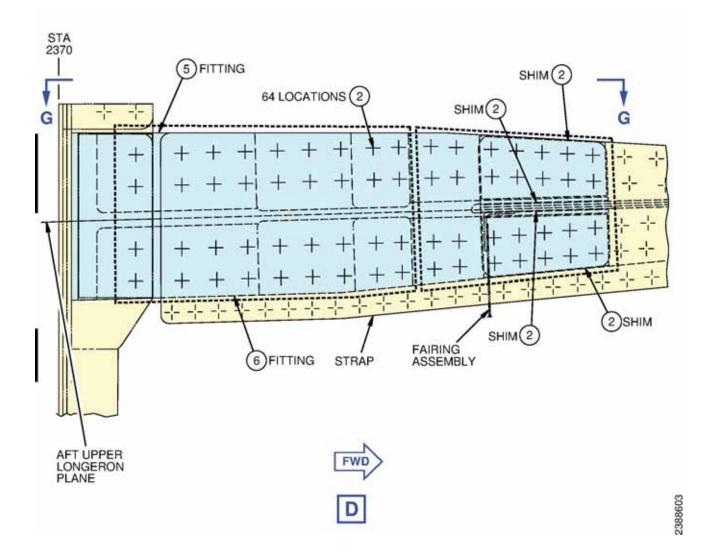


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 5 OF 10)



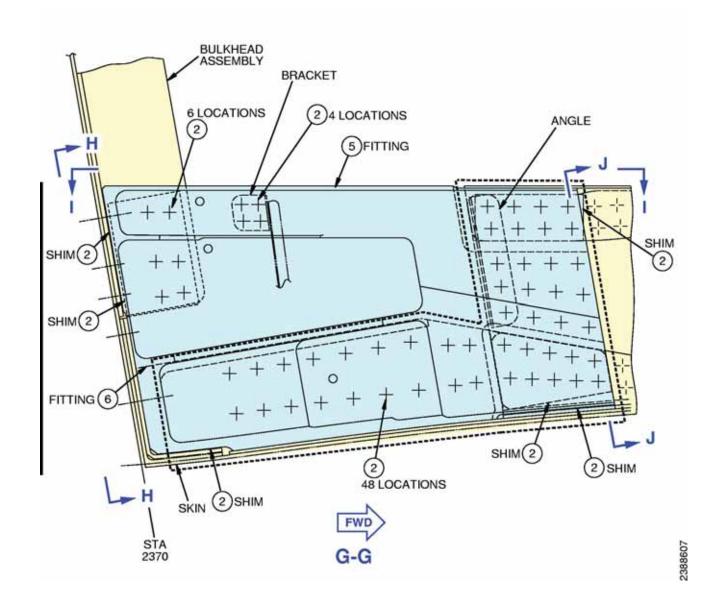


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 7 OF 10)

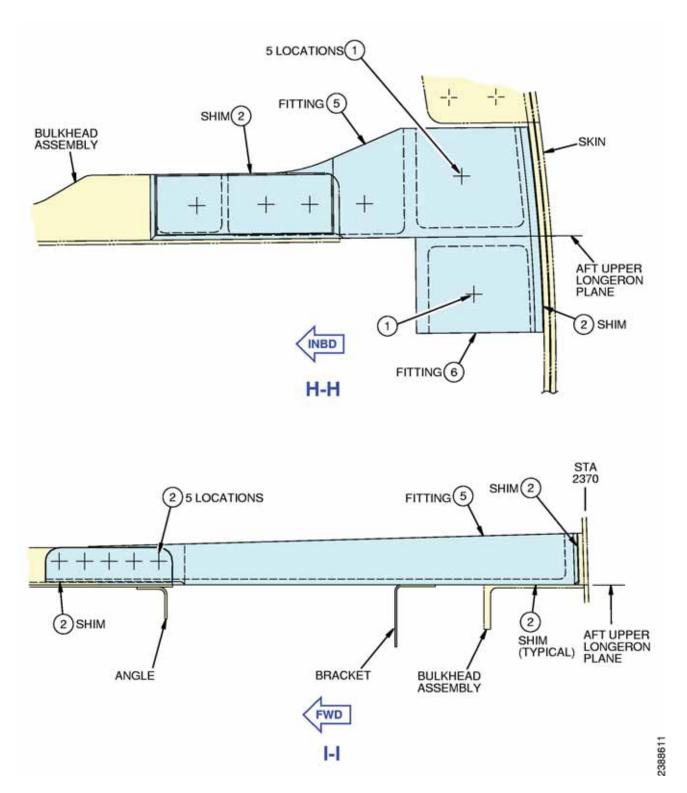
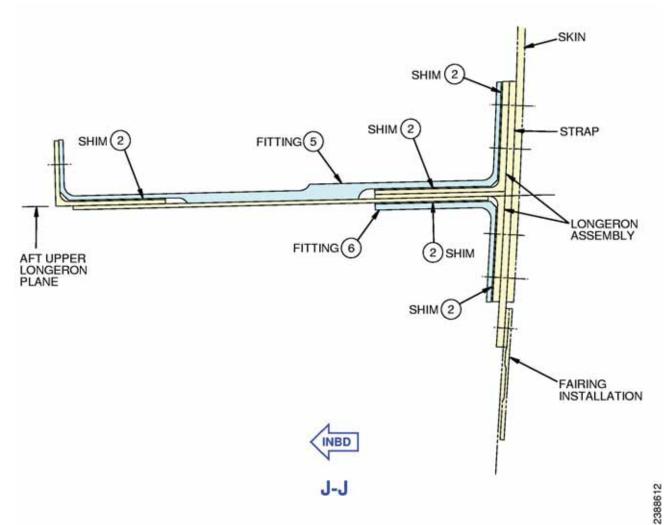


FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 8 OF 10)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name         | Identification  | Qty | More Data   |
|------|-------------|--------------|-----------------|-----|---|
| 1    | Remove/Keep | FASTENER     | -               | 12  | Make a note of the location of each removed fastener. |
| 2    | Remove      | FASTENER     | -               | 202 |   |
|      |             | SHIM         | -               | 19  |   |
|      |             | SPLICE ANGLE | 148W2204-( )    | 1   |   |
| 3    | Remove/Keep | END FITTING  | 148W2379-( )    | 1   |   |
|      |             | FILLER       | BACF3H14NP017HN | 2   | FILLER A  |
|      |             | FILLER       | 148W2328-1      | 1   | FILLER D  |

## FIGURE 10: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD - PART REMOVAL (SHEET 9 OF 10)

## **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Step | Task        | Name  | Identification | Qty | More Data |
|------|-------------|---|----------------|-----|-----------|
| 4    | Remove/Keep | END FITTING   | 148W2369-( )   | 1   |           |
|      |             | FILLER  | 148W2328-2     | 1   | FILLER E  |
| 5    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, UPR | 148W2514-( )   | 1   |           |
| 6    | Remove/Keep | SPLICE FITTING -<br>UPR LONGERON,<br>STA 2370, OUT-<br>BOARD, FWD | 148W2515-( )   | 1   |           |

### **ALERT**

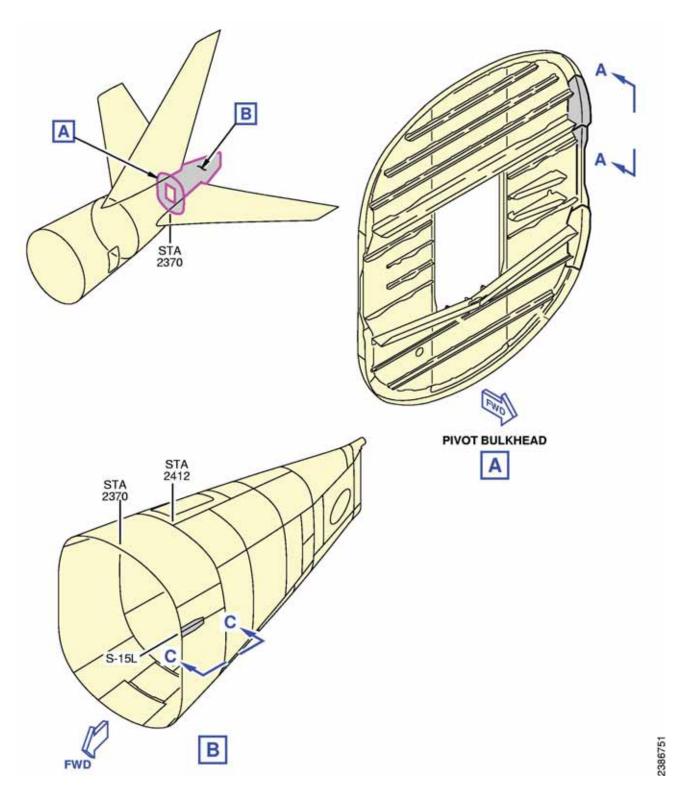


FIGURE 11: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 1 OF 5)

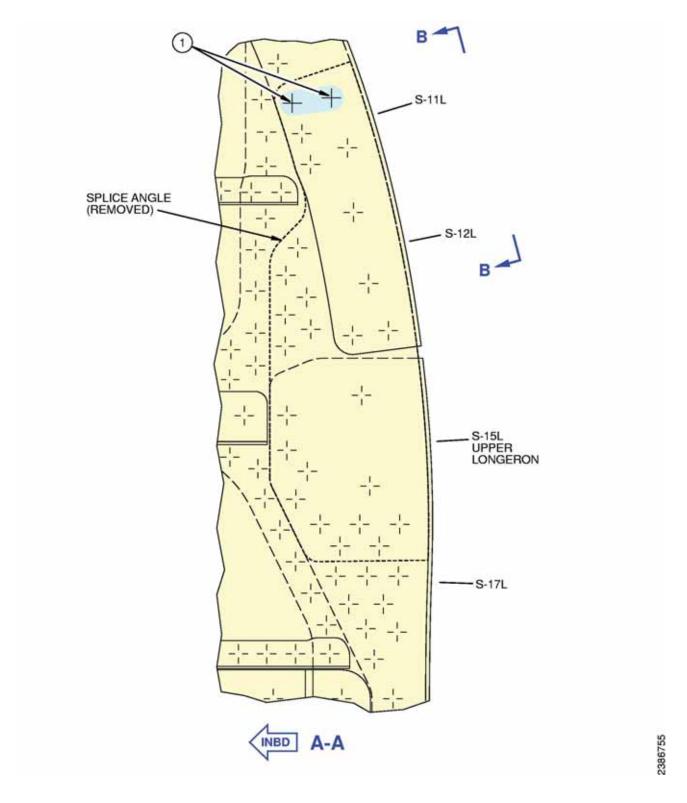


FIGURE 11: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 2 OF 5)

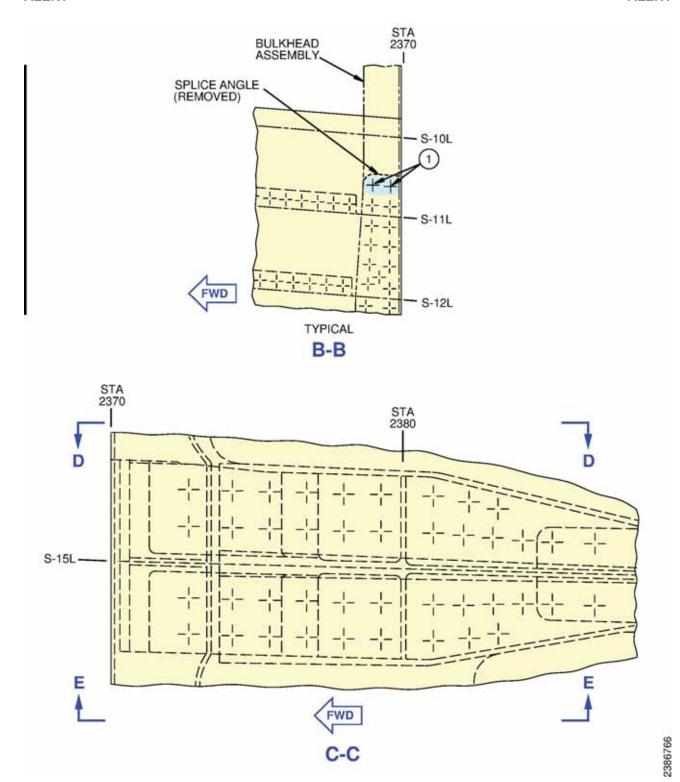


FIGURE 11: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 3 OF 5)

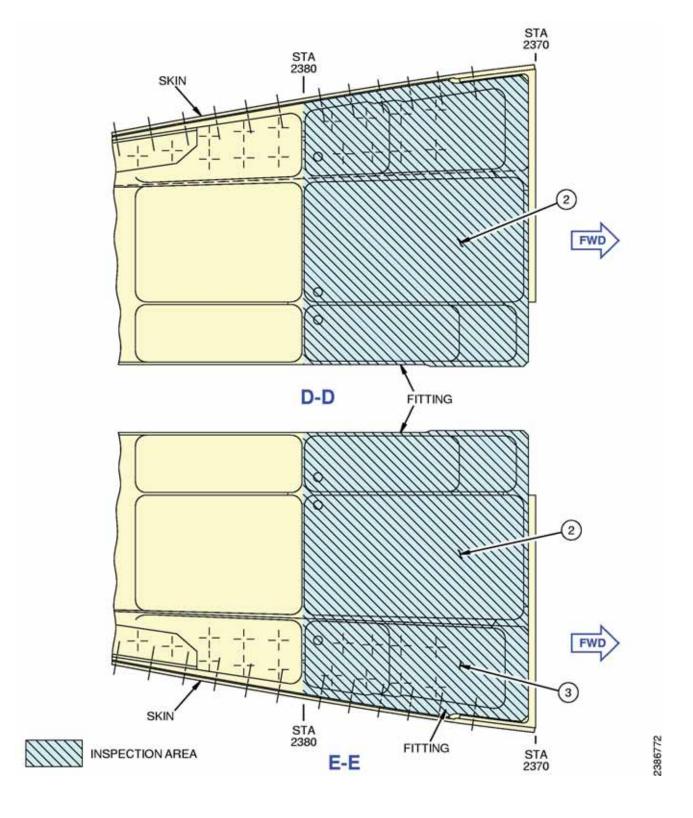


FIGURE 11: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 4 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name    | Identification | Qty | More Data   |
|------|---------|---------|----------------|-----|---|
| 1    | Inspect | HOLE    | -              | 4   | Do an open hole High Frequency Eddy Current (HFEC) inspection for any crack, of the holes common to the pivot bulkhead web, the upper forward chord and the aft chord, and of the holes common to the skin and the bulkhead assembly, in accordance with 777 NDT Manual Part 6, 51-00-02. |
| 2    | Inspect | FITTING | 148W5126-( )   | 1   | Do a Detailed Inspection (DET) of the upper aft longeron extension fittings between STA 2370 and STA 2380, for any crack.   |
| 3    | Inspect | FITTING | 148W5127-( )   | 1   | Do a Detailed Inspection (DET) of the upper aft longeron extension fittings between STA 2370 and STA 2380, for any crack.   |

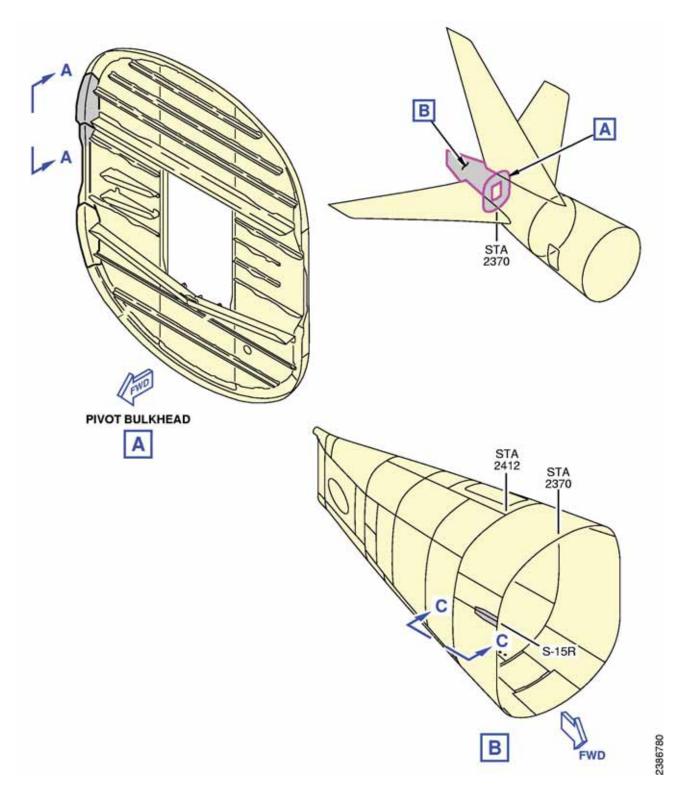


FIGURE 12: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 1 OF 5)

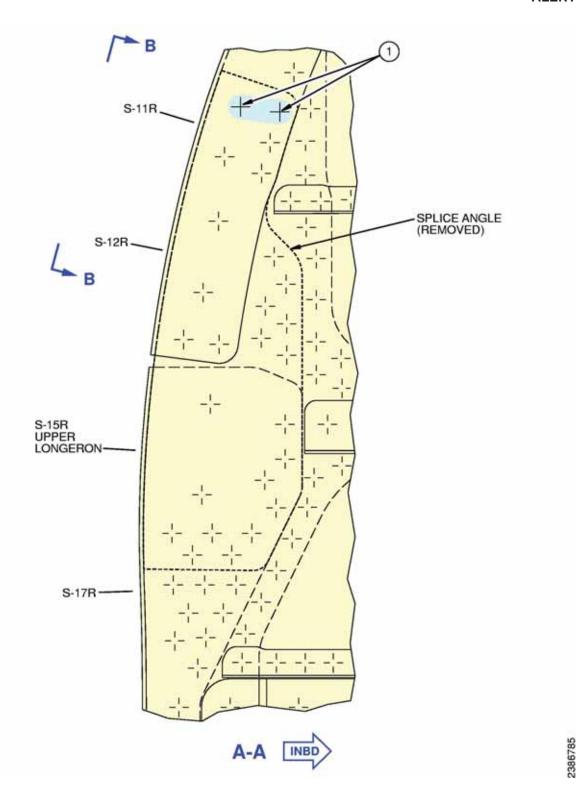


FIGURE 12: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 2 OF 5)

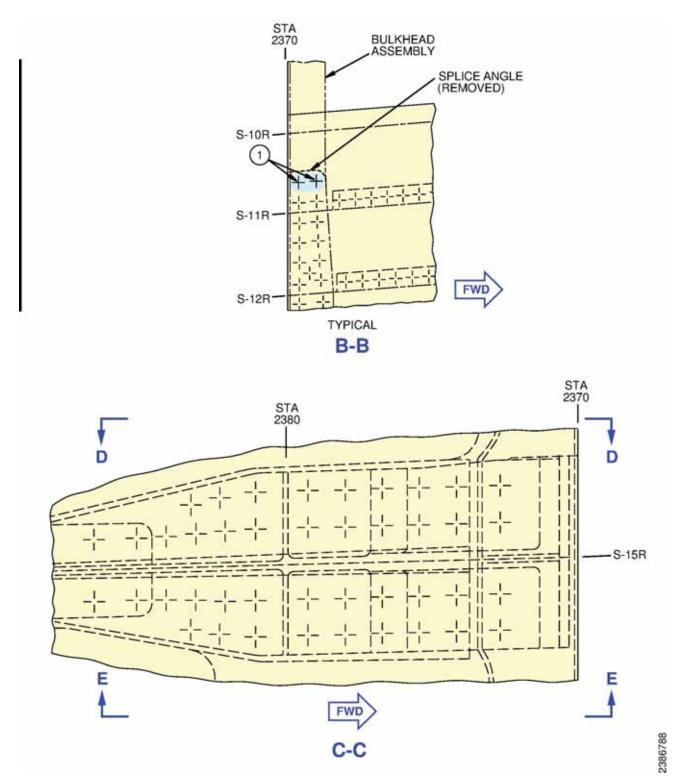


FIGURE 12: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 3 OF 5)

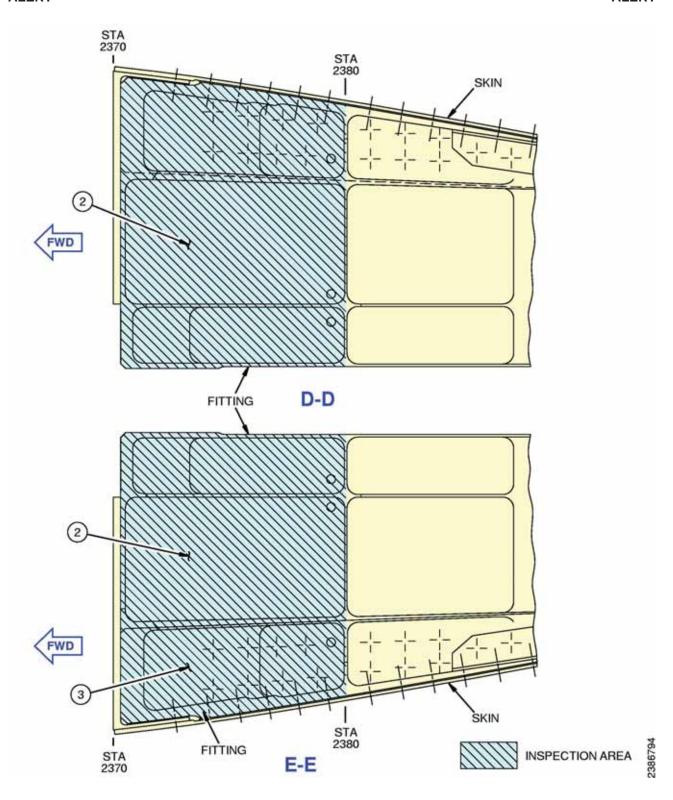


FIGURE 12: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD OUTER CHORD AND ADJACENT STRUCTURE - HFEC AND DET INSPECTION (SHEET 4 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name    | Identification | Qty | More Data   |
|------|---------|---------|----------------|-----|---|
| 1    | Inspect | HOLE    | -              | 4   | Do an open hole High Frequency Eddy Current (HFEC) inspection for any crack, of the holes common to the pivot bulkhead web, the upper forward chord and the aft chord, and of the holes common to the skin and the bulkhead assembly, in accordance with 777 NDT Manual Part 6, 51-00-02. |
| 2    | Inspect | FITTING | 148W5126-( )   | 1   | Do a Detailed Inspection (DET) of the upper aft longeron extension fittings between STA 2370 and STA 2380, for any crack.   |
| 3    | Inspect | FITTING | 148W5127-( )   | 1   | Do a Detailed Inspection (DET) of the upper aft longeron extension fittings between STA 2370 and STA 2380, for any crack.   |

### **ALERT**

This Figure applies only to: Group 1.

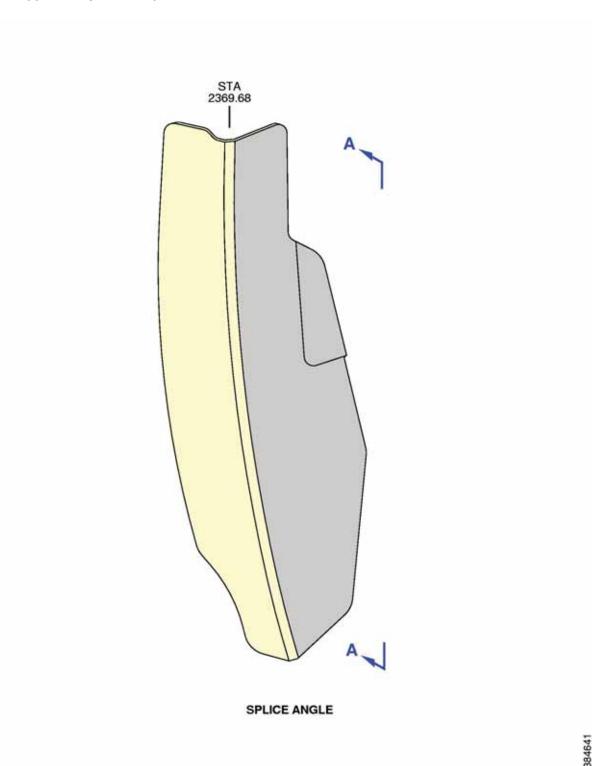


FIGURE 13: LEFT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION (SHEET 1 OF 3)

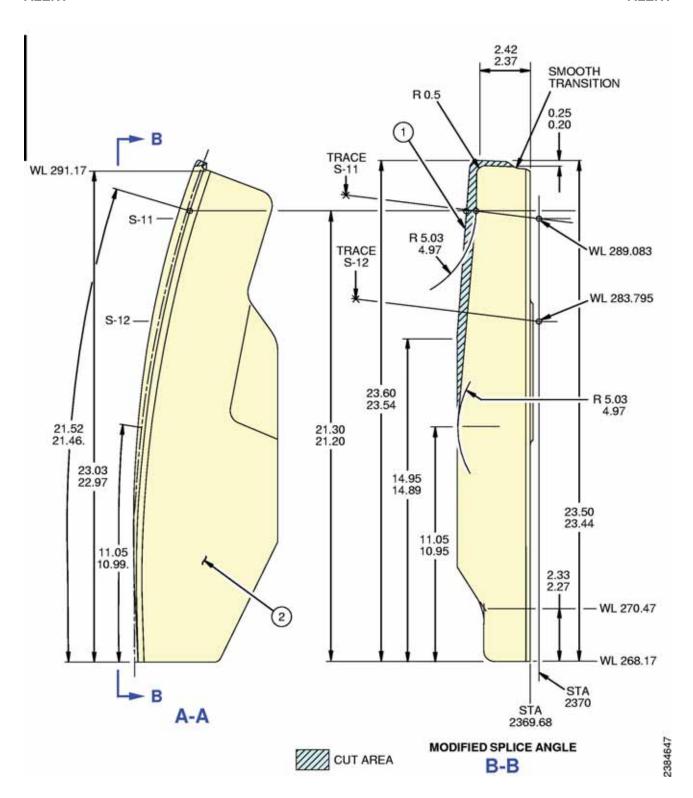


FIGURE 13: LEFT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION (SHEET 2 OF 3)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task      | Name                              | Identification       | Qty | More Data  |
|------|-----------|-----------------------------------|----------------------|-----|--|
| 1    | Cut       | SPLICE ANGLE                      | 148W2204-5           | 1   | Cut to the dimensions shown. Maximum surface roughness 125RA.  |
|      | Deburr    | SPLICE ANGLE                      | 148W2204-5           | 1   | Break all sharp edges.   |
|      | Shot Peen | SPLICE ANGLE                      | 148W2204-5           | 1   | Roto peen cut<br>edges. Refer to<br>SOPM 20-10-03<br>as an accepted<br>procedure.  |
|      | Apply     | CHEMICAL<br>CONVERSION<br>COATING | -                    | -   | Apply to the cut surfaces. Refer to SOPM 20-43-03 as an accepted procedure.  |
|      |           | PRIMER                            | BMS 10-11,<br>TYPE I | -   | Apply two coats to the cut surfaces. Refer to SOPM 20-41-02 as an accepted procedure.  |
| 2    | Identify  | SPLICE ANGLE                      | 148W2204-5           | 1   | Identify on the part that this service bulletin change has been made. Refer to SOPM 20-50-10 rubber stamp method as an accepted procedure. |

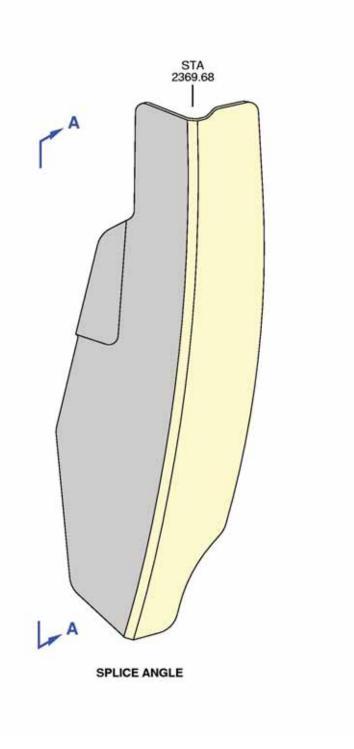


FIGURE 14: RIGHT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION (SHEET 1 OF 3)

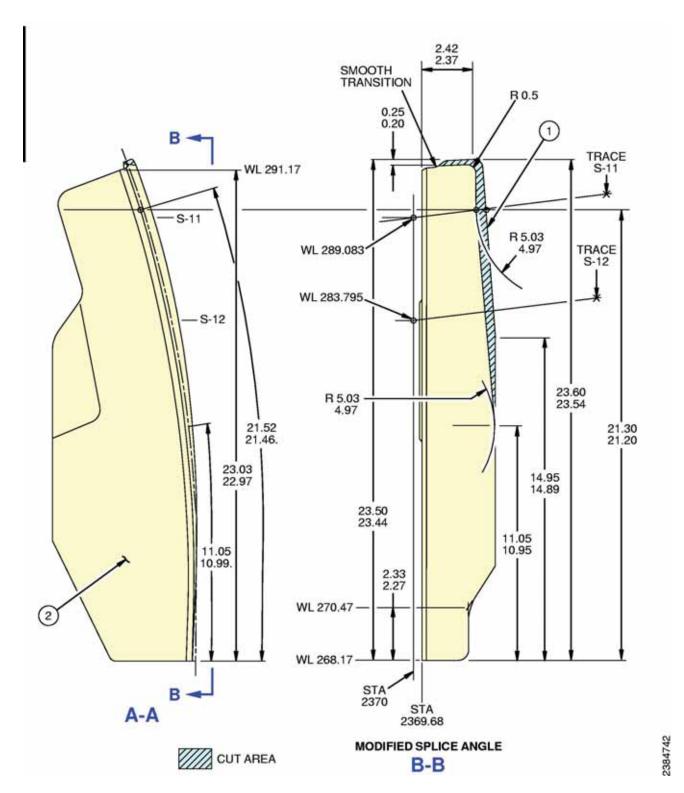


FIGURE 14: RIGHT SIDE - STA 2370 - SPLICE ANGLE - MODIFICATION (SHEET 2 OF 3)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task      | Name                              | Identification       | Qty | More Data  |
|------|-----------|-----------------------------------|----------------------|-----|--|
| 1    | Cut       | SPLICE ANGLE                      | 148W2204-6           | 1   | Cut to the dimensions shown. Maximum surface roughness 125RA.  |
|      | Deburr    | SPLICE ANGLE                      | 148W2204-6           | 1   | Break all sharp edges.   |
|      | Shot Peen | SPLICE ANGLE                      | 148W2204-6           | 1   | Roto peen cut<br>edges. Refer to<br>SOPM 20-10-03<br>as an accepted<br>procedure.  |
|      | Apply     | CHEMICAL<br>CONVERSION<br>COATING |                      | -   | Apply to the cut<br>surfaces. Refer<br>to SOPM 20-43-<br>03 as an accept-<br>ed procedure.   |
|      |           | PRIMER                            | BMS 10-11,<br>TYPE I | -   | Apply two coats to the cut surfaces. Refer to SOPM 20-41-02 as an accepted procedure.  |
| 2    | Identify  | SPLICE ANGLE                      | 148W2204-6           | 1   | Identify on the part that this service bulletin change has been made. Refer to SOPM 20-50-10 rubber stamp method as an accepted procedure. |

**ALERT** 

This Figure applies only to: Group 1.

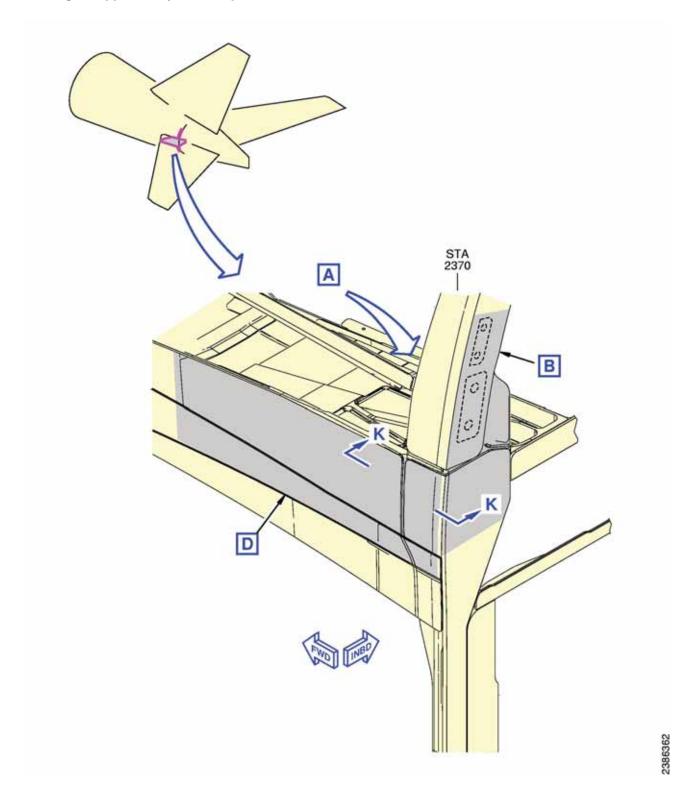


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 1 OF 22)

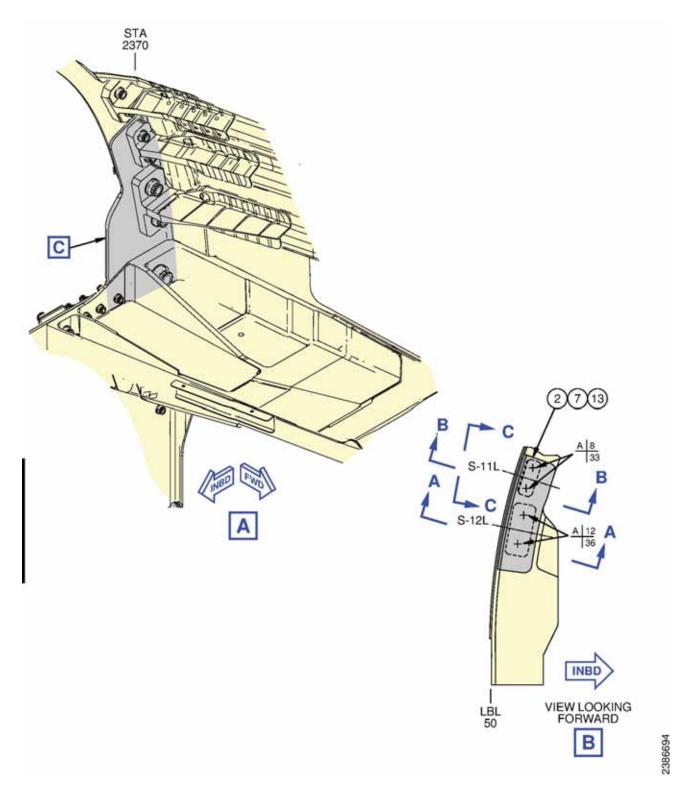


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 2 OF 22)

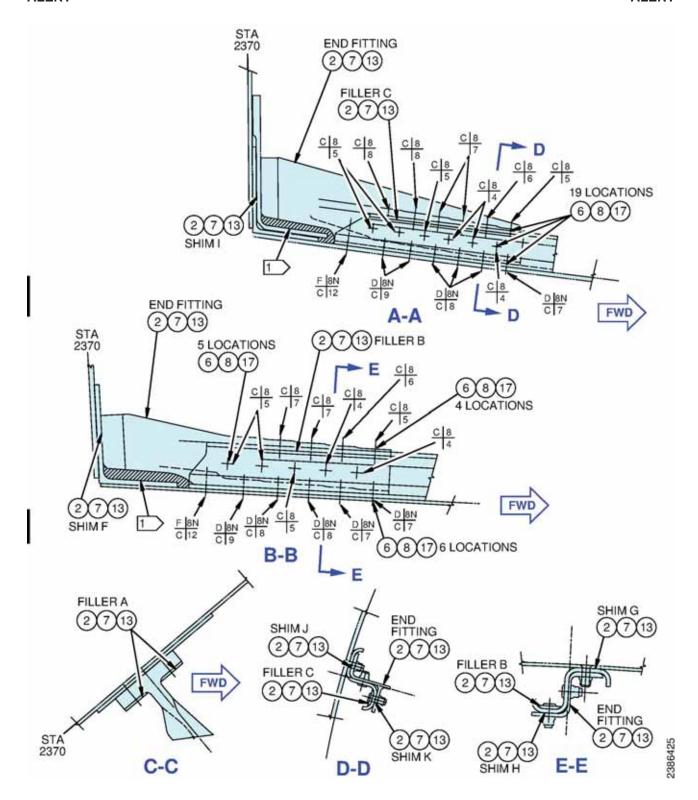


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 3 OF 22)

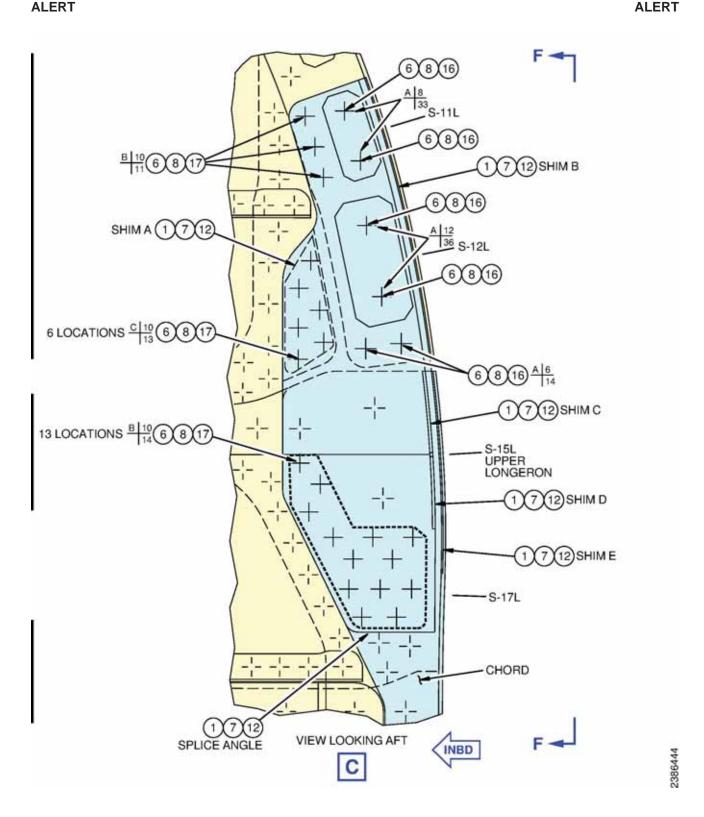


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 4 OF 22)

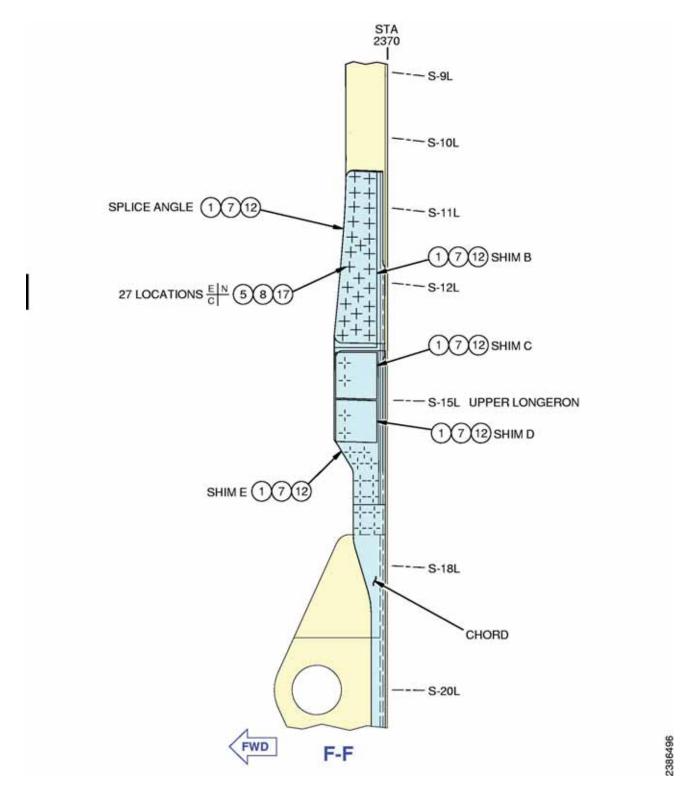


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 5 OF 22)

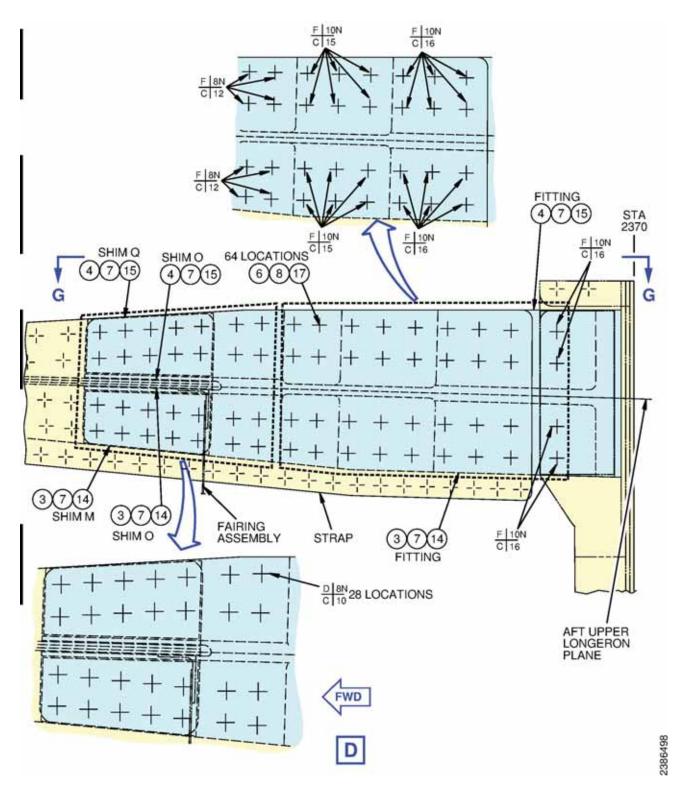


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 6 OF 22)

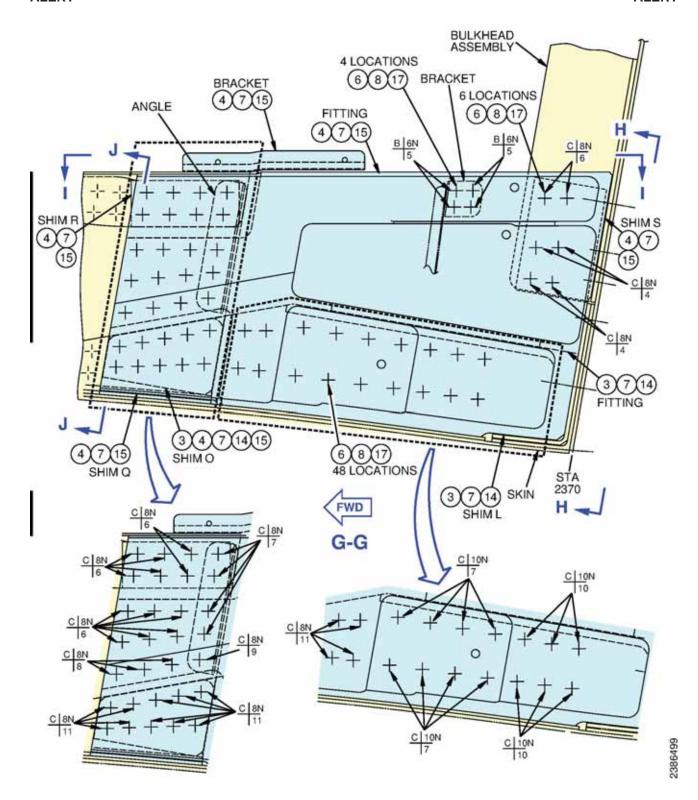


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 7 OF 22)

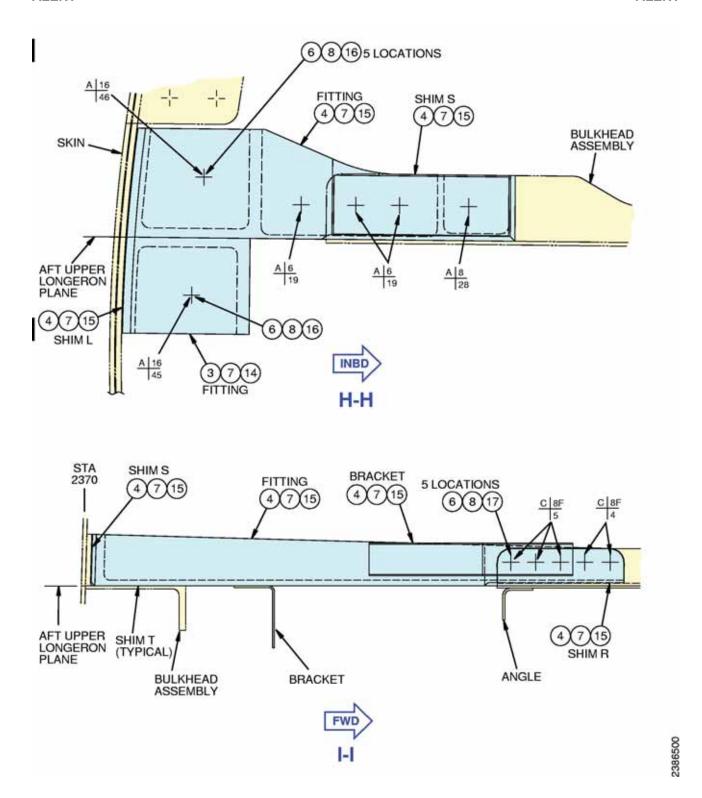
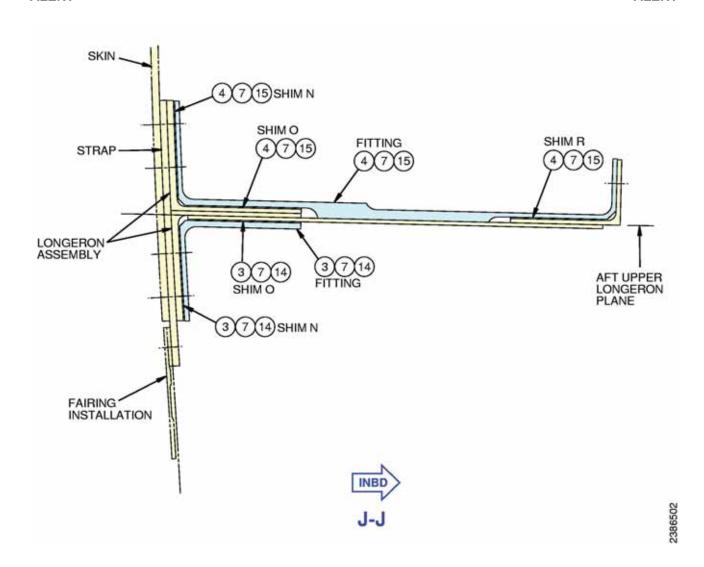


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 8 OF 22)



# FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 9 OF 22)

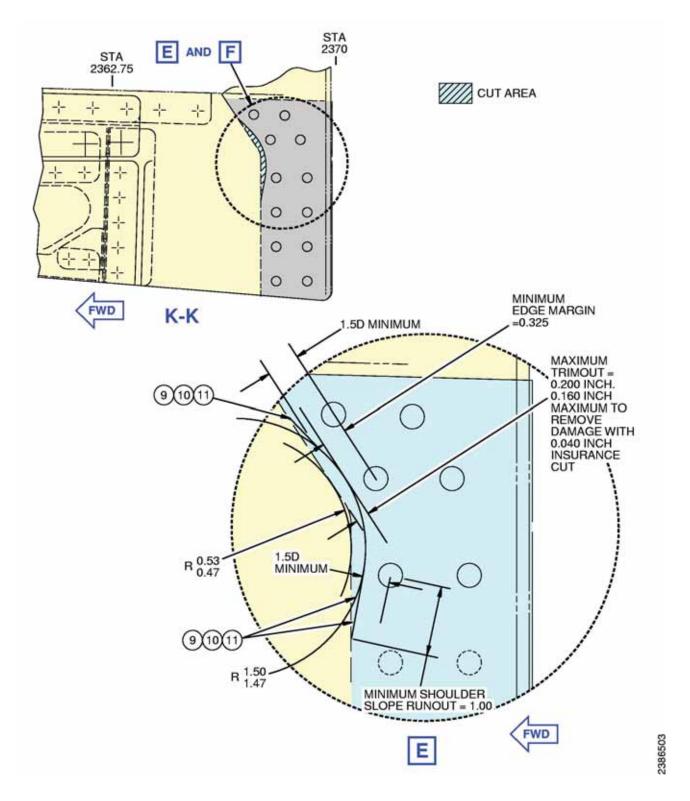


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 10 OF 22)

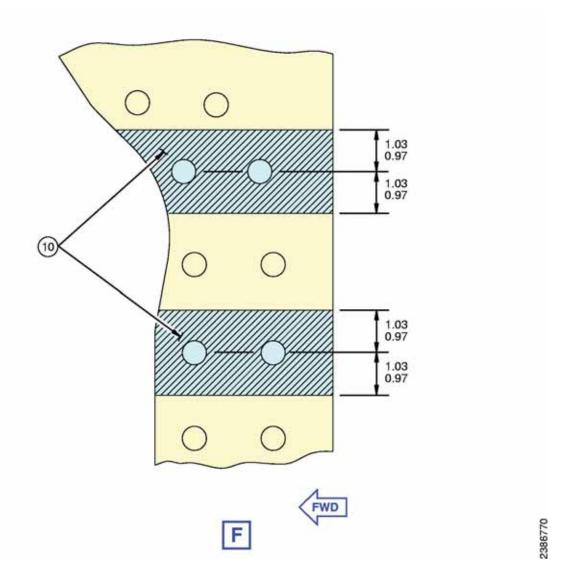


FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 11 OF 22)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task       | Name            | Identification  | Qty | More Data                              |
|------|------------|-----------------|-----------------|-----|--|
| 1    | Put / Hold | SPLICE ANGLE    | 148W2204-5      | 1   | modified in accordance with FIGURE 13. |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-11     | 1   | SHIM A                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-13     | 1   | SHIM B                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-7      | 1   | SHIM C                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-6      | 1   | SHIM D                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-5      | 1   | SHIM E                                 |
| 2    | Put / Hold | SHIM, LAMINATED | BACS40R017B037F | 1   | SHIM F                                 |
|      | Put / Hold | FILLER          | BACF3H14NP017HN | 2   | FILLER A This is a kept part.          |
|      | Put / Hold | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H                                 |
|      | Put / Hold | FILLER          | BACF33C105-410F | 1   | FILLER B<br>This is a kept part.       |
|      | Put / Hold | END FITTING     | 148W2379-()     | 1   |  |
|      | Put / Hold | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K                                 |
|      | Put / Hold | FILLER          | BACF33C105-620F | 1   | FILLER C<br>This is a kept part.       |
|      | Put / Hold | END FITTING     | 148W2369-()     | 1   |  |
| 3    | Put / Hold | FITTING         | 148W2515-()     | 1   |  |
|      | Put / Hold | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L                                 |
|      | Put / Hold | SHIM            | 148W0015-13     | 1   | SHIM M                                 |
|      | Put / Hold | SHIM            | 148W0015-14     | 1   | SHIM O                                 |

| Step | Task          | Name            | Identification  | Qty | More Data   |
|------|---------------|-----------------|-----------------|-----|---|
| 4    | Put / Hold    | FITTING         | 148W2514-()     | 1   |   |
|      | Put / Hold    | SHIM            | 148W0015-12     | 1   | SHIM Q  |
|      | Put / Hold    | SHIM            | 148W0015-14     | 1   | SHIM O  |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R  |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S  |
|      | Put / Hold    | BRACKET         | 287W4809-291    | 1   | This is a kept part.  |
| 5    | Drill         | HOLE            | -               | 27  | Match drill the holes common to the skin, splice angle and forward outer chord. |
| 6    | Drill / Ream  | HOLE            | -               | 195 |   |
| 7    | Remove / Keep | PART            | -               | -   |   |
| 8    | Deburr        | HOLE            | -               | -   |   |

| Step | Task    | Name  | Identification | Qty | More Data   |
|------|---------|-------|----------------|-----|---|
| 9    | Cut     | CHORD | 148W7102-()    | 1   | the damaged edge in accordance with 777-200 SRM 51-10-02 or 777-300 SRM 51-10-02, as applicable. Minimum material removed equals the length of the longest detected crack, and not to exceed 0.160 inch.  |
|      | Deburr  | CHORD | 148W7102-()    | 1   |   |
|      | Inspect | CHORD | 148W7102-()    | 1   | Do a surface High<br>Frequency Eddy<br>Current (HFEC) in-<br>spection of the cut<br>edge, to make sure<br>any crack was re-<br>moved, in accor-<br>dance with 777 NDT<br>Manual Part 6, 51-<br>00-01. (a) |
|      | Cut     | CHORD | 148W7102-()    | 1   | 0.04 inch insurance cut. Maximum edge trim out is 0.200 inch. Blend the edge to a minimum radius of 1.50 inch. Maintain a shoulder slope of runout of minimum 1.0 inch.                                   |
|      | Deburr  | CHORD | 148W7102-()    | 1   | Deburr the cut edge.<br>The surface roughness of the cut edge is 63 Ra or better.   |

FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 14 OF 22)

| Step | Task          | Name                        | Identification    | Qty | More Data   |
|------|---------------|-----------------------------|-------------------|-----|---|
| 10   | Shot Peen     | CHORD                       | 148W7102-()       | 1   | The indicated inboard and outboard surface of the chord. Shot intensity is 0.010A, shot size is 330, and coverage is 100%. Refer to SOPM 20-10-03, Self-Contained Shot Peening, as an accepted procedure. |
| 11   | Apply         | CHEMICAL CONVERSION COATING | -                 | -   | to the cut surface, in<br>accordance with<br>777-200 SRM 51-<br>20-01 or 777-300<br>SRM 51-20-01, as<br>applicable.   |
|      | Apply         | PRIMER                      | BMS 10-11, TYPE I | -   | two coats, on the cut<br>surface. Refer to<br>SOPM 20-41-02 as<br>an accepted proce-<br>dure.   |
| 12   | Install (New) | SPLICE ANGLE                | 148W2204-5        | 1   | modified in accordance with FIGURE 13. (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-11       | 1   | SHIM A<br>(e) (f)   |
|      | Install (New) | SHIM LAMINATED              | 148W7143-13       | 1   | SHIM B<br>(e) (f)   |
|      | Install (New) | SHIM LAMINATED              | 148W7143-7        | 1   | SHIM C<br>(e) (f)   |
|      | Install (New) | SHIM LAMINATED              | 148W7143-6        | 1   | SHIM D<br>(e) (f)   |
|      | Install (New) | SHIM LAMINATED              | 148W7143-5        | 1   | SHIM E<br>(e) (f)   |

| Step | Task           | Name            | Identification  | Qty | More Data  |
|------|----------------|-----------------|-----------------|-----|--|
| 13   | Install (New)  | SHIM, LAMINATED | BACS40R017B037F | 1   | SHIM F<br>(d) (f)  |
|      | Install (Kept) | FILLER          | BACF3H14NP017HN | 2   | FILLER A (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G<br>(b) (f)  |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H<br>(b) (f)  |
|      | Install (Kept) | FILLER          | BACF33C105-410F | 1   | FILLER B (f)   |
|      | Install (Kept) | END FITTING     | 148W2379-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
|      | Install (New)  | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I<br>(d) (f)  |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J<br>(b) (f)  |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K<br>(b) (f)  |
|      | Install (Kept) | FILLER          | BACF33C105-620F | 1   | FILLER C (f)   |
|      | Install (Kept) | END FITTING     | 148W2369-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
| 14   | Install (Kept) | FITTING         | 148W2515-()     | 1   | (f)  |
|      | Install (New)  | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L<br>(b) (f)  |
|      | Install (New)  | SHIM            | 148W0015-13     | 1   | SHIM M<br>(b) (f)  |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O<br>(b) (f)  |

# FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 16 OF 22)

| Step | Task           | Name            | Identification  | Qty | More Data         |
|------|----------------|-----------------|-----------------|-----|-------------------|
| 15   | Install (Kept) | FITTING         | 148W2514-()     | 1   | (f)               |
|      | Install (New)  | SHIM            | 148W0015-12     | 1   | SHIM Q<br>(b) (f) |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O<br>(b) (f) |
|      | Install (New)  | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R<br>(b) (f) |
|      | Install (New)  | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S<br>(b) (f) |
|      | Install (Kept) | BRACKET         | 287W4809-291    | 1   | (f)               |
| 16   | Install (Kept) | FASTENER        | -               | 12  | (g)               |
| 17   | Install (New)  | FASTENER        | -               | 210 | (g)               |

- (a) If crack indications exist after this surface HFEC inspection, remove additional material, a maximum of 0.160 inch total, to remove the crack indication. If crack indications still exist after a total of 0.160 inch of material has been removed, this repair cannot be done. Do the modification in Boeing Service Bulletin 777-53-0076.
- (b) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.04 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (c) Fit shim by removing 0.003 inch laminations as required. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (d) Fit shim by removing 0.003 inch laminations as required. Maximum gap after shimming is 0.003 inch. Step tapering may be necessary. Shim must pick up minimum of one bolt. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (e) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.033 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (f) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.
- (q) Install fasteners with BMS 5-95. Refer to SOPM 20-50-19, Method 2, as an accepted procedure.

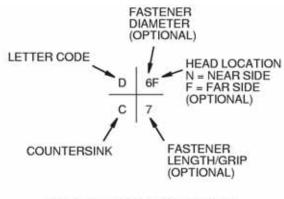
The parts shown in the table below are provided as extra parts for this figure.

| Name           | Identification  | Qty | More Data |
|----------------|-----------------|-----|-----------|
| SHIM-LAMINATED | BACS40R033B052F | 1   | SHIM T    |

### FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 17 OF 22)

The flag note numbers shown below agree with the numbers shown in the flag symbols in the figure.

| Flagnote | Description   |
|----------|---|
| 1        | Make sure the space between the stringer end fitting and the adjacent structure is free of sealant for sufficient drainage. |



**EXAMPLE OF FASTENER SYMBOL** 

314994

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name             | Identification | Qty | Hole Dia      | More Data   |
|------|------------------|----------------|-----|---------------|---|
| A    | BOLT, 12 PT HEAD | BACB30US6K14   | 2   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD | BACB30US6K19   | 3   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN    | BACW10BP6CD    | 5   | -             | Under bolt head   |
|      | WASHER           | BACW10BP6DP    | 5   | -             | Under the nut   |
|      | SELF-LOCKING NUT | BACN10HR6CD    | 5   | -             | Tighten to 300 to 500 in-<br>lb.  |
|      | BOLT, 12 PT HEAD | BACB30US8K28   | 1   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD | BACB30US8K33   | 2   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER           | BACW10BP8CD    | 3   | -             | Under bolt head   |
|      | WASHER           | BACW10BP8DP    | 3   | -             | Under the nut   |
|      | NUT              | BACN10HR8CD    | 3   | -             | Tighten to 870 to 1300 in-<br>lb.   |
|      | BOLT, 12 PT HEAD | BACB30US12K36  | 2   | 0.751 - 0.757 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN    | BACW10BP12CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN    | BACW10BP12DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT | BACN10HR12CD   | 2   | -             | Tighten to 3300 to 4300 in-lb.  |

# FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 19 OF 22)

| Code | Name                   | Identification | Qty | Hole Dia      | More Data   |
|------|------------------------|----------------|-----|---------------|---|
|      | BOLT, 12 PT HEAD       | BACB30US16K45  | 1   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD       | BACB30US16K46  | 1   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN          | BACW10BP16CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN          | BACW10BP16DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT       | BACN10HR162CD  | 2   | -             | Tighten to 7000 to 10900 in-lb.   |
| В    | BOLT, PROTRUDING<br>HD | BACB30NX6K5X   | 4   | 0.200 - 0.203 |   |
|      | COLLAR                 | BACC30M6       | 4   | -             |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K11X | 3   | 0.327 - 0.331 |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K14X | 13  | 0.327 - 0.331 |   |
|      | COLLAR                 | BACC30BH10     | 16  | -             |   |

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| С    | BOLT, PROTRUDING<br>HD  | BACB30MY8K4X   | 11  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K5X   | 11  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K6X   | 16  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K7X   | 8   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K9X   | 1   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K11X  | 14  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 66  | -             |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K7X  | 8   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K10X | 6   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K13X | 6   | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30M10      | 20  | -             |           |
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K7X   | 3   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 3   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K10X  | 28  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 39  | -             |           |
| E    | RIVET                   | BACR15FV81KE13 | 27  | 0.268 - 0.272 |           |

# FIGURE 15: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 21 OF 22)

#### **BOEING SERVICE BULLETIN 777-53A0075**

ALERT

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| F    | BOLT, 100 DEG HEX<br>DR | BACB30NZ8K12X  | 10  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30BH8      | 10  | -             |           |
|      | BOLT, 100 DEG HEX<br>D  | BACB30NZ10K15X | 12  | 0.325 - 0.328 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NZ10K16X | 16  | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30BH10     | 28  | -             |           |

This Figure applies only to: Group 1.

**ALERT** 

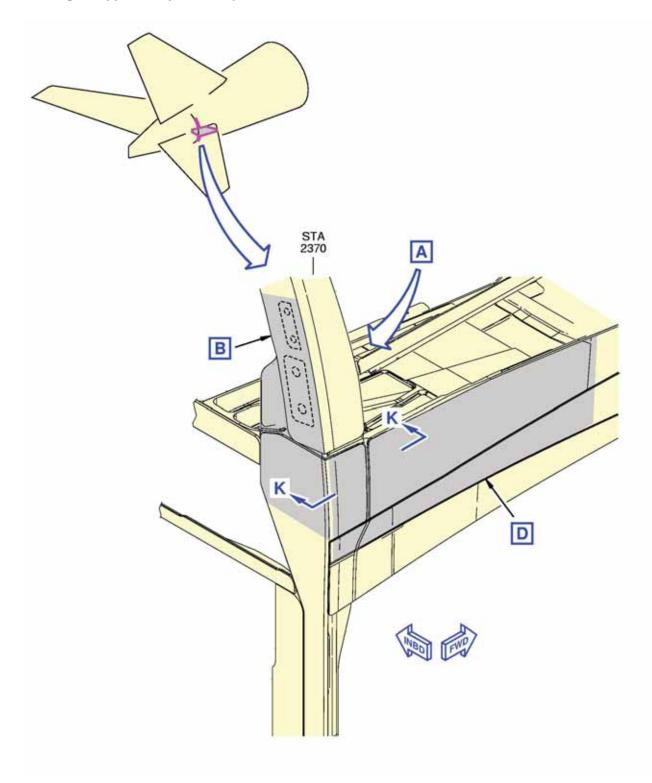


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 1 OF 20)

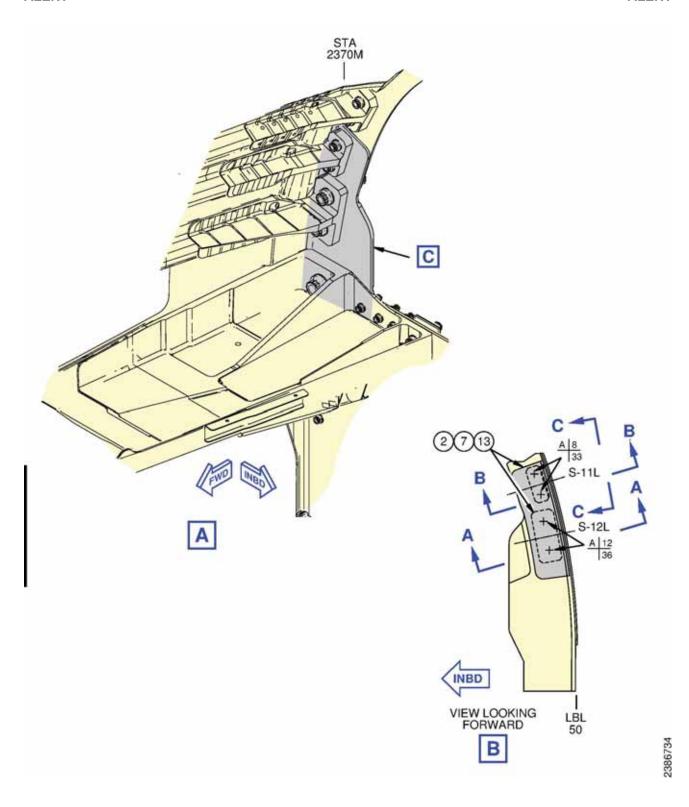


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 2 OF 20)

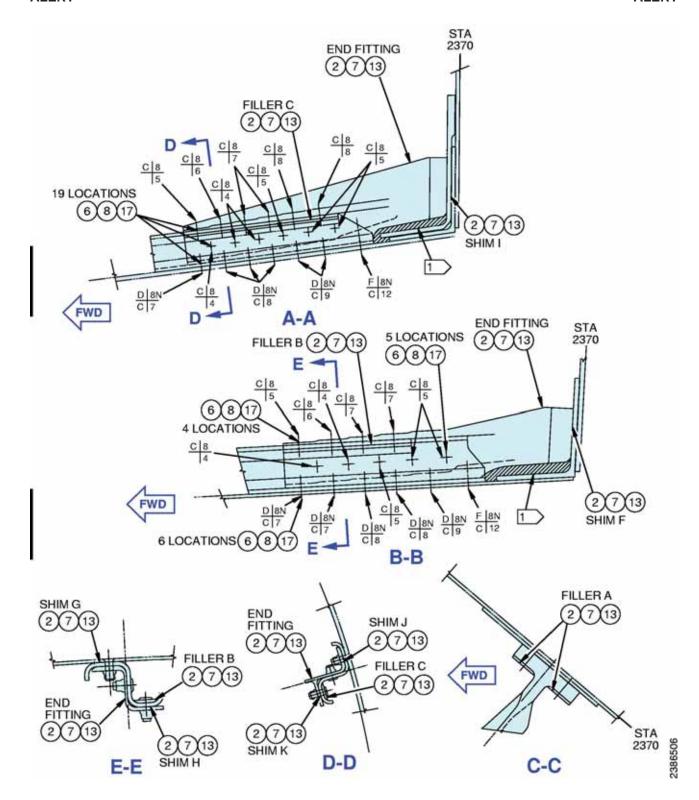


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 3 OF 20)

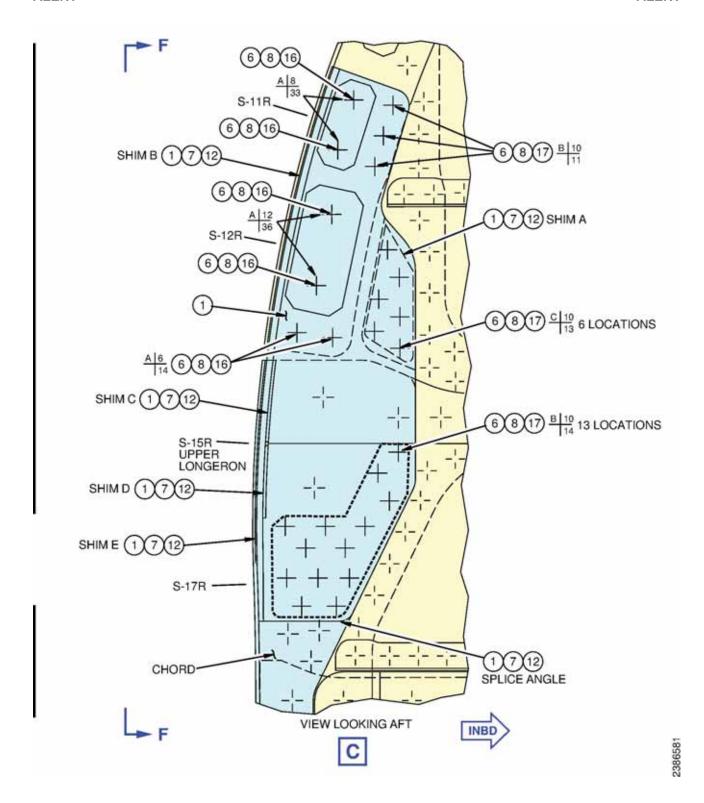


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 4 OF 20)

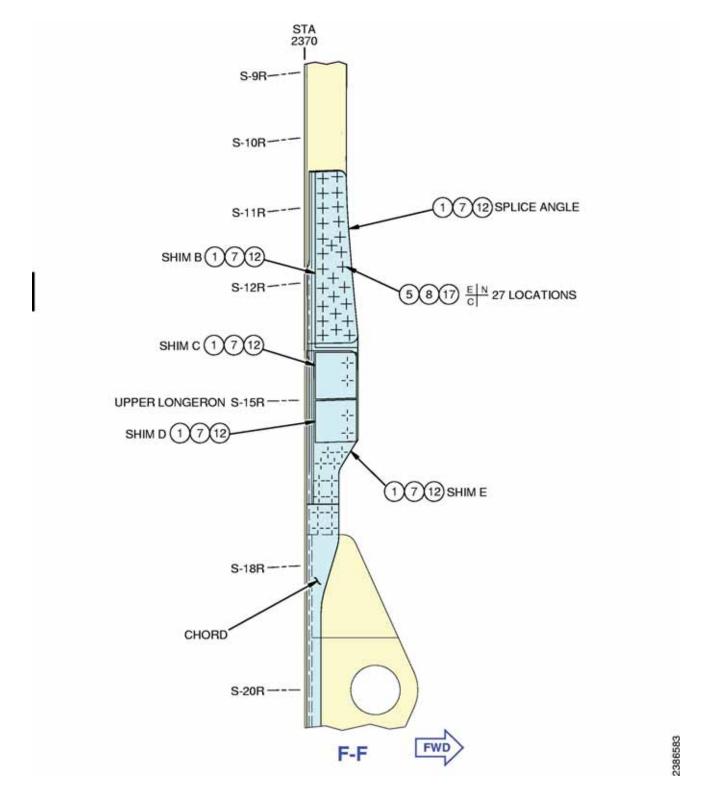


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 5 OF 20)

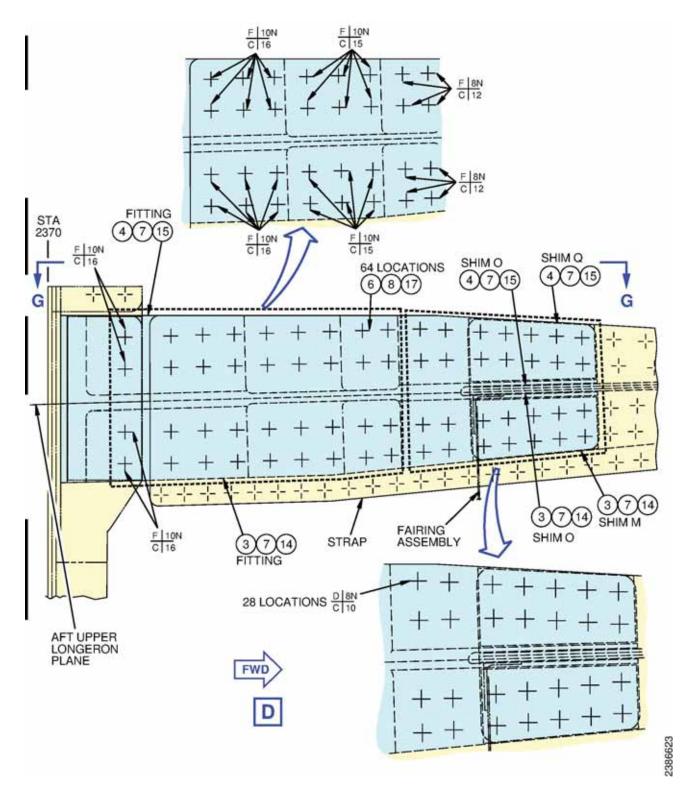


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 6 OF 20)

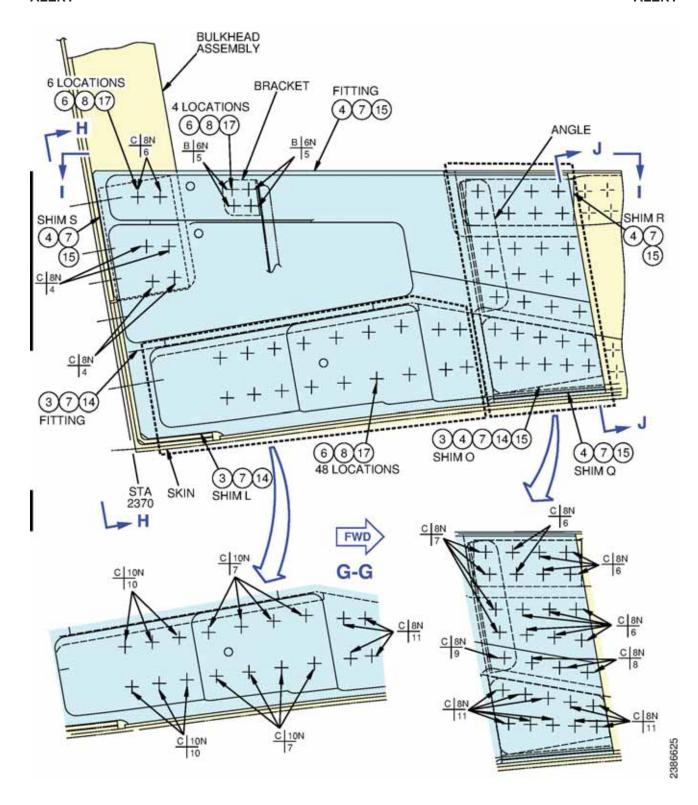


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 7 OF 20)

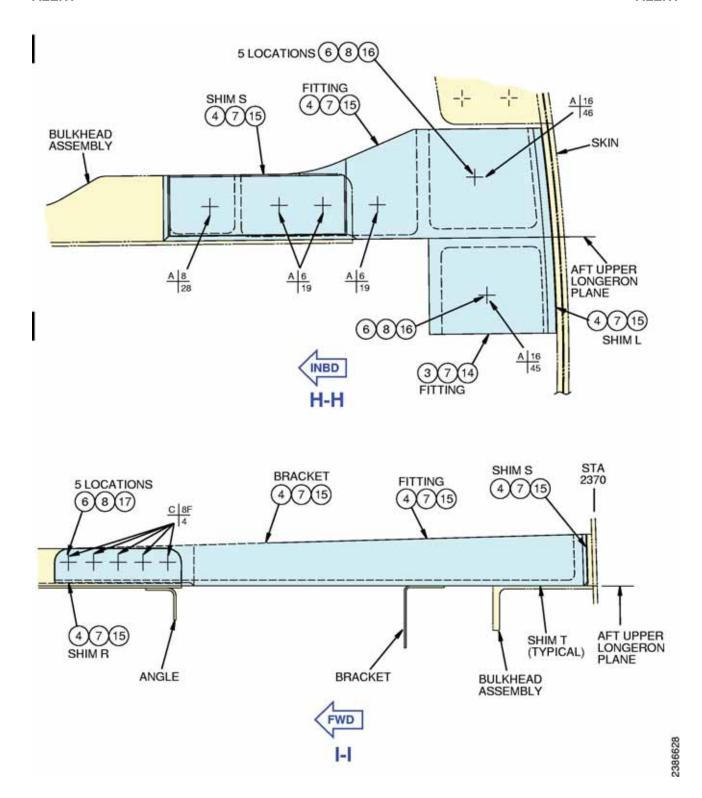


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 8 OF 20)

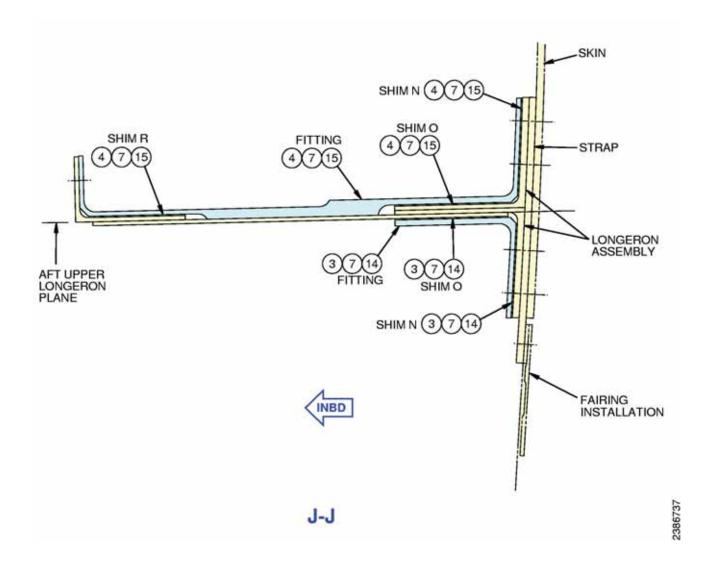


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 9 OF 20)

**ALERT** 

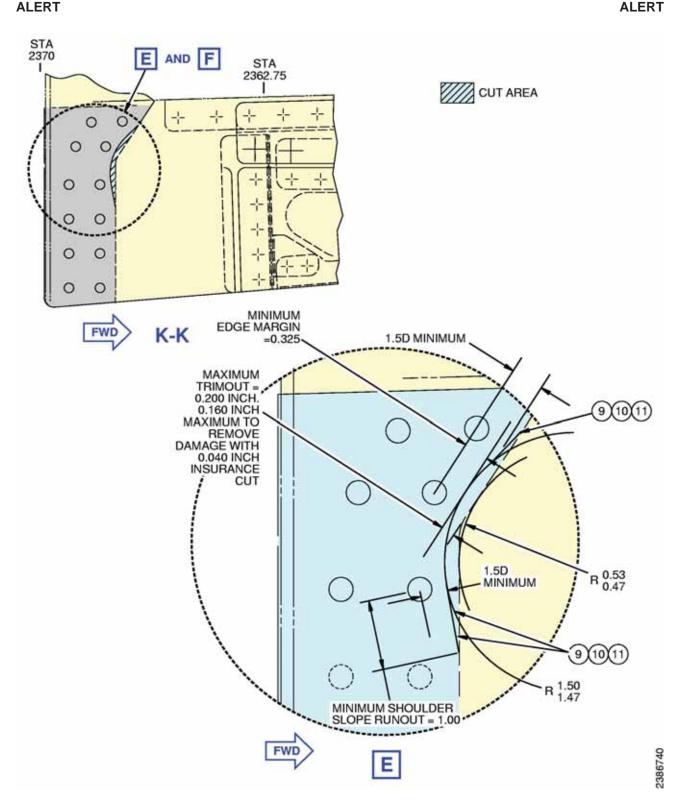


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 10 OF 20)

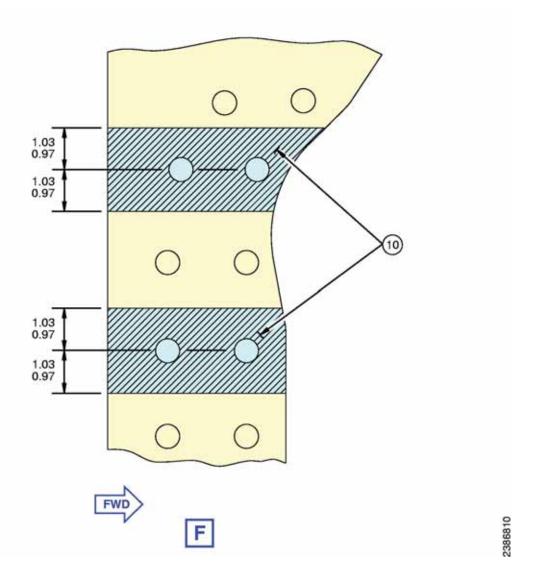


FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 11 OF 20)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task       | Name            | Identification  | Qty | More Data                              |
|------|------------|-----------------|-----------------|-----|--|
| 1    | Put / Hold | SPLICE ANGLE    | 148W2204-6      | 1   | modified in accordance with FIGURE 14. |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-11     | 1   | SHIM A                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-13     | 1   | SHIM B                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-7      | 1   | SHIM C                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-6      | 1   | SHIM D                                 |
|      | Put / Hold | SHIM LAMINATED  | 148W7143-5      | 1   | SHIM E                                 |
| 2    | Put / Hold | SHIM, LAMINATED | BACS40R017B037F | 1   | SHIM F                                 |
|      | Put / Hold | FILLER          | BACF3H14NP017HN | 2   | FILLER A This is a kept part.          |
|      | Put / Hold | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H                                 |
|      | Put / Hold | FILLER          | BACF33C105-410F | 1   | FILLER B<br>This is a kept part.       |
|      | Put / Hold | END FITTING     | 148W2379-()     | 1   |  |
|      | Put / Hold | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K                                 |
|      | Put / Hold | FILLER          | BACF33C105-620F | 1   | FILLER C<br>This is a kept part.       |
|      | Put / Hold | END FITTING     | 148W2369-()     | 1   |  |
| 3    | Put / Hold | FITTING         | 148W2515-()     | 1   |  |
|      | Put / Hold | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L                                 |
|      | Put / Hold | SHIM            | 148W0015-13     | 1   | SHIM M                                 |
|      | Put / Hold | SHIM            | 148W0015-14     | 1   | SHIM O                                 |
| 4    | Put / Hold | FITTING         | 148W2514-()     | 1   |  |
|      | Put / Hold | SHIM            | 148W0015-12     | 1   | SHIM Q                                 |
|      | Put / Hold | SHIM            | 148W0015-14     | 1   | SHIM O                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R                                 |
|      | Put / Hold | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S                                 |

# FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 12 OF 20)

| Step | Task          | Name  | Identification | Qty | More Data   |
|------|---------------|-------|----------------|-----|---|
| 5    | Drill         | HOLE  | -              | 27  | Match drill the holes common to the skin, splice angle and forward outer chord.   |
| 6    | Drill / Ream  | HOLE  | -              | 195 |   |
| 7    | Remove / Keep | PART  | -              | -   |   |
| 8    | Deburr        | HOLE  | -              | -   |   |
| 9    | Cut           | CHORD | 148W7102-()    | 1   | the damaged edge in accordance with 777-200 SRM 51-10-02 or 777-300 SRM 51-10-02, as applicable. Minimum material removed equals the length of the longest detected crack, and not to exceed 0.160 inch.  |
|      | Deburr        | CHORD | 148W7102-()    | 1   |   |
|      | Inspect       | CHORD | 148W7102-()    | 1   | Do a surface High<br>Frequency Eddy<br>Current (HFEC) in-<br>spection of the cut<br>edge, to make sure<br>any crack was re-<br>moved, in accor-<br>dance with 777 NDT<br>Manual Part 6, 51-<br>00-01. (a) |
|      | Cut           | CHORD | 148W7102-()    | 1   | 0.04 inch insurance cut. Maximum edge trim out is 0.200 inch. Blend the edge to a minimum radius of 1.50 inch. Maintain a shoulder slope of runout of minimum 1.0 inch.                                   |
|      | Deburr        | CHORD | 148W7102-()    | 1   | Deburr the cut edge.<br>The surface roughness of the cut edge is 63 Ra or better.   |

#### FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 13 OF 20)

| Step | Task          | Name                        | Identification    | Qty | More Data   |
|------|---------------|-----------------------------|-------------------|-----|---|
| 10   | Shot Peen     | CHORD                       | 148W7102-()       | 1   | The indicated inboard and outboard surface of the chord. Shot intensity is 0.010A, shot size is 330, and coverage is 100%. Refer to SOPM 20-10-03, Self-Contained Shot Peening, as an accepted procedure. |
| 11   | Apply         | CHEMICAL CONVERSION COATING | -                 | -   | to the cut surface, in<br>accordance with<br>777-200 SRM 51-<br>20-01 or 777-300<br>SRM 51-20-01, as<br>applicable.   |
|      | Apply         | PRIMER                      | BMS 10-11, TYPE I | -   | two coats, on the cut<br>surface. Refer to<br>SOPM 20-41-02 as<br>an accepted proce-<br>dure.   |
| 12   | Install (New) | SPLICE ANGLE                | 148W2204-6        | 1   | modified in accordance with FIGURE 14. (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-11       | 1   | SHIM A (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-13       | 1   | SHIM B (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-7        | 1   | SHIM C (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-6        | 1   | SHIM D (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-5        | 1   | SHIM E (e) (f)  |

FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 14 OF 20)

| Step | Task           | Name            | Identification  | Qty | More Data  |
|------|----------------|-----------------|-----------------|-----|--|
| 13   | Install (New)  | SHIM, LAMINATED | BACS40R017B037F | 1   | SHIM F (d) (f)   |
|      | Install (Kept) | FILLER          | BACF3H14NP017HN | 2   | FILLER A (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H (b) (f)   |
|      | Install (Kept) | FILLER          | BACF33C105-410F | 1   | FILLER B (f)   |
|      | Install (Kept) | END FITTING     | 148W2379-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
|      | Install (New)  | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I (d) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K (b) (f)   |
|      | Install (Kept) | FILLER          | BACF33C105-620F | 1   | FILLER C (f)   |
|      | Install (Kept) | END FITTING     | 148W2369-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
| 14   | Install (Kept) | FITTING         | 148W2515-()     | 1   | (f)  |
|      | Install (New)  | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-13     | 1   | SHIM M (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
| 15   | Install (Kept) | FITTING         | 148W2514-()     | 1   | (f)  |
|      | Install (New)  | SHIM            | 148W0015-12     | 1   | SHIM Q (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S (b) (f)   |
| 16   | Install (Kept) | FASTENER        | -               | 12  | (g)  |
| 17   | Install (New)  | FASTENER        | -               | 210 | (g)  |

<sup>(</sup>a) If crack indications exist after this surface HFEC inspection, remove additional material, maximum of 0.160 inch total, to remove the crack indication. If crack indications still exist after a total of 0.160 inch of material has been removed, this repair cannot be done. Do the modification in Boeing Service Bulletin 777-53-0076.

# FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 15 OF 20)

| Step  | Task   | Name | Identification | Qty | More Data |  |  |
|-------|--|------|----------------|-----|-----------|--|--|
| (b) F | (b) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.04 inch. Step ta- |      |                |     |           |  |  |
| р     | pering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install    |      |                |     |           |  |  |

(c) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.04 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.

with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.

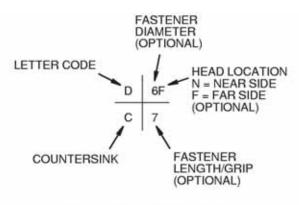
- (d) Fit shim by removing 0.003 inch laminations as required. Maximum gap after shimming is 0.003 inch. Step tapering may be necessary. Shim must pick up minimum of one bolt. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (e) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.033 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (f) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.
- (g) Install fasteners with BMS 5-95. Refer to SOPM 20-50-19, Method 2, as an accepted procedure.

The parts shown in the table below are provided as extra parts for this figure.

| Name           | Identification  | Qty | More Data |
|----------------|-----------------|-----|-----------|
| SHIM-LAMINATED | BACS40R033B052F | 1   | SHIM T    |

The flag note numbers shown below agree with the numbers shown in the flag symbols in the figure.

| Flagnote | Description   |
|----------|---|
| 1        | Make sure the space between the stringer end fitting and the adjacent structure is free of sealant for sufficient drainage. |



**EXAMPLE OF FASTENER SYMBOL** 

FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 16 OF 20)

Original Issue: January 14, 2015 Revision 1 December 14, 2015

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name             | Identification | Qty | Hole Dia      | More Data   |
|------|------------------|----------------|-----|---------------|---|
| A    | BOLT, 12 PT HEAD | BACB30US6K14   | 2   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD | BACB30US6K19   | 3   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN    | BACW10BP6CD    | 5   | -             | Under bolt head   |
|      | WASHER           | BACW10BP6DP    | 5   | -             | Under the nut   |
|      | SELF-LOCKING NUT | BACN10HR6CD    | 5   | -             | Tighten to 300 to 500 in-<br>lb.  |
|      | BOLT, 12 PT HEAD | BACB30US8K28   | 1   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD | BACB30US8K33   | 2   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER           | BACW10BP8CD    | 3   | -             | Under bolt head   |
|      | WASHER           | BACW10BP8DP    | 3   | -             | Under the nut   |
|      | NUT              | BACN10HR8CD    | 3   | -             | Tighten to 870 to 1300 in-<br>lb.   |
|      | BOLT, 12 PT HEAD | BACB30US12K36  | 2   | 0.751 - 0.757 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN    | BACW10BP12CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN    | BACW10BP12DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT | BACN10HR12CD   | 2   | -             | Tighten to 3300 to 4300 in-lb.  |

# FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 17 OF 20)

| Code | Name                   | Identification | Qty | Hole Dia      | More Data   |
|------|------------------------|----------------|-----|---------------|---|
|      | BOLT, 12 PT HEAD       | BACB30US16K45  | 1   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | BOLT, 12 PT HEAD       | BACB30US16K46  | 1   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN          | BACW10BP16CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN          | BACW10BP16DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT       | BACN10HR162CD  | 2   | -             | Tighten to 7000 to 10900 in-lb.   |
| В    | BOLT, PROTRUDING<br>HD | BACB30NX6K5X   | 4   | 0.200 - 0.203 |   |
|      | COLLAR                 | BACC30M6       | 4   | -             |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K11X | 3   | 0.327 - 0.331 |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K14X | 13  | 0.327 - 0.331 |   |
|      | COLLAR                 | BACC30BH10     | 16  | -             |   |

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| С    | BOLT, PROTRUDING<br>HD  | BACB30MY8K4X   | 14  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K5X   | 8   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K6X   | 16  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K7X   | 8   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K9X   | 1   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K11X  | 14  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 66  | -             |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K7X  | 8   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K10X | 6   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K13X | 6   | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30M10      | 20  | -             |           |
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K7X   | 3   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 3   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K10X  | 28  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 39  | -             |           |
| E    | RIVET                   | BACR15FV81KE13 | 27  | 0.268 - 0.272 |           |

# FIGURE 16: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 19 OF 20)

#### **BOEING SERVICE BULLETIN 777-53A0075**

ALERT ALERT

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| F    | BOLT, 100 DEG HEX<br>DR | BACB30NZ8K12X  | 10  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30BH8      | 10  | -             |           |
|      | BOLT, 100 DEG HEX<br>D  | BACB30NZ10K15X | 12  | 0.325 - 0.328 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NZ10K16X | 16  | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30BH10     | 28  | -             |           |

ALERT

This Figure applies only to: Group 2.

**ALERT** 

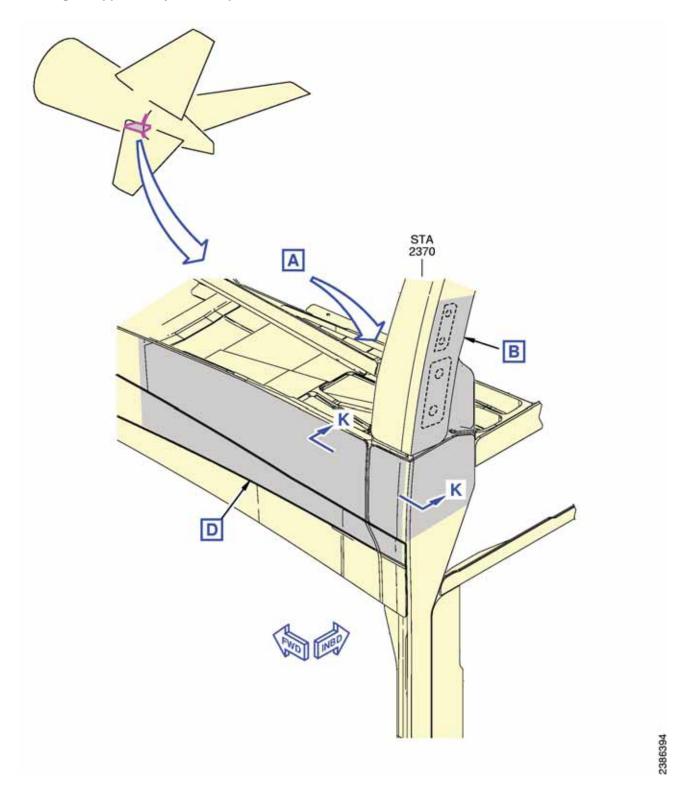


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 1 OF 20)

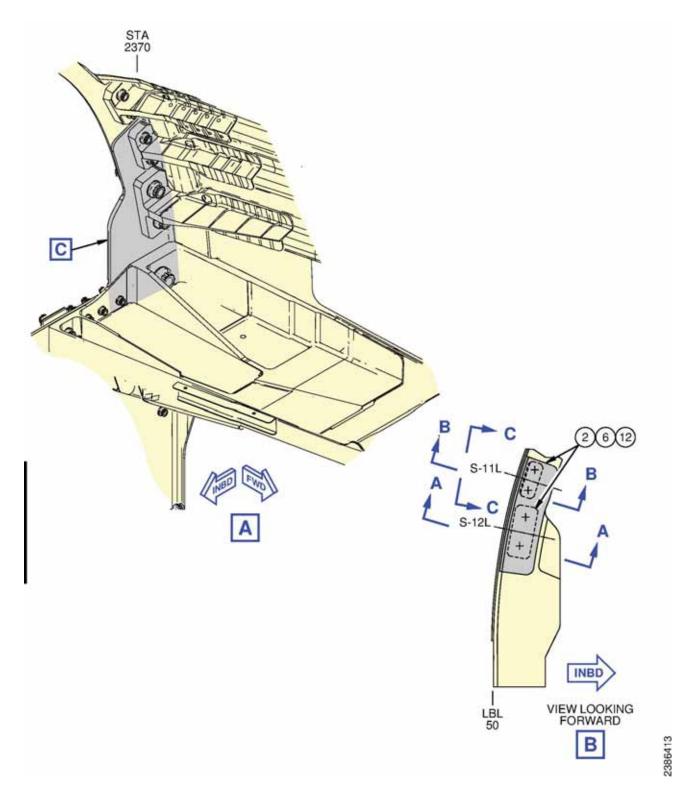


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 2 OF 20)

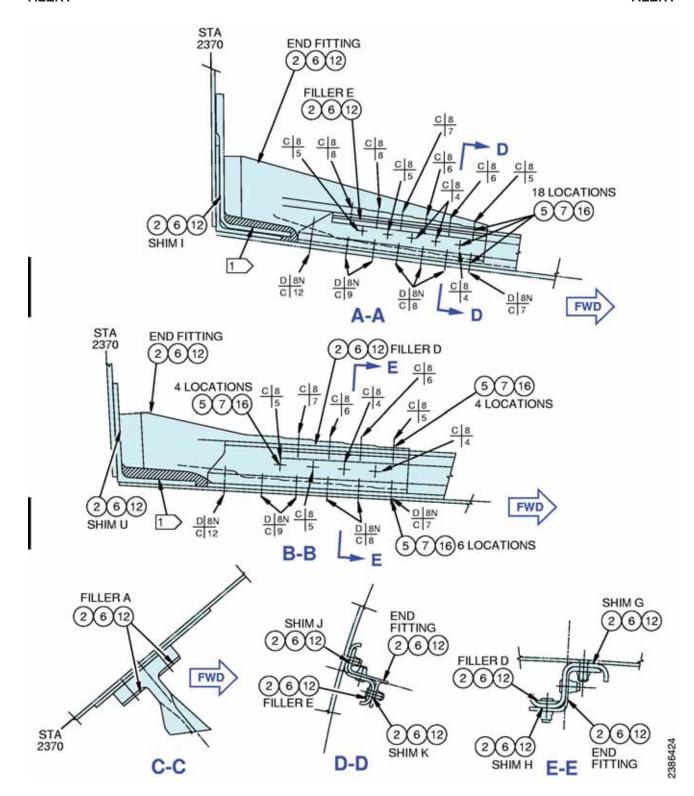


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 3 OF 20)

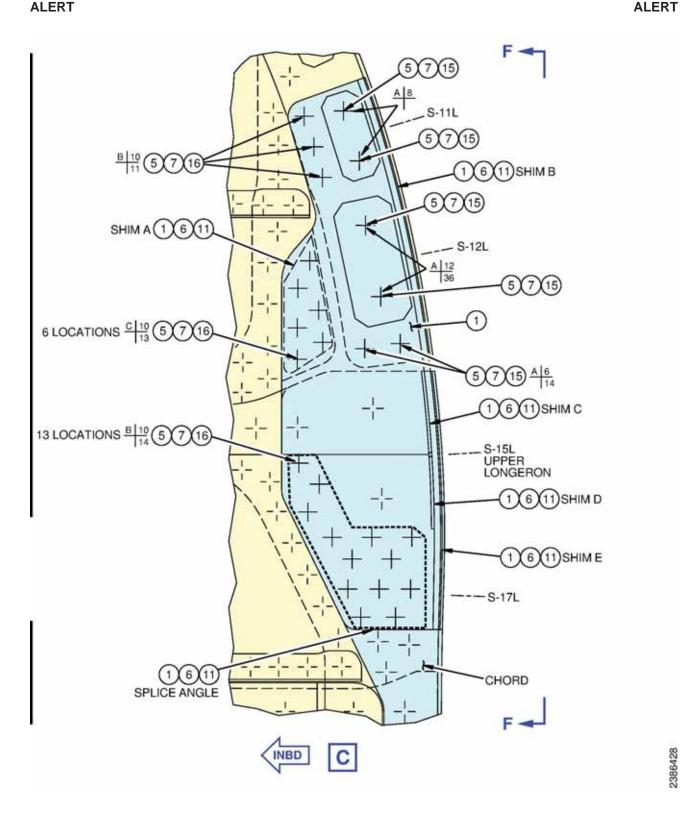


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 4 OF 20)

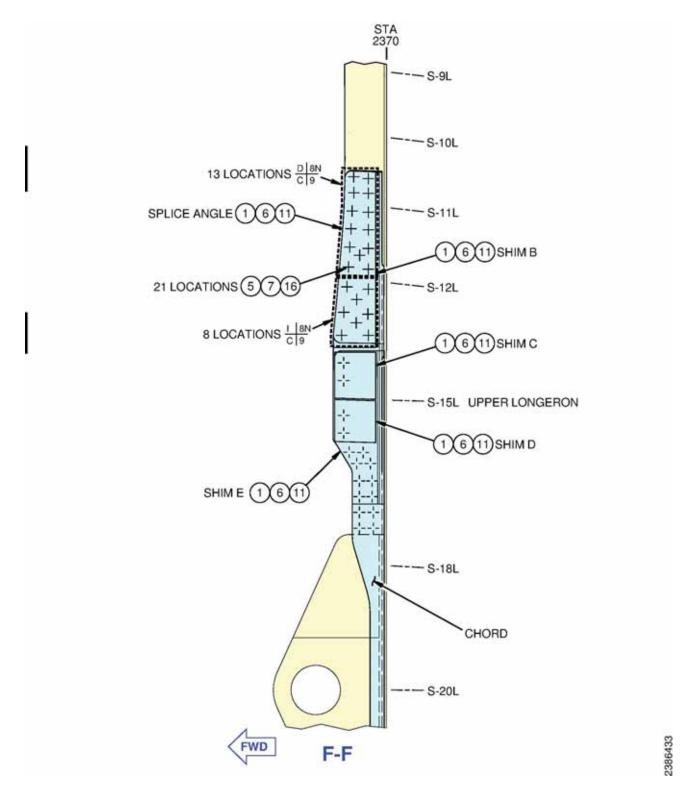


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 5 OF 20)



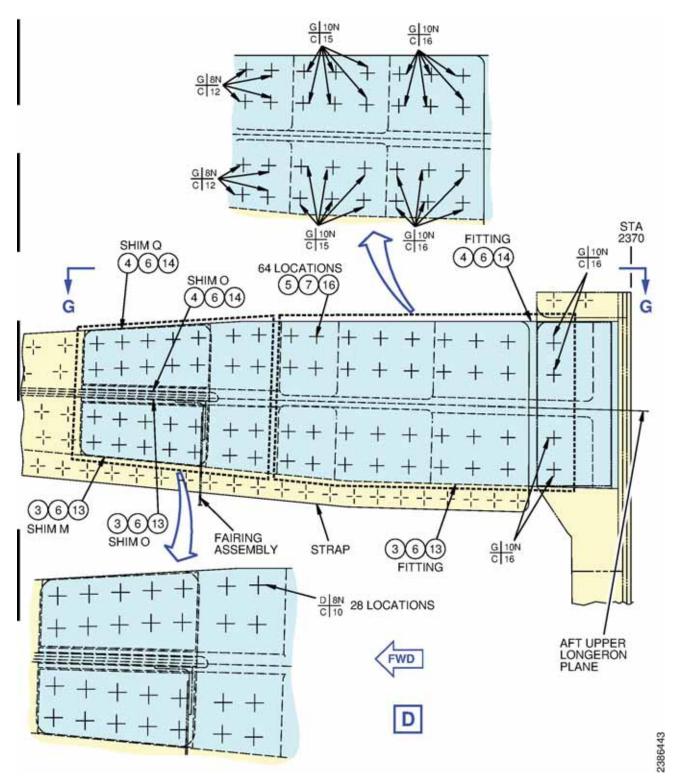


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 6 OF 20)

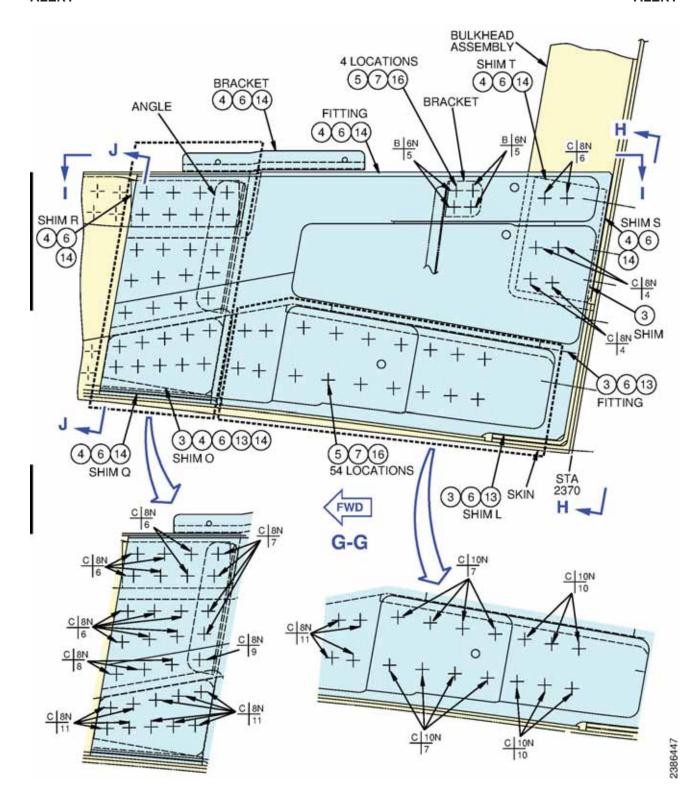


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 7 OF 20)

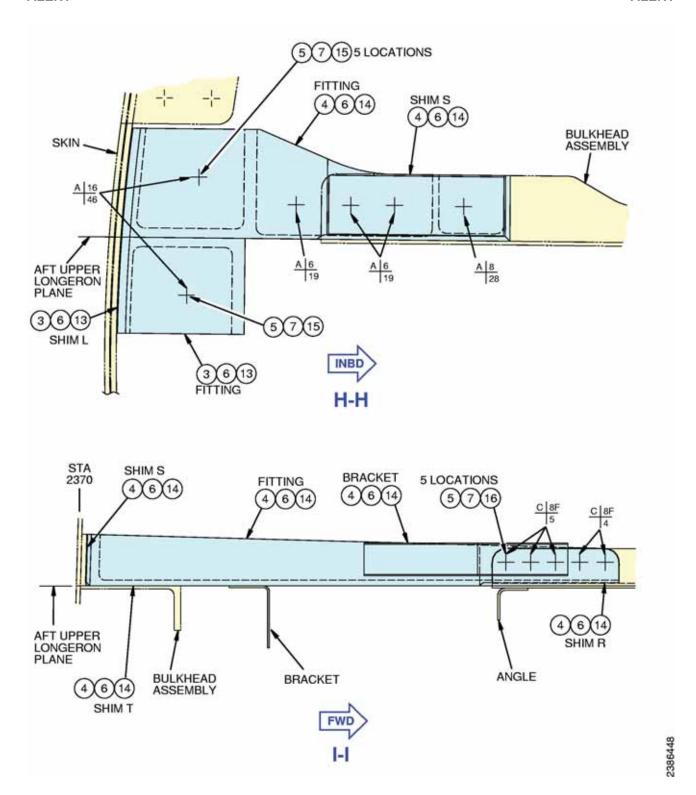


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 8 OF 20)

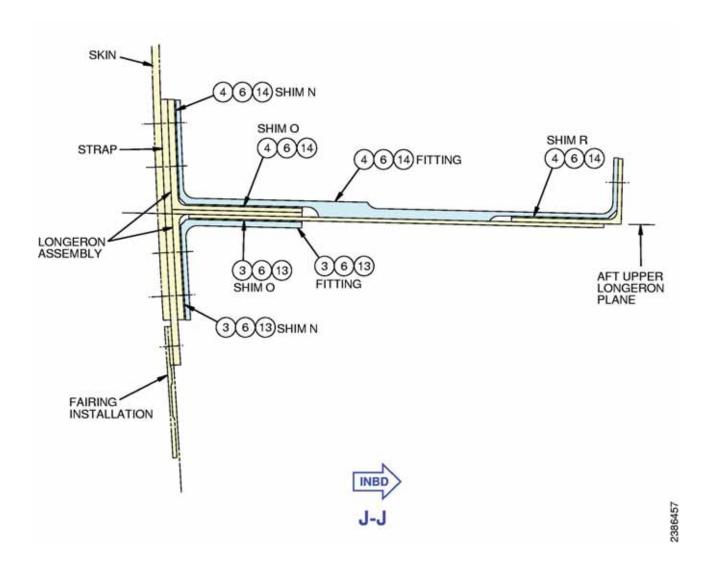


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 9 OF 20)

**ALERT** 

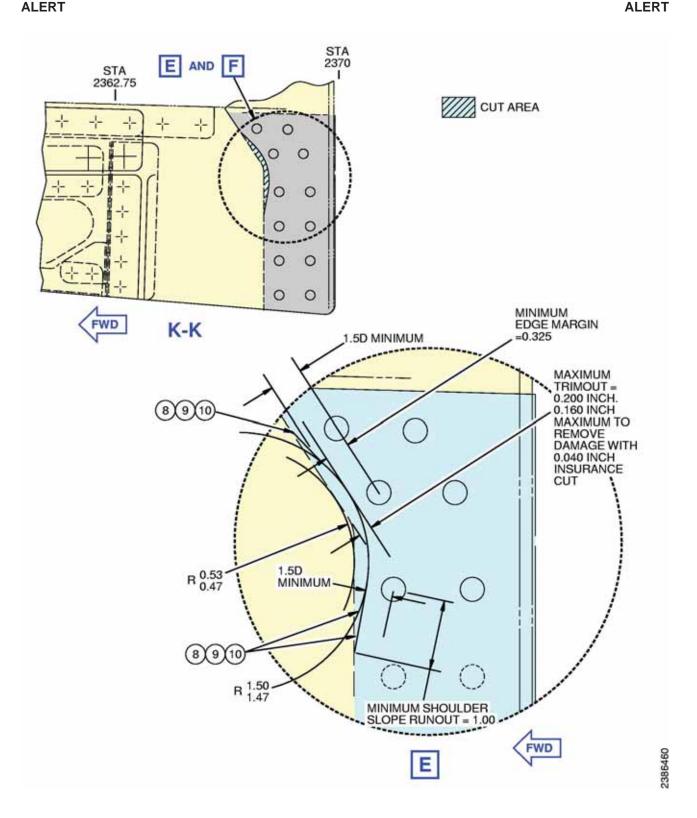
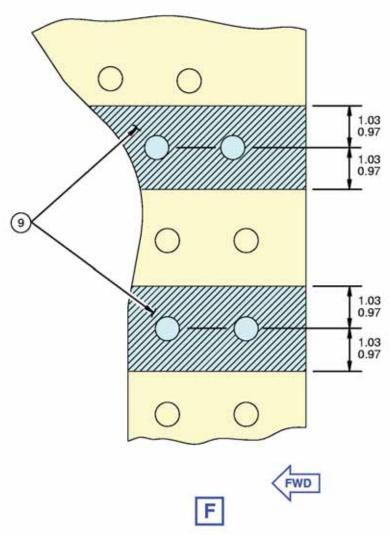


FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 10 OF 20)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task       | Name           | Identification | Qty | More Data |
|------|------------|----------------|----------------|-----|-----------|
| 1    | Put / Hold | SPLICE ANGLE   | 148W2204-5     | 1   |           |
|      | Put / Hold | SHIM LAMINATED | 148W7143-11    | 1   | SHIM A    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-13    | 1   | SHIM B    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-7     | 1   | SHIM C    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-6     | 1   | SHIM D    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-5     | 1   | SHIM E    |

FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 11 OF 20)

| Step | Task          | Name            | Identification  | Qty | More Data                        |
|------|---------------|-----------------|-----------------|-----|----------------------------------|
| 2    | Put / Hold    | SHIM, LAMINATED | BACS40R016B037F | 1   | SHIM U                           |
|      | Put / Hold    | FILLER          | BACF3H14NP017HN | 2   | FILLER A This is a kept part.    |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H                           |
|      | Put / Hold    | FILLER          | 148W2328-1      | 1   | FILLER D This is a kept part.    |
|      | Put / Hold    | END FITTING     | 148W2379-()     | 1   |                                  |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K                           |
|      | Put / Hold    | FILLER          | 148W2328-2      | 1   | FILLER E<br>This is a kept part. |
|      | Put / Hold    | END FITTING     | 148W2369-()     | 1   |                                  |
| 3    | Put / Hold    | FITTING         | 148W2515-()     | 1   |                                  |
|      | Put / Hold    | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L                           |
|      | Put / Hold    | SHIM            | 148W0015-13     | 1   | SHIM M                           |
|      | Put / Hold    | SHIM            | 148W0015-14     | 1   | SHIM O                           |
| 4    | Put / Hold    | FITTING         | 148W2514-()     | 1   |                                  |
|      | Put / Hold    | SHIM            | 148W0015-12     | 1   | SHIM Q                           |
|      | Put / Hold    | SHIM            | 148W0015-14     | 1   | SHIM O                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S                           |
|      | Put / Hold    | SHIM-LAMINATED  | BACS40R033B052F | 1   | SHIM T                           |
|      | Put / Hold    | BRACKET         | 287W4809-291    | 1   | This is a kept part.             |
| 5    | Drill / Ream  | HOLE            | -               | 214 |                                  |
| 6    | Remove / Keep | PART            | -               | -   |                                  |
| 7    | Deburr        | HOLE            | -               | -   |                                  |

FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 12 OF 20)

| Step | Task    | Name  | Identification | Qty | More Data   |
|------|---------|-------|----------------|-----|---|
| 8    | Cut     | CHORD | 148W7102-()    | 1   | the damaged edge in accordance with 777-200 SRM 51-10-02 or 777-300 SRM 51-10-02, as applicable. Minimum material removed equals the length of the longest detected crack, and not to exceed 0.160 inch.  |
|      | Deburr  | CHORD | 148W7102-()    | 1   |   |
|      | Inspect | CHORD | 148W7102-()    | 1   | Do a surface High<br>Frequency Eddy<br>Current (HFEC) in-<br>spection of the cut<br>edge, to make sure<br>any crack was re-<br>moved, in accor-<br>dance with 777 NDT<br>Manual Part 6, 51-<br>00-01. (a) |
|      | Cut     | CHORD | 148W7102-()    | 1   | 0.04 inch insurance cut. Maximum edge trim out is 0.200 inch. Blend the edge to a minimum radius of 1.50 inch. Maintain a shoulder slope of runout of minimum 1.0 inch.                                   |
|      | Deburr  | CHORD | 148W7102-()    | 1   | Deburr the cut edge.<br>The surface roughness of the cut edge is 63 Ra or better.   |

| Step | Task          | Name                        | Identification    | Qty | More Data   |
|------|---------------|-----------------------------|-------------------|-----|---|
| 9    | Shot Peen     | CHORD                       | 148W7102-()       | 1   | The indicated inboard and outboard surface of the chord. Shot intensity is 0.010A, shot size is 330, and coverage is 100%. Refer to SOPM 20-10-03, Self-Contained Shot Peening, as an accepted procedure. |
| 10   | Apply         | CHEMICAL CONVERSION COATING | -                 | -   | to the cut surface, in<br>accordance with<br>777-200 SRM 51-<br>20-01 or 777-300<br>SRM 51-20-01, as<br>applicable.   |
|      | Apply         | PRIMER                      | BMS 10-11, TYPE I | -   | two coats, on the cut<br>surface. Refer to<br>SOPM 20-41-02 as<br>an accepted proce-<br>dure.   |
| 11   | Install (New) | SPLICE ANGLE                | 148W2204-5        | 1   | (f)   |
|      | Install (New) | SHIM LAMINATED              | 148W7143-11       | 1   | SHIM A (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-13       | 1   | SHIM B (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-7        | 1   | SHIM C (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-6        | 1   | SHIM D (e) (f)  |
|      | Install (New) | SHIM LAMINATED              | 148W7143-5        | 1   | SHIM E (e) (f)  |

| Step | Task           | Name            | Identification  | Qty | More Data  |
|------|----------------|-----------------|-----------------|-----|--|
| 12   | Install (New)  | SHIM, LAMINATED | BACS40R016B037F | 1   | SHIM U (d) (f)   |
|      | Install (Kept) | FILLER          | BACF3H14NP017HN | 2   | FILLER A (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H (b) (f)   |
|      | Install (Kept) | FILLER          | 148W2328-1      | 1   | FILLER D (f)   |
|      | Install (Kept) | END FITTING     | 148W2379-()     | 1   | (f) End fitting pad<br>must remained<br>clamped to chord<br>until the sealant is<br>cured. |
|      | Install (New)  | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I (d) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K (b) (f)   |
|      | Install (Kept) | FILLER          | 148W2328-2      | 1   | FILLER E (f)   |
|      | Install (Kept) | END FITTING     | 148W2369-()     | 1   | (f) End fitting pad<br>must remained<br>clamped to chord<br>until the sealant is<br>cured. |
| 13   | Install (Kept) | FITTING         | 148W2515-()     | 1   | (f)  |
|      | Install (New)  | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-13     | 1   | SHIM M (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
| 14   | Install (Kept) | FITTING         | 148W2514-()     | 1   | (f)  |
|      | Install (New)  | SHIM            | 148W0015-12     | 1   | SHIM Q (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S (b) (f)   |
|      | Install (New)  | SHIM-LAMINATED  | BACS40R033B052F | 1   | SHIM T (c) (f)   |
|      | Install (Kept) | BRACKET         | 287W4809-291    | 1   | (f)  |
| 15   | Install (Kept) | FASTENER        | -               | 12  | (g)  |
| 16   | Install (New)  | FASTENER        | -               | 202 | (g)  |

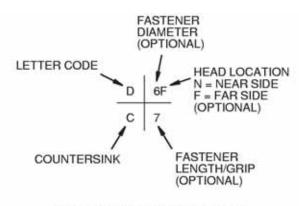
FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 15 OF 20)

| Step | Task | Name | Identification | Qty | More Data |
|------|------|------|----------------|-----|-----------|
|------|------|------|----------------|-----|-----------|

- (a) If crack indications exist after this surface HFEC inspection, remove additional material, maximum of 0.160 inch total, to remove the crack indication. If crack indications still exist after a total of 0.160 inch of material has been removed, this repair cannot be done. Do the modification in Boeing Service Bulletin 777-53-0076.
- (b) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.04 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (c) Fit shim by removing 0.003 inch laminations as required. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (d) Fit shim by removing 0.003 inch laminations as required. Maximum gap after shimming is 0.003 inch. Step tapering may be necessary. Shim must pick up minimum of one bolt. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (e) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.033 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (f) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.
- (g) Install fasteners with BMS 5-95. Refer to SOPM 20-50-19, Method 2, as an accepted procedure.

The flag note numbers shown below agree with the numbers shown in the flag symbols in the figure.

| Flagnote | Description   |
|----------|---|
| 1        | Make sure the space between the stringer end fitting and the adjacent structure is free of sealant for sufficient drainage. |



**EXAMPLE OF FASTENER SYMBOL** 

314994

FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 16 OF 20)

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| de | Name             | Identification | Qty | Hole Dia      | More Data   |
|----|------------------|----------------|-----|---------------|---|
|    | BOLT, 12 PT HEAD | BACB30US6K14   | 2   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | BOLT, 12 PT HEAD | BACB30US6K19   | 3   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER, PLAIN    | BACW10BP6CD    | 5   | -             | Under bolt head   |
|    | WASHER           | BACW10BP6DP    | 5   | -             | Under the nut   |
|    | SELF-LOCKING NUT | BACN10HR6CD    | 5   | -             | Tighten to 300 to 500 in-lb.  |
|    | BOLT, 12 PT HEAD | BACB30US8K28   | 1   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | BOLT, 12 PT HEAD | BACB30US8K*    | 2   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER           | BACW10BP8CD    | 3   | -             | Under bolt head   |
|    | WASHER           | BACW10BP8DP    | 3   | -             | Under the nut   |
|    | NUT              | BACN10HR8CD    | 3   | -             | Tighten to 870 to 1300 in-lb.   |
|    | BOLT, 12 PT HEAD | BACB30US12K36  | 2   | 0.751 - 0.757 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER, PLAIN    | BACW10BP12CD   | 2   | -             | Under bolt head   |
|    | WASHER, PLAIN    | BACW10BP12DP   | 2   | -             | Under the nut   |
|    | SELF-LOCKING NUT | BACN10HR12CD   | 2   | -             | Tighten to 3300 to 4300 in-lb.  |

FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 17 OF 20)

| Code | Name                   | Identification | Qty | Hole Dia      | More Data   |
|------|------------------------|----------------|-----|---------------|---|
|      | BOLT, 12 PT HEAD       | BACB30US16K46  | 2   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN          | BACW10BP16CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN          | BACW10BP16DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT       | BACN10HR162CD  | 2   | -             | Tighten to 7000 to 10900 in-lb.   |
| В    | BOLT, PROTRUDING<br>HD | BACB30NX6K5X   | 4   | 0.200 - 0.203 |   |
|      | COLLAR                 | BACC30M6       | 4   | -             |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K11X | 3   | 0.327 - 0.331 |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K14X | 13  | 0.327 - 0.331 |   |
|      | COLLAR                 | BACC30BH10     | 16  | -             |   |

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| С    | BOLT, PROTRUDING<br>HD  | BACB30MY8K4X   | 11  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K5X   | 9   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K6X   | 18  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K7X   | 6   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K9X   | 1   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K11X  | 14  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 64  | -             |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K7X  | 8   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K10X | 6   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K13X | 6   | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30M10      | 20  | -             |           |
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K7X   | 2   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 17  | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K10X  | 28  | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K12X  | 2   | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 54  | -             |           |

# FIGURE 17: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 19 OF 20)

| Code | Name                    | Identification | Qty | Hole Dia           | More Data                    |
|------|-------------------------|----------------|-----|--------------------|------------------------------|
| G    | BOLT, HEX DRIVE         | BACB30YN8K12X  | 8   | 0.263 - 0.266      |                              |
|      | WASHER                  | NAS1149D0432J  | 8   | -                  | -                            |
|      | WASHER                  | NAS1149D0463J  | 8   | -                  | -                            |
|      | NUT                     | BACN10YR4CD    | 8   | -                  | Tighten to 60 to 80 in-lb.   |
|      | BOLT, HEX DRIVE         | BACB30YN10K15X | 12  | 0.325 - 0.328      |                              |
|      | BOLT, HEX DRIVE         | BACB30YN10K16X | 16  | 0.325 - 0.328      |                              |
|      | WASHER                  | NAS1149D0532J  | 28  | -                  | -                            |
|      | WASHER                  | NAS1149D0563J  | 28  | -                  | -                            |
|      | NUT                     | BACN10YR5CD    | 28  | -                  | Tighten to 130 to 160 in-lb. |
| I    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 8   | 0.2616 -<br>0.2636 |                              |
|      | WASHER, PLAIN           | BACW10BP41DP   | 8   | -                  |                              |
|      | NUT                     | BACN10YR4CD    | 8   | -                  | Tighten to 60 to 80 in-lb.   |

#### **ALERT**

This Figure applies only to: Group 2.

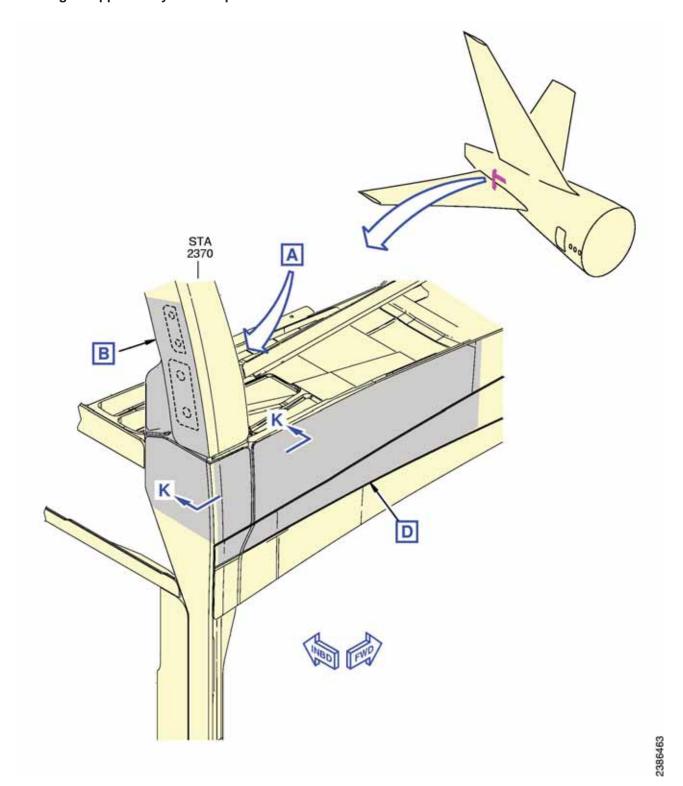


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 1 OF 20)

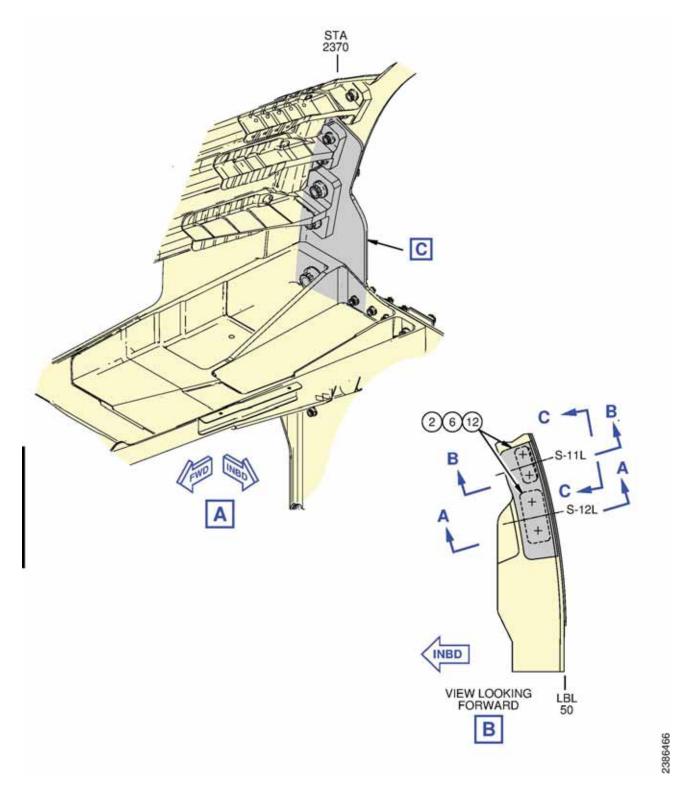


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 2 OF 20)

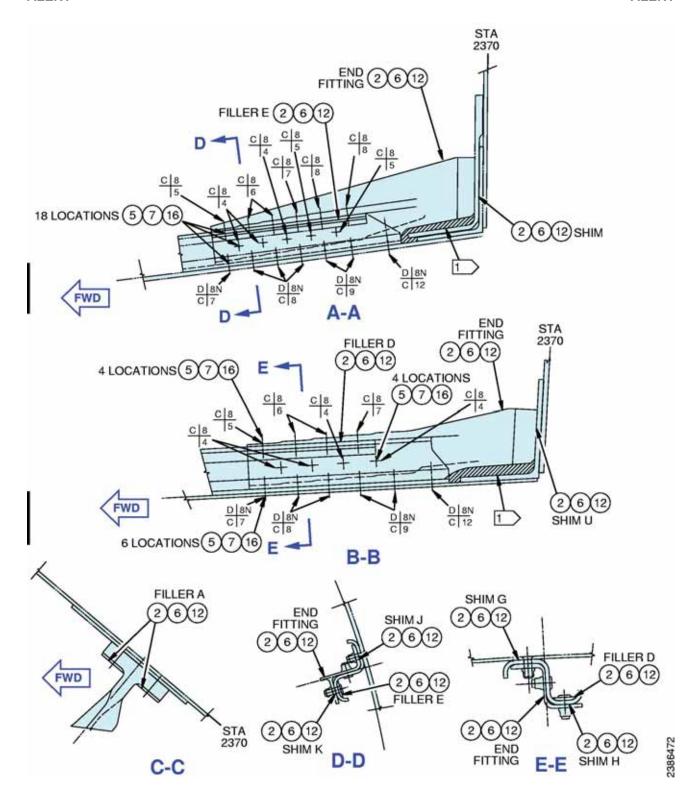


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 3 OF 20)

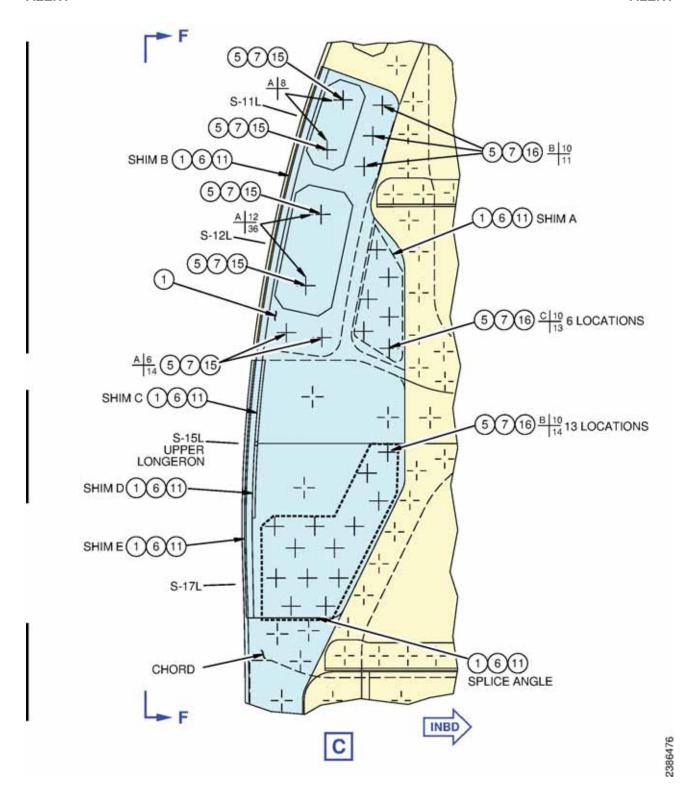


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 4 OF 20)

FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 5 OF 20)

F-F

2386477

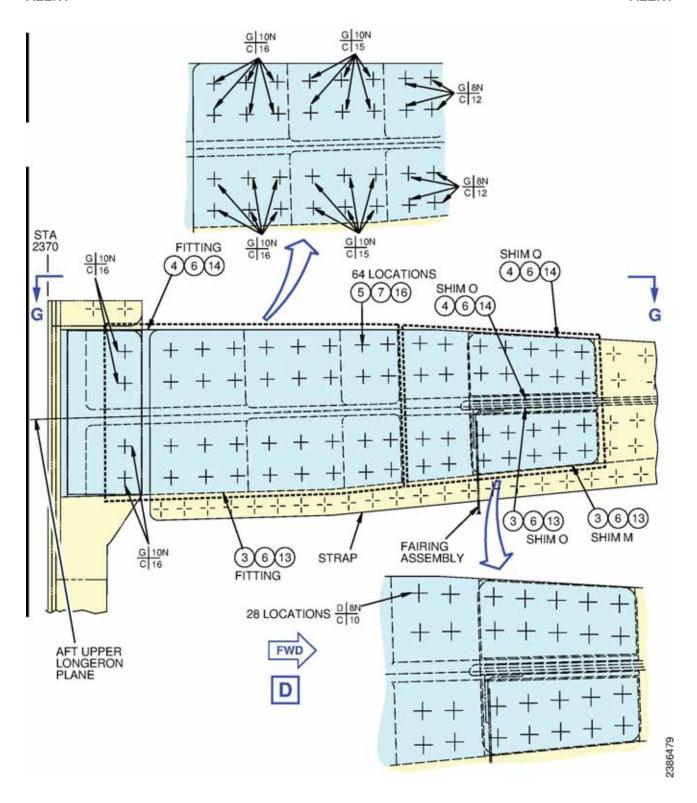


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 6 OF 20)

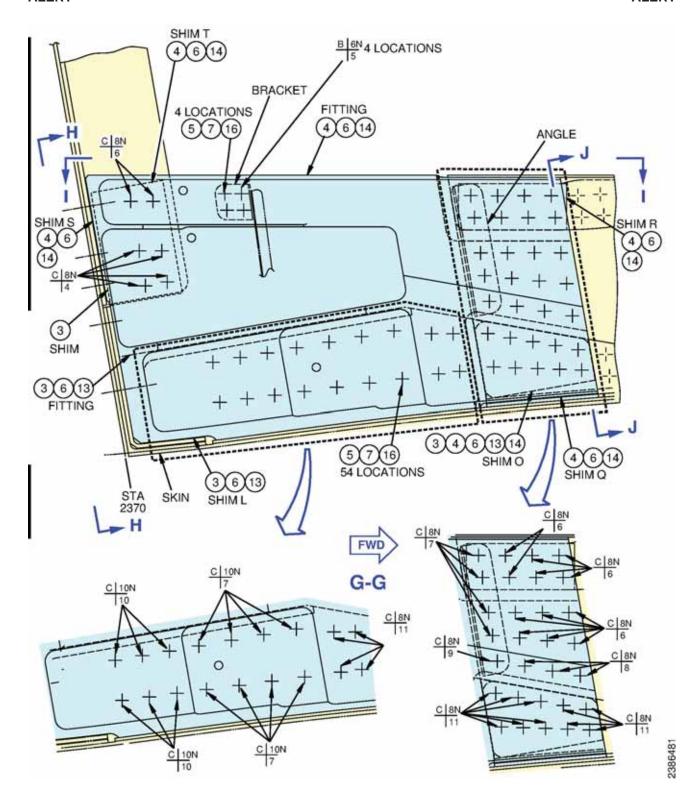


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 7 OF 20)

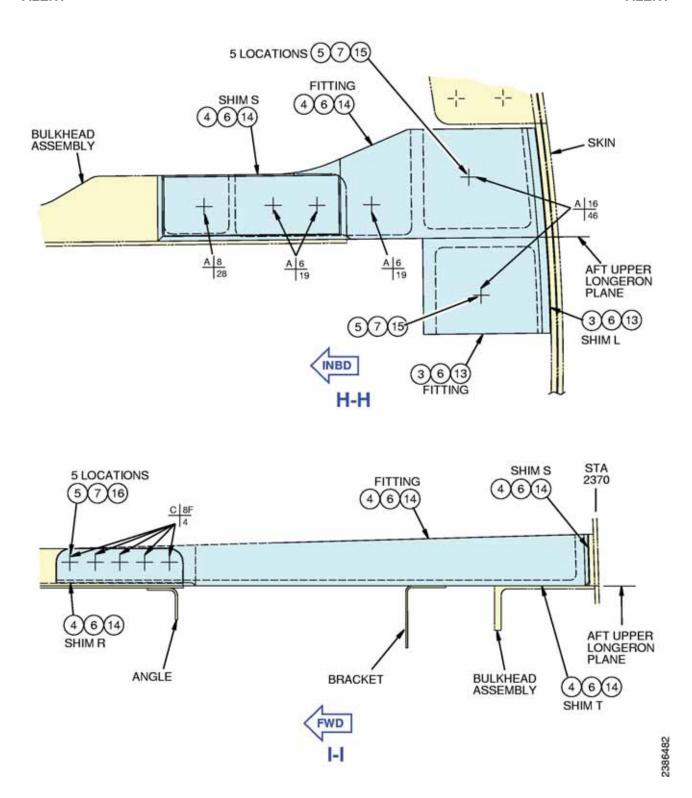


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 8 OF 20)

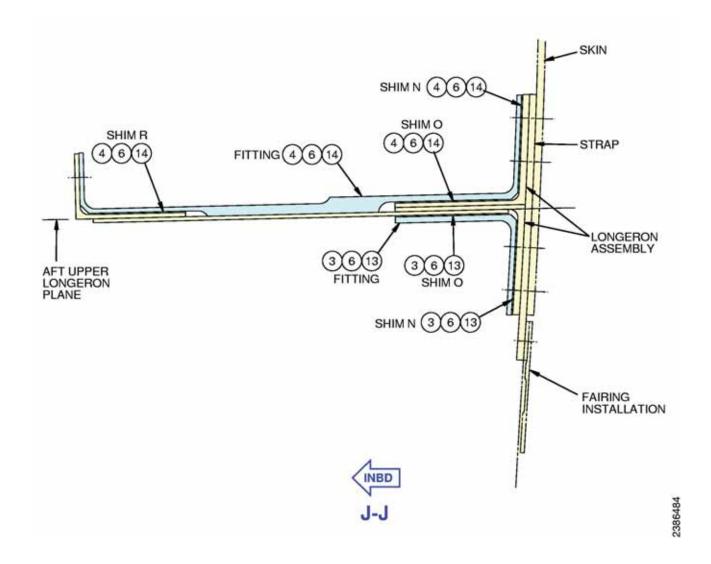


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 9 OF 20)

**ALERT** 

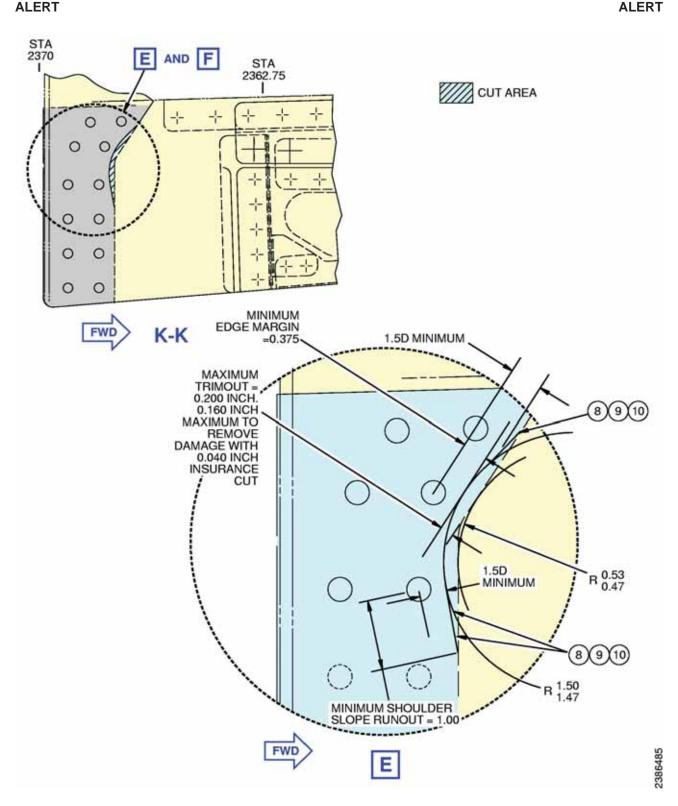
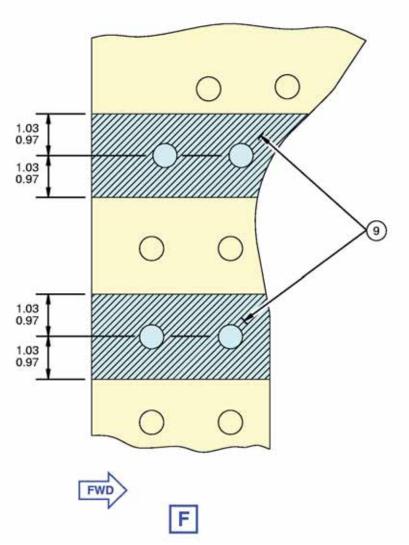


FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 10 OF 20)



The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task       | Name           | Identification | Qty | More Data |
|------|------------|----------------|----------------|-----|-----------|
| 1    | Put / Hold | SPLICE ANGLE   | 148W2204-6     | 1   |           |
|      | Put / Hold | SHIM LAMINATED | 148W7143-11    | 1   | SHIM A    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-13    | 1   | SHIM B    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-7     | 1   | SHIM C    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-6     | 1   | SHIM D    |
|      | Put / Hold | SHIM LAMINATED | 148W7143-5     | 1   | SHIM E    |

FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 11 OF 20)

Original Issue: January 14, 2015 Revision 1 December 14, 2015 2387121

| Step | Task          | Name            | Identification  | Qty | More Data                        |
|------|---------------|-----------------|-----------------|-----|----------------------------------|
| 2    | Put / Hold    | SHIM, LAMINATED | BACS40R016B037F | 1   | SHIM U                           |
|      | Put / Hold    | FILLER          | BACF3H14NP017HN | 2   | FILLER A This is a kept part.    |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H                           |
|      | Put / Hold    | FILLER          | 148W2328-1      | 1   | FILLER D This is a kept part.    |
|      | Put / Hold    | END FITTING     | 148W2379-()     | 1   | BLUE                             |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K                           |
|      | Put / Hold    | FILLER          | 148W2328-2      | 1   | FILLER E<br>This is a kept part. |
|      | Put / Hold    | END FITTING     | 148W2369-()     | 1   |                                  |
| 3    | Put / Hold    | FITTING         | 148W2515-()     | 1   |                                  |
|      | Put / Hold    | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L                           |
|      | Put / Hold    | SHIM            | 148W0015-13     | 1   | SHIM M                           |
|      | Put / Hold    | SHIM            | 148W0015-14     | 1   | SHIM O                           |
| 4    | Put / Hold    | FITTING         | 148W2514-()     | 1   |                                  |
|      | Put / Hold    | SHIM            | 148W0015-12     | 1   | SHIM Q                           |
|      | Put / Hold    | SHIM            | 148W0015-14     | 1   | SHIM O                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R                           |
|      | Put / Hold    | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S                           |
|      | Put / Hold    | SHIM-LAMINATED  | BACS40R033B052F | 1   | SHIM T                           |
| 5    | Drill / Ream  | HOLE            | -               | 214 |                                  |
| 6    | Remove / Keep | PART            | -               | -   |                                  |
| 7    | Deburr        | HOLE            | -               | -   |                                  |

FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 12 OF 20)

| Step | Task    | Name  | Identification | Qty | More Data   |
|------|---------|-------|----------------|-----|---|
| 8    | Cut     | CHORD | 148W7102-()    | 1   | the damaged edge in accordance with 777-200 SRM 51-10-02 or 777-300 SRM 51-10-02, as applicable. Minimum material removed equals the length of the longest detected crack, and not to exceed 0.160 inch.  |
|      | Deburr  | CHORD | 148W7102-()    | 1   |   |
|      | Inspect | CHORD | 148W7102-()    | 1   | Do a surface High<br>Frequency Eddy<br>Current (HFEC) in-<br>spection of the cut<br>edge, to make sure<br>any crack was re-<br>moved, in accor-<br>dance with 777 NDT<br>Manual Part 6, 51-<br>00-01. (a) |
|      | Cut     | CHORD | 148W7102-()    | 1   | 0.04 inch insurance cut. Maximum edge trim out is 0.200 inch. Blend the edge to a minimum radius of 1.50 inch. Maintain a shoulder slope of runout of minimum 1.0 inch.                                   |
|      | Deburr  | CHORD | 148W7102-()    | 1   | Deburr the cut edge.<br>The surface roughness of the cut edge is 63 Ra or better.   |

| Step | Task          | Name                             | Identification    | Qty | More Data   |
|------|---------------|----------------------------------|-------------------|-----|---|
| 9    | Shot Peen     | CHORD                            | 148W7102-()       | 1   | The indicated inboard and outboard surface of the chord. Shot intensity is 0.010A, shot size is 330, and coverage is 100%. Refer to SOPM 20-10-03, Self-Contained Shot Peening, as an accepted procedure. |
| 10   | Apply         | CHEMICAL CONVER-<br>SION COATING | -                 | -   | to the cut surface, in<br>accordance with<br>777-200 SRM 51-<br>20-01 or 777-300<br>SRM 51-20-01, as<br>applicable.   |
|      | Apply         | PRIMER                           | BMS 10-11, TYPE I | -   | two coats, on the cut<br>surface. Refer to<br>SOPM 20-41-02 as<br>an accepted proce-<br>dure.   |
| 11   | Install (New) | SPLICE ANGLE                     | 148W2204-6        | 1   | (f)   |
|      | Install (New) | SHIM LAMINATED                   | 148W7143-11       | 1   | SHIM A (e) (f)  |
|      | Install (New) | SHIM LAMINATED                   | 148W7143-13       | 1   | SHIM B (e) (f)  |
|      | Install (New) | SHIM LAMINATED                   | 148W7143-7        | 1   | SHIM C (e) (f)  |
|      | Install (New) | SHIM LAMINATED                   | 148W7143-6        | 1   | SHIM D (e) (f)  |
|      | Install (New) | SHIM LAMINATED                   | 148W7143-5        | 1   | SHIM E (e) (f)  |

FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 14 OF 20)

| Step | Task           | Name            | Identification  | Qty | More Data  |
|------|----------------|-----------------|-----------------|-----|--|
| 12   | Install (New)  | SHIM, LAMINATED | BACS40R016B037F | 1   | SHIM U (d) (f)   |
|      | Install (Kept) | FILLER          | BACF3H14NP017HN | 2   | FILLER A (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B064F | 1   | SHIM G (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B041F | 1   | SHIM H (b) (f)   |
|      | Install (Kept) | FILLER          | 148W2328-1      | 1   | FILLER D (f)   |
|      | Install (Kept) | END FITTING     | 148W2379-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
|      | Install (New)  | SHIM, LAMINATED | BACS40R023B053F | 1   | SHIM I (d) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R007B077F | 1   | SHIM J (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R008B062F | 1   | SHIM K (b) (f)   |
|      | Install (Kept) | FILLER          | 148W2328-2      | 1   | FILLER E (f)   |
|      | Install (Kept) | END FITTING     | 148W2369-()     | 1   | (f) End fitting pad<br>must remain<br>clamped to chord<br>until the sealant is<br>cured. |
| 13   | Install (Kept) | FITTING         | 148W2515-()     | 1   | (f)  |
|      | Install (New)  | SHIM,LAMINATED  | BACS40R029B065F | 1   | SHIM L (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-13     | 1   | SHIM M (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
| 14   | Install (Kept) | FITTING         | 148W2514-()     | 1   | (f)  |
|      | Install (New)  | SHIM            | 148W0015-12     | 1   | SHIM Q (b) (f)   |
|      | Install (New)  | SHIM            | 148W0015-14     | 1   | SHIM O (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R021B049F | 1   | SHIM R (b) (f)   |
|      | Install (New)  | SHIM, LAMINATED | BACS40R019B056F | 1   | SHIM S (b) (f)   |
|      | Install (New)  | SHIM-LAMINATED  | BACS40R033B052F | 1   | SHIM T (c) (f)   |
| 15   | Install (Kept) | FASTENER        | -               | 12  | (g)  |
| 16   | Install (New)  | FASTENER        | -               | 202 | (g)  |

<sup>(</sup>a) If crack indications exist after this surface HFEC inspection, remove additional material, a maximum of 0.160 inch total, to remove the crack indication. If crack indications still exist after a total of 0.160 inch of material has been removed, this repair cannot be done. Do the modification in Boeing Service Bulletin 777-53-0076.

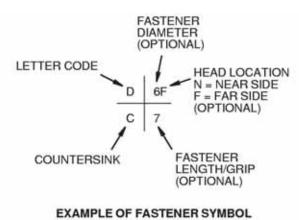
## FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 15 OF 20)

| Ste | эp  | Task                 | Name                      | Identification  | Qty       | More Data           |
|-----|---|----------------------|---------------------------|---|-----------|---------------------|
|     | p) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.04 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure. |                      |                           |   |           |                     |
| , , | afte  | ,                    | nch before fastener insta | quired. Step tapering may<br>Illation. Install with BMS | ,         | , .                 |
| (d) | Fit s   | shim by removing 0.0 | 03 inch laminations as re | equired. Maximum gap at                                 | ter shimi | ming is 0.003 inch. |

- (d) Fit shim by removing 0.003 inch laminations as required. Maximum gap after shimming is 0.003 inch. Step tapering may be necessary. Shim must pick up minimum of one bolt. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (e) Fit shim by removing 0.003 inch laminations as required. Maximum shim thickness is 0.033 inch. Step tapering may be necessary. Maximum gap after shimming is 0.005 inch before fastener installation. Install with BMS 10-11, Type I primer. Refer to SOPM 20-41-02 as an accepted procedure.
- (f) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.
- (g) Install fasteners with BMS 5-95. Refer to SOPM 20-50-19, Method 2, as an accepted procedure.

The flag note numbers shown below agree with the numbers shown in the flag symbols in the figure.

| Flagnote | Description   |
|----------|---|
| 1        | Make sure the space between the stringer end fitting and the adjacent structure is free of sealant for sufficient drainage. |



314994

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| de | Name             | Identification | Qty | Hole Dia      | More Data   |
|----|------------------|----------------|-----|---------------|---|
| A  | BOLT, 12 PT HEAD | BACB30US6K14   | 2   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | BOLT, 12 PT HEAD | BACB30US6K19   | 3   | 0.376 - 0.379 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER, PLAIN    | BACW10BP6CD    | 5   | -             | Under bolt head   |
|    | WASHER           | BACW10BP6DP    | 5   | -             | Under the nut   |
|    | SELF-LOCKING NUT | BACN10HR6CD    | 5   | -             | Tighten to 300 to 500 in-<br>lb.  |
|    | BOLT, 12 PT HEAD | BACB30US8K28   | 1   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | BOLT, 12 PT HEAD | BACB30US8K*    | 2   | 0.501 - 0.505 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER           | BACW10BP8CD    | 3   | -             | Under bolt head   |
|    | WASHER           | BACW10BP8DP    | 3   | -             | Under the nut   |
|    | NUT              | BACN10HR8CD    | 3   | -             | Tighten to 870 to 1300 in-<br>lb.   |
|    | BOLT, 12 PT HEAD | BACB30US12K36  | 2   | 0.751 - 0.757 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|    | WASHER, PLAIN    | BACW10BP12CD   | 2   | -             | Under bolt head   |
|    | WASHER, PLAIN    | BACW10BP12DP   | 2   | -             | Under the nut   |
|    | SELF-LOCKING NUT | BACN10HR12CD   | 2   | -             | Tighten to 3300 to 4300 in-lb.  |

# FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 17 OF 20)

| Code | Name                   | Identification | Qty | Hole Dia      | More Data   |
|------|------------------------|----------------|-----|---------------|---|
|      | BOLT, 12 PT HEAD       | BACB30US16K46  | 2   | 1.028 - 1.047 | This is a kept part. If this part is not serviceable, use a new part with the same part number. This part is not in the retrofit kit. |
|      | WASHER, PLAIN          | BACW10BP16CD   | 2   | -             | Under bolt head   |
|      | WASHER, PLAIN          | BACW10BP16DP   | 2   | -             | Under the nut   |
|      | SELF-LOCKING NUT       | BACN10HR162CD  | 2   | -             | Tighten to 7000 to 10900 in-lb.   |
| В    | BOLT, PROTRUDING<br>HD | BACB30NX6K5X   | 4   | 0.200 - 0.203 |   |
|      | COLLAR                 | BACC30M6       | 4   | -             |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K11X | 3   | 0.327 - 0.331 |   |
|      | BOLT, PROTRUDING<br>HD | BACB30NX10K14X | 13  | 0.327 - 0.331 |   |
|      | COLLAR                 | BACC30BH10     | 16  | -             |   |

| Code | Name                    | Identification | Qty | Hole Dia      | More Data |
|------|-------------------------|----------------|-----|---------------|-----------|
| С    | BOLT, PROTRUDING<br>HD  | BACB30MY8K4X   | 16  | 0.263 - 0.266 |           |
| ı    | BOLT, PROTRUDING<br>HD  | BACB30MY8K5X   | 4   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K6X   | 18  | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K7X   | 6   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K9X   | 1   | 0.263 - 0.266 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY8K11X  | 14  | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 64  | -             |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K7X  | 8   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K10X | 6   | 0.325 - 0.328 |           |
|      | BOLT, PROTRUDING<br>HD  | BACB30MY10K13X | 6   | 0.325 - 0.328 |           |
|      | COLLAR                  | BACC30M10      | 20  | -             |           |
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K7X   | 2   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K8X   | 5   | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 17  | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K10X  | 28  | 0.263 - 0.266 |           |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K12X  | 2   | 0.263 - 0.266 |           |
|      | COLLAR                  | BACC30M8       | 54  | -             |           |

## FIGURE 18: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - REPAIR (SHEET 19 OF 20)

|   | Code | Name                    | Identification | Qty | Hole Dia           | More Data                   |
|---|------|-------------------------|----------------|-----|--------------------|-----------------------------|
| ĺ | G    | BOLT, HEX DRIVE         | BACB30YN8K12X  | 8   | 0.263 - 0.266      |                             |
|   |      | WASHER                  | NAS1149D0432J  | 8   | -                  |                             |
|   |      | WASHER                  | NAS1149D0463J  | 8   | -                  |                             |
|   |      | NUT                     | BACN10YR4CD    | 8   | -                  | Tighten to 60 to 80 in-lb.  |
|   |      | BOLT, HEX DRIVE         | BACB30YN10K15X | 12  | 0.325 - 0.328      |                             |
|   |      | BOLT, HEX DRIVE         | BACB30YN10K16X | 16  | 0.325 - 0.328      |                             |
|   |      | WASHER                  | NAS1149D0532J  | 28  | -                  |                             |
|   |      | WASHER                  | NAS1149D0563J  | 28  | -                  |                             |
|   |      | NUT                     | BACN10YR5CD    | 28  | -                  | Tighten to 130 to 160 inlb. |
|   | I    | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 8   | 0.2616 -<br>0.2636 |                             |
|   |      | WASHER, PLAIN           | BACW10BP41DP   | 8   | -                  |                             |
|   |      | NUT                     | BACN10YR4CD    | 8   | -                  | Tighten to 60 to 80 in-lb.  |

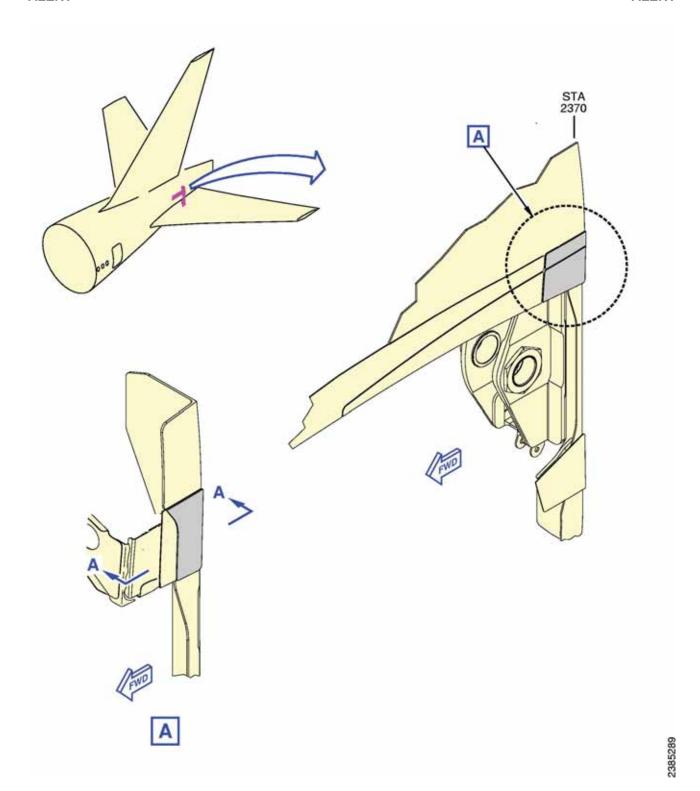


FIGURE 19: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION (SHEET 1 OF 3)

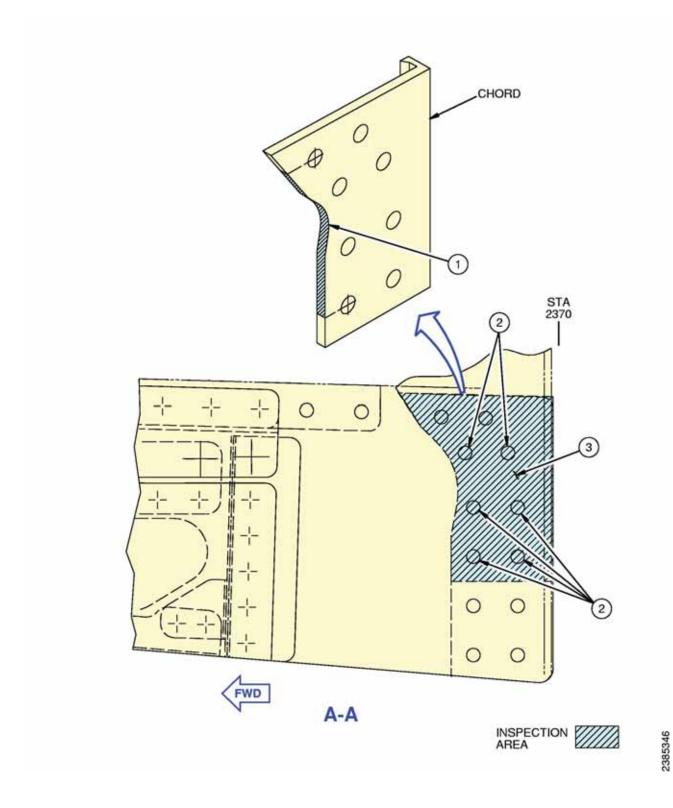


FIGURE 19: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION (SHEET 2 OF 3)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name   | Identification | Qty | More Data   |
|------|---------|--|----------------|-----|---|
| 1    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do a surface High Frequency Eddy Current (HFEC) inspection for any crack, in accordance with 777 NDT Manual Part 6, 51-00-01. |
| 2    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do an open hole<br>HFEC inspection<br>for any crack, in<br>accordance with<br>777 NDT Manual<br>Part 6, 51-00-02.             |
| 3    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-( )   | 1   | Do a DET for any crack.   |

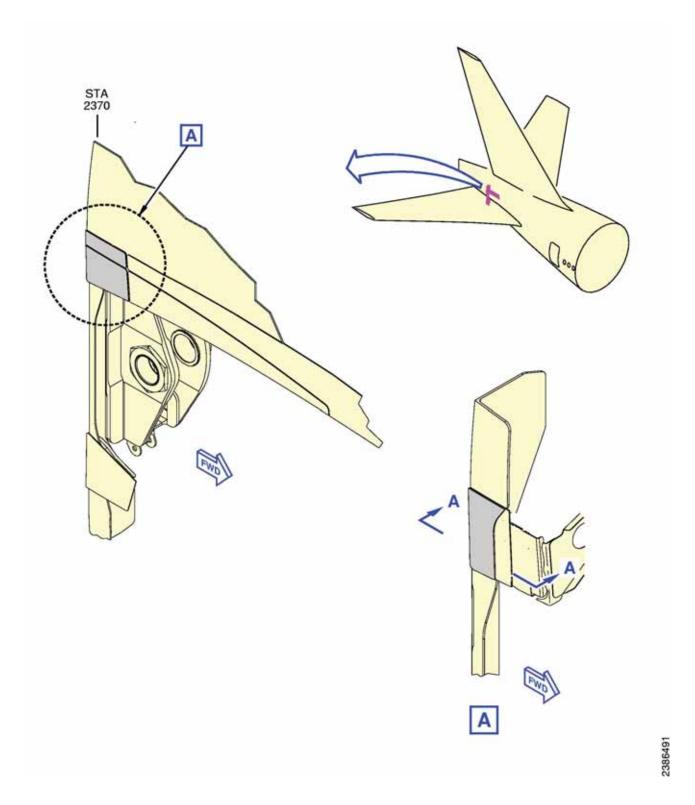


FIGURE 20: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION (SHEET 1 OF 3)

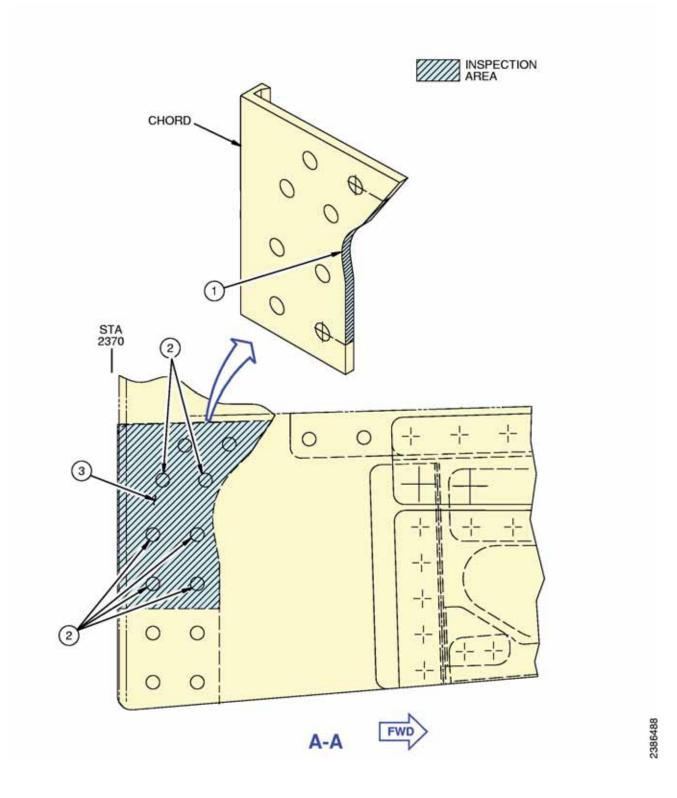


FIGURE 20: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION (SHEET 2 OF 3)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task    | Name   | Identification | Qty | More Data   |
|------|---------|--|----------------|-----|---|
| 1    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do a surface<br>High Frequency<br>Eddy Current<br>(HFEC) inspec-<br>tion for any<br>crack, in accor-<br>dance with 777<br>NDT Manual Part<br>6, 51-00-01. |
| 2    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do an open hole<br>HFEC inspection<br>for any crack, in<br>accordance with<br>777 NDT Manual<br>Part 6, 51-00-02.   |
| 3    | Inspect | CHORD - FOR-<br>WARD, PIVOT<br>BULKHEAD, MID | 148W7102-()    | 1   | Do a DET for any crack.   |

FIGURE 20: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION (SHEET 3 OF 3)

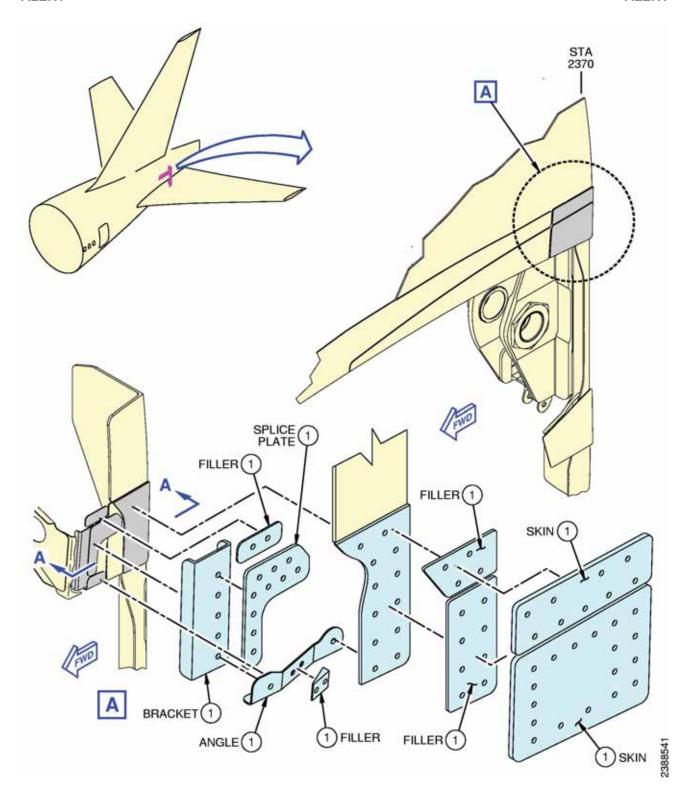


FIGURE 21: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION (SHEET 1 OF 5)

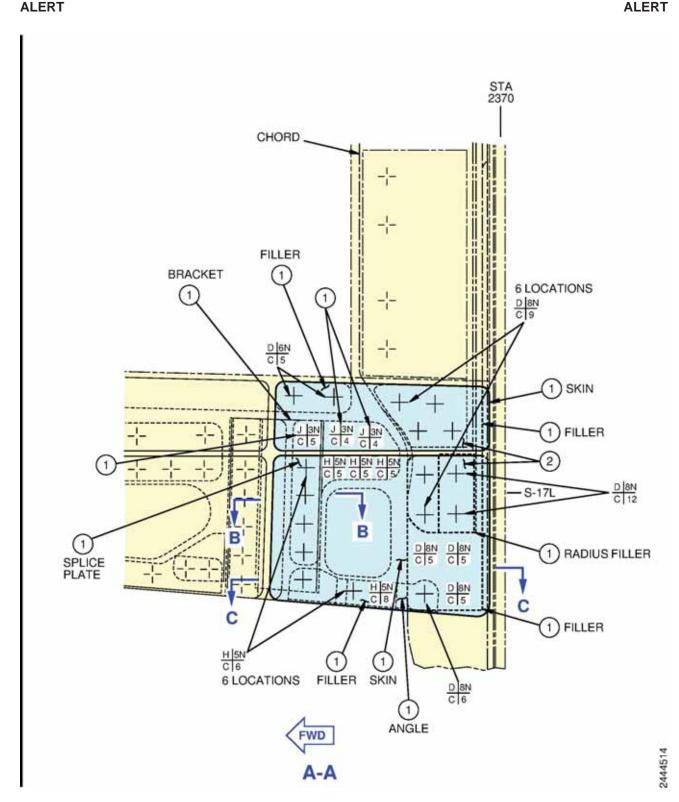


FIGURE 21: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION (SHEET 2 OF 5)

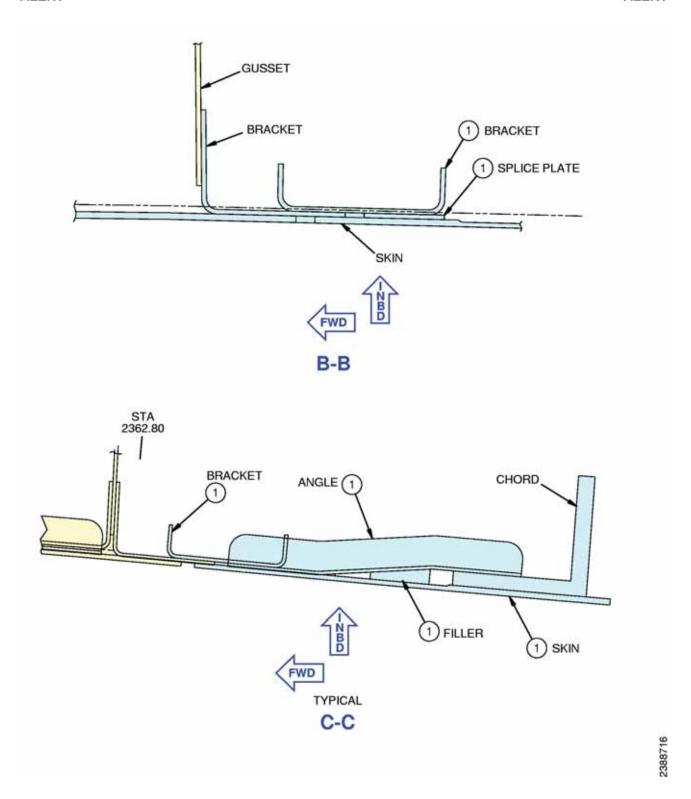
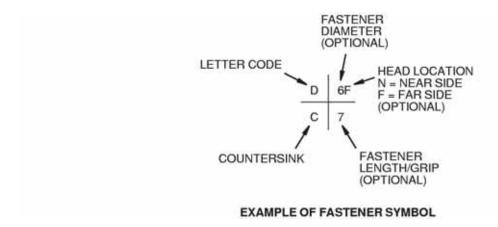


FIGURE 21: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION (SHEET 3 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task           | Name                                  | Identification | Qty | More Data   |
|------|----------------|---------------------------------------|----------------|-----|---|
| 1    | Install (Kept) | FILLER                                | 148W2917-9     | 1   | (a)   |
|      |                | FILLER                                | 148W2917-11    | 1   | (a)   |
|      |                | FILLER                                | 148W2917-7     | 1   | (a)   |
|      |                | ANGLE - FAIR-<br>ING ASSY, UP-<br>PER | 148W2914-( )   | 1   | (a)   |
|      |                | FILLER                                | BACF3T03M14S8B | 1   | (a)   |
|      |                | SPLICE PLATE                          | 148W2918-3     | 1   | (a)   |
|      |                | BRACKET                               | 148W2920-1     | 1   | (a)   |
|      |                | SKIN                                  | 148W2912-1     | 1   | (a) Do not seal<br>the exterior gap<br>around this skin<br>panel. |
|      |                | SKIN                                  | 148W2912-2     | 1   | (a) Do not seal<br>the exterior gap<br>around this skin<br>panel. |
|      |                | RADIUS FILLER                         | 148W9710-15    | 1   | (a)   |
|      |                | FASTENER                              | -              | 3   |   |
| 2    | Install (New)  | FASTENER                              | -              | 24  |   |

<sup>(</sup>a) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.



231499

FIGURE 21: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION
- SKIN PANEL INSTALLATION
(SHEET 4 OF 5)

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name                    | Identification | Qty | Hole Dia           | More Data  |
|------|-------------------------|----------------|-----|--------------------|--|
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW6K5X   | 2   | 0.2026 -<br>0.2036 | (a)  |
|      | COLLAR                  | BACC30M6       | 2   | -                  |  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K5X   | 3   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K6X   | 1   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 6   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K12X  | 2   | 0.2651 -<br>0.2661 | (a)  |
|      | COLLAR                  | BACC30M8       | 12  | -                  |  |
| Н    | RIVET, 100 DEG          | BACR15CE5KE5   | 3   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE6   | 6   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE8   | 1   | -                  |  |
| J    | BOLT                    | BACB30VF3K4    | 2   | -                  |  |
|      | BOLT                    | BACB30VF3K5    | -   | -                  |  |
|      | NUTPLATE                | BACN10YF33CD   | -   | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |

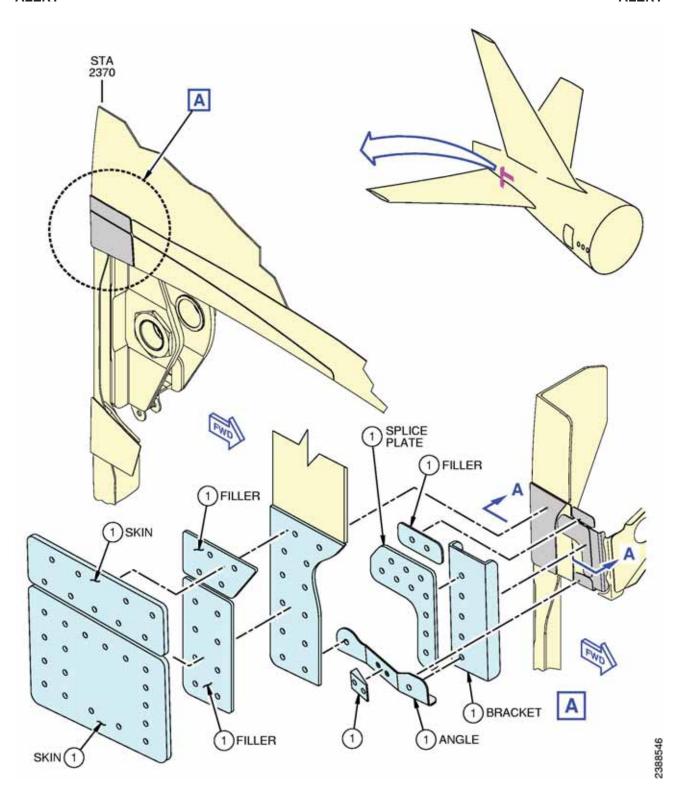


FIGURE 22: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION
- SKIN PANEL INSTALLATION
(SHEET 1 OF 5)

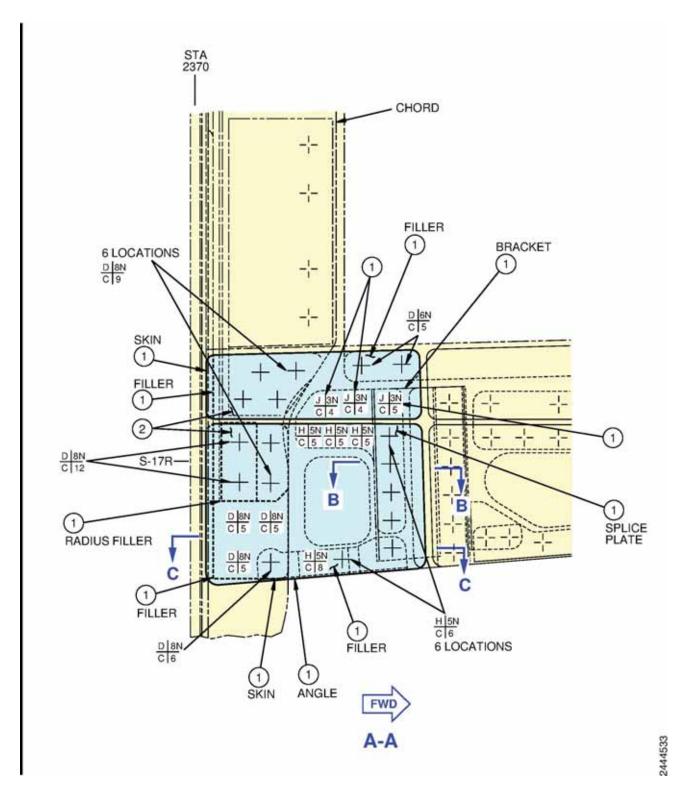
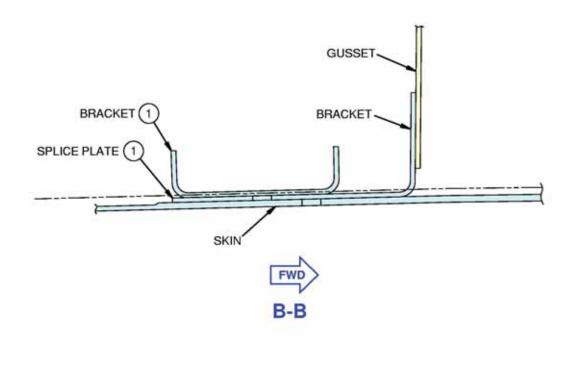


FIGURE 22: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION
- SKIN PANEL INSTALLATION
(SHEET 2 OF 5)



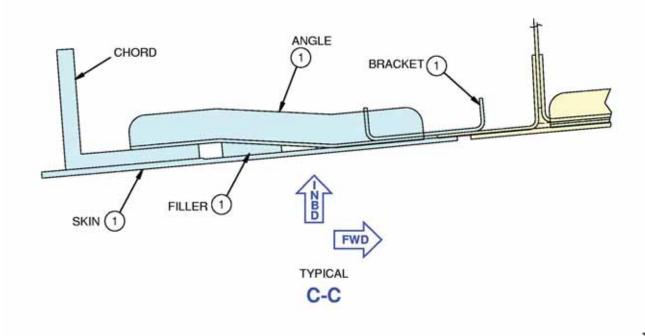
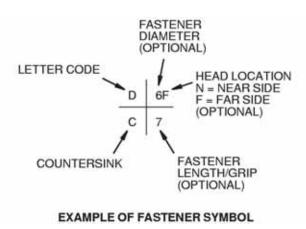


FIGURE 22: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION
- SKIN PANEL INSTALLATION
(SHEET 3 OF 5)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Ste | ер | Task           | Name                                  | Identification | Qty | More Data   |
|-----|----|----------------|---------------------------------------|----------------|-----|---|
| 1   |    | Install (Kept) | FILLER                                | 148W2917-9     | 1   | (a)   |
|     |    |                | FILLER                                | 148W2917-11    | 1   | (a)   |
|     |    |                | FILLER                                | 148W2917-7     | 1   | (a)   |
|     |    |                | ANGLE - FAIR-<br>ING ASSY, UP-<br>PER | 148W2914-( )   | 1   | (a)   |
|     |    |                | FILLER                                | BACF3T03M14S8B | 1   | (a)   |
|     |    |                | SPLICE PLATE                          | 148W2918-4     | 1   | (a)   |
|     |    |                | BRACKET                               | 148W2920-2     | 1   | (a)   |
|     |    |                | SKIN                                  | 148W2912-2     | 1   | (a) Do not seal<br>the exterior gap<br>around this skin<br>panel. |
|     |    |                | SKIN                                  | 148W2912-4     | 1   | (a) Do not seal<br>the exterior gap<br>around this skin<br>panel. |
|     |    |                | RADIUS FILLER                         | 148W9710-15    | 1   | (a)   |
|     |    |                | FASTENER                              | -              | 3   |   |
| 2   | 2  | Install (New)  | FASTENER                              | -              | 24  |   |

<sup>(</sup>a) Apply BMS 5-95, Class C to all mating surfaces. Refer to SOPM 20-50-19 as an accepted procedure.



# FIGURE 22: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR INSPECTION - SKIN PANEL INSTALLATION (SHEET 4 OF 5)

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name                    | Identification | Qty | Hole Dia           | More Data  |
|------|-------------------------|----------------|-----|--------------------|--|
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW6K5X   | 2   | 0.2026 -<br>0.2036 | (a)  |
|      | COLLAR                  | BACC30M6       | 2   | -                  |  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K5X   | 3   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K6X   | 1   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 6   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K12X  | 2   | 0.2651 -<br>0.2661 | (a)  |
|      | COLLAR                  | BACC30M8       | 12  | -                  |  |
| Н    | RIVET, 100 DEG          | BACR15CE5KE5   | 3   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE6   | 6   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE8   | 1   | -                  |  |
| J    | BOLT                    | BACB30VF3K4    | 2   | -                  |  |
|      | BOLT                    | BACB30VF3K5    | -   | -                  |  |
|      | NUTPLATE                | BACN10YF33CD   | -   | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |

<sup>(</sup>a) Install fasteners with BMS 5-95 sealant. Refer to SOPM 20-50-19, Method 2 as an accepted procedure.

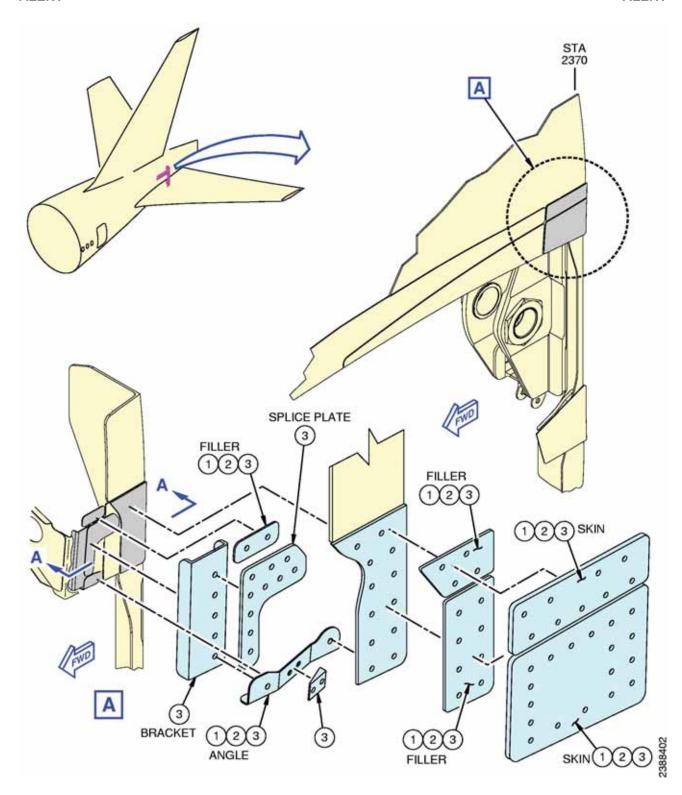


FIGURE 23: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 1 OF 6)

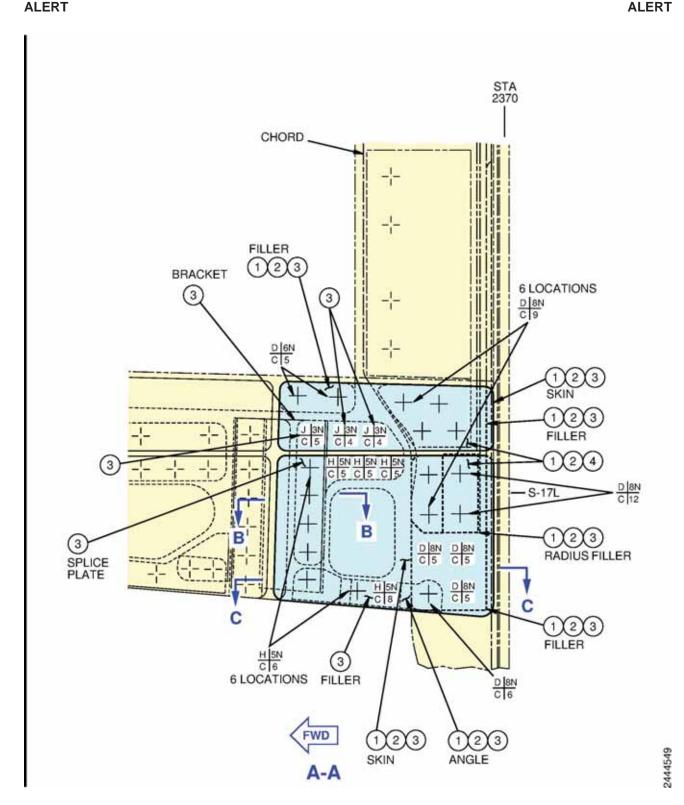


FIGURE 23: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL **INSTALLATION** (SHEET 2 OF 6)

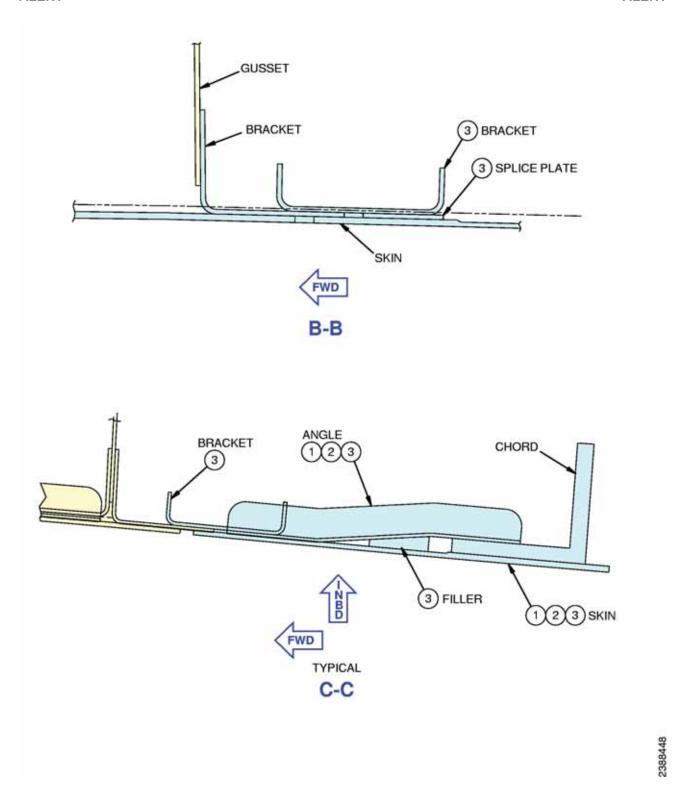


FIGURE 23: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 3 OF 6)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task             | Name                           | Identification | Qty | More Data |
|------|------------------|--------------------------------|----------------|-----|-----------|
| 1    | Put/Hold         | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |                  | FILLER                         | 148W2917-9     | 1   |           |
|      |                  | FILLER                         | 148W2917-11    | 1   |           |
|      |                  | FILLER                         | 148W2917-7     | 1   |           |
|      |                  | SKIN                           | 148W2912-1     | 1   |           |
|      |                  | SKIN                           | 148W2912-3     | 1   |           |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      | Drill/Ream       | HOLE                           | -              | 14  |           |
| 2    | Re-<br>move/Keep | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |                  | FILLER                         | 148W2917-9     | 1   |           |
|      |                  | FILLER                         | 148W2917-11    | 1   |           |
|      |                  | FILLER                         | 148W2917-7     | 1   |           |
|      |                  | SKIN                           | 148W2912-1     | 1   |           |
|      |                  | SKIN                           | 148W2912-3     | 1   |           |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      | Deburr           | HOLE                           | -              | -   |           |

FIGURE 23: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 4 OF 6)

| Step | Task             | Name                           | Identification | Qty | More Data  |
|------|------------------|--------------------------------|----------------|-----|--|
| 3    | Install          | FILLER                         | 148W2917-9     | 1   | (a)  |
|      | (Kept)           | FILLER                         | 148W2917-11    | 1   | (a)  |
|      |                  | FILLER                         | 148W2917-7     | 1   | (a)  |
|      |                  | SPLICE PLATE                   | 148W2918-3     | 1   | (a)  |
|      |                  | BRACKET                        | 148W2920-1     | 1   | (a)  |
|      |                  | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   | (a)  |
|      |                  | FILLER                         | BACF3T03M14S8B | 1   | (a)  |
|      |                  | SKIN                           | 148W2912-1     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | SKIN                           | 148W2912-3     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   | (a)  |
|      |                  | FASTENER                       | -              | 3   |  |
| 4    | Install<br>(New) | FASTENER                       | -              | 24  |  |

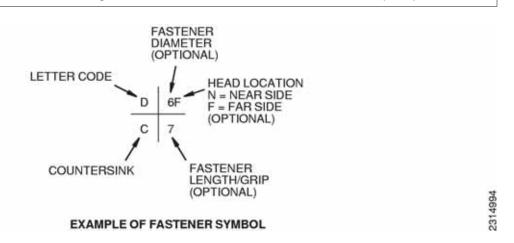


FIGURE 23: LEFT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 5 OF 6)

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

| Code | Name                    | Identification | Qty | Hole Dia           | More Data  |
|------|-------------------------|----------------|-----|--------------------|--|
| D    | BOLT, 100 DEG HEX<br>DR | BACB30NW6K5X   | 2   | 0.2026 -<br>0.2036 | (a)  |
|      | COLLAR                  | BACC30M6       | 2   | -                  |  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K5X   | 3   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K6X   | 1   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K9X   | 6   | 0.2651 -<br>0.2661 | (a)  |
|      | BOLT, 100 DEG HEX<br>DR | BACB30NW8K12X  | 2   | 0.2651 -<br>0.2661 | (a)  |
|      | COLLAR                  | BACC30M8       | 12  | -                  |  |
| Н    | RIVET, 100 DEG          | BACR15CE5KE5   | 3   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE6   | 6   | -                  |  |
|      | RIVET, 100 DEG          | BACR15CE5KE8   | 1   | -                  |  |
| J    | BOLT                    | BACB30VF3K4    | 2   | -                  |  |
|      | BOLT                    | BACB30VF3K5    | -   | -                  |  |
|      | NUTPLATE                | BACN10YF33CD   | -   | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |

<sup>(</sup>a) Install fasteners with BMS 5-95 sealant. Refer to SOPM 20-50-19, Method 2 as an accepted procedure.

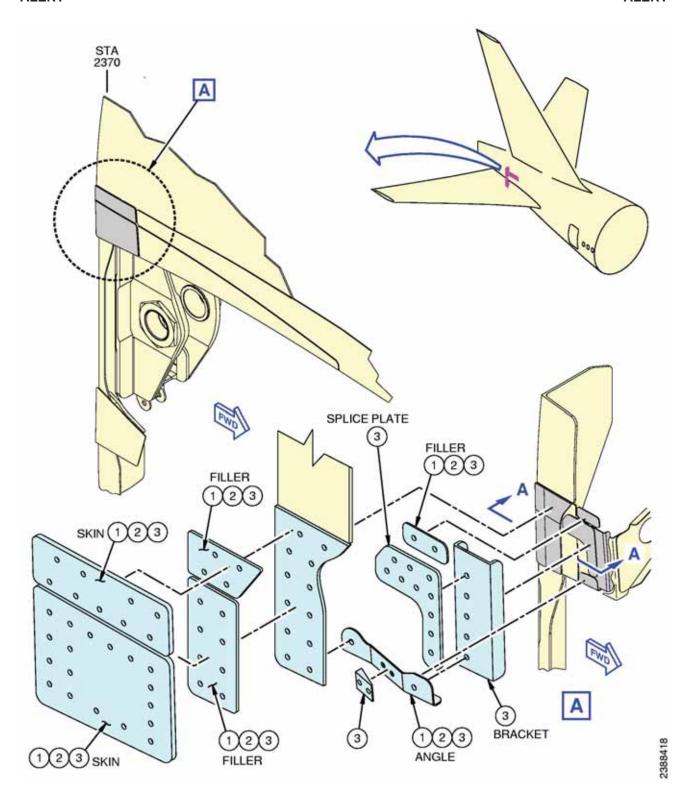


FIGURE 24: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 1 OF 6)

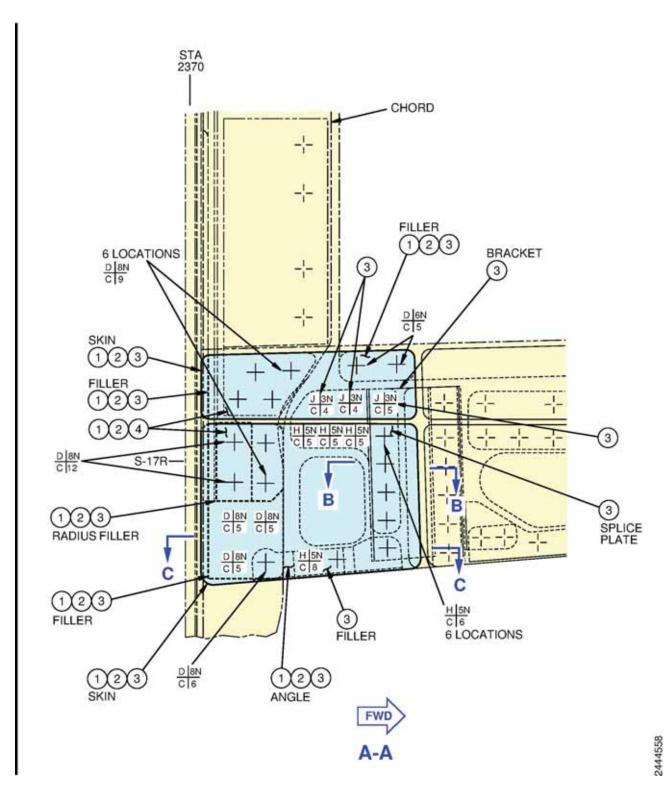


FIGURE 24: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 2 OF 6)

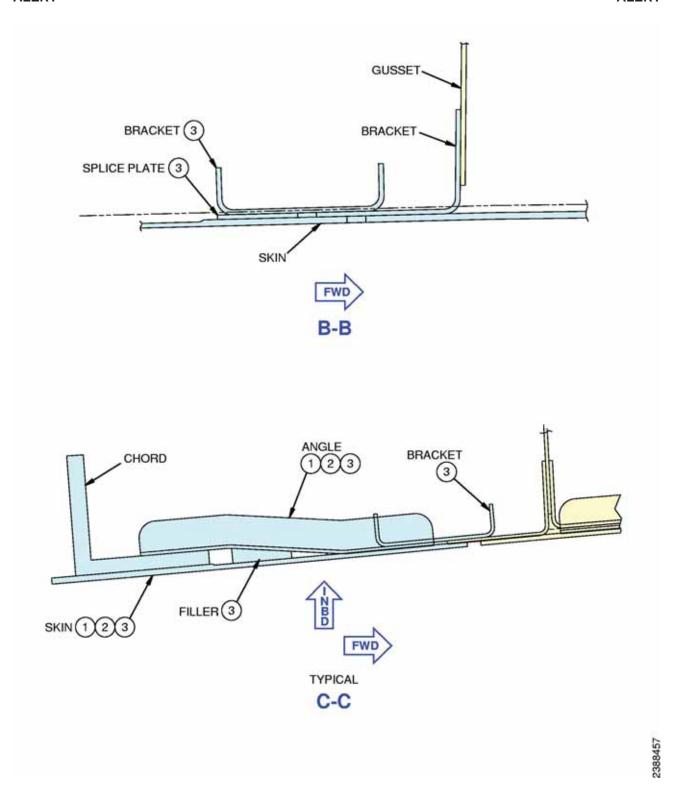


FIGURE 24: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 3 OF 6)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task             | Name                           | Identification | Qty | More Data |
|------|------------------|--------------------------------|----------------|-----|-----------|
| 1    | Put/Hold         | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |                  | FILLER                         | 148W2917-9     | 1   |           |
|      |                  | FILLER                         | 148W2917-11    | 1   |           |
|      |                  | FILLER                         | 148W2917-7     | 1   |           |
|      |                  | SKIN                           | 148W2912-2     | 1   |           |
|      |                  | SKIN                           | 148W2912-4     | 1   |           |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      | Drill/Ream       | HOLE                           | -              | 14  |           |
| 2    | Re-<br>move/Keep | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |                  | FILLER                         | 148W2917-9     | 1   |           |
|      |                  | FILLER                         | 148W2917-11    | 1   |           |
|      |                  | FILLER                         | 148W2917-7     | 1   |           |
|      |                  | SKIN                           | 148W2912-2     | 1   |           |
|      |                  | SKIN                           | 148W2912-4     | 1   |           |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      | Deburr           | HOLE                           | -              | -   |           |

FIGURE 24: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 4 OF 6)

| Step | Task             | Name                           | Identification | Qty | More Data  |
|------|------------------|--------------------------------|----------------|-----|--|
| 3    | Install          | FILLER                         | 148W2917-9     | 1   | (a)  |
|      | (Kept)           | FILLER                         | 148W2917-11    | 1   | (a)  |
|      |                  | FILLER                         | 148W2917-7     | 1   | (a)  |
|      |                  | SPLICE PLATE                   | 148W2918-4     | 1   | (a)  |
|      |                  | BRACKET                        | 148W2920-2     | 1   | (a)  |
|      |                  | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   | (a)  |
|      |                  | FILLER                         | BACF3T03M14S8B | 1   | (a)  |
|      |                  | SKIN                           | 148W2912-2     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | SKIN                           | 148W2912-4     | 1   | (a) Do not seal the exterior gap around this skin panel. |
|      |                  | RADIUS FILLER                  | 148W9710-15    | 1   | (a)  |
|      |                  | FASTENER                       | -              | 3   |  |
| 4    | Install<br>(New) | FASTENER                       | -              | 24  |  |

FASTENER
DIAMETER
(OPTIONAL)

LETTER CODE

HEAD LOCATION
N = NEAR SIDE
F = FAR SIDE
(OPTIONAL)

COUNTERSINK

FASTENER
LENGTH/GRIP
(OPTIONAL)

EXAMPLE OF FASTENER SYMBOL

FIGURE 24: RIGHT SIDE - STA 2370 PIVOT BULKHEAD FORWARD CHORD POST-REPAIR - SKIN PANEL INSTALLATION (SHEET 5 OF 6)

The codes shown below agree with the letter shown in the upper left corner of the fastener symbols in the figure. A number in the lower right corner gives the grip length of the fastener. The QTY numbers shown below are the number of fasteners necessary for this figure.

|   | Code     | Name                      | Identification        | Qty       | Hole Dia           | More Data  |
|---|----------|---------------------------|-----------------------|-----------|--------------------|--|
|   | D        | BOLT, 100 DEG HEX<br>DR   | BACB30NW6K5X          | 2         | 0.2026 -<br>0.2036 | (a)  |
|   |          | COLLAR                    | BACC30M6              | 2         | -                  |  |
|   |          | BOLT, 100 DEG HEX<br>DR   | BACB30NW8K5X          | 3         | 0.2651 -<br>0.2661 | (a)  |
|   |          | BOLT, 100 DEG HEX<br>DR   | BACB30NW8K6X          | 1         | 0.2651 -<br>0.2661 | (a)  |
|   |          | BOLT, 100 DEG HEX<br>DR   | BACB30NW8K9X          | 6         | 0.2651 -<br>0.2661 | (a)  |
|   |          | BOLT, 100 DEG HEX<br>DR   | BACB30NW8K12X         | 2         | 0.2651 -<br>0.2661 | (a)  |
|   |          | COLLAR                    | BACC30M8              | 12        | -                  |  |
| Ì | Н        | RIVET, 100 DEG            | BACR15CE5KE5          | 3         | -                  |  |
|   |          | RIVET, 100 DEG            | BACR15CE5KE6          | 6         | -                  |  |
|   |          | RIVET, 100 DEG            | BACR15CE5KE8          | 1         | -                  |  |
|   | J        | BOLT                      | BACB30VF3K4           | 2         | -                  |  |
|   |          | BOLT                      | BACB30VF3K5           | -         | -                  |  |
|   |          | NUTPLATE                  | BACN10YF33CD          | -         | -                  | Install bolts into existing nutplates on the horizontal stabilizer seal fairing. |
|   | (a) land | all factorious with DMC F | OF applant Defeate CO | DN 4 20 E | 0.40 Mathad 0.6    |  |

<sup>(</sup>a) Install fasteners with BMS 5-95 sealant. Refer to SOPM 20-50-19, Method 2 as an accepted procedure.

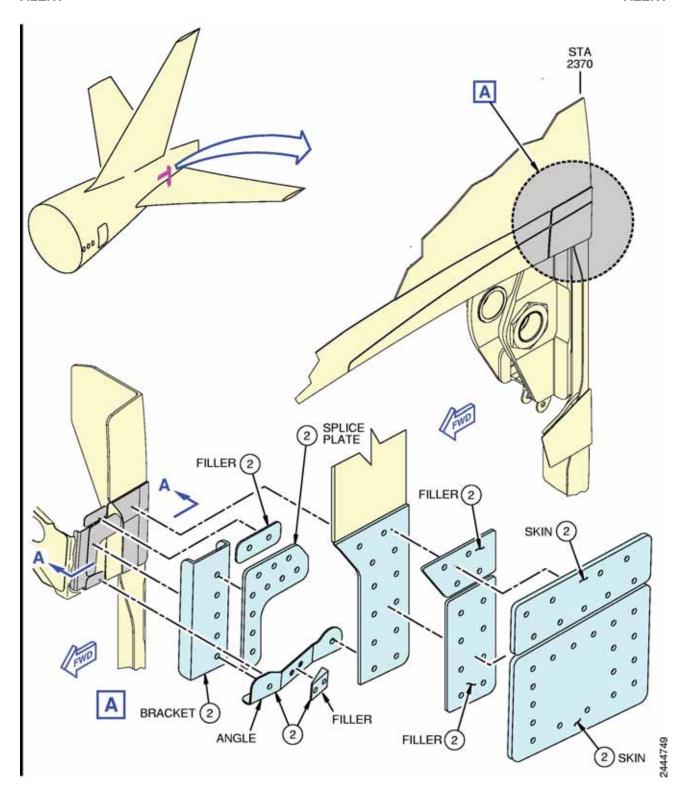
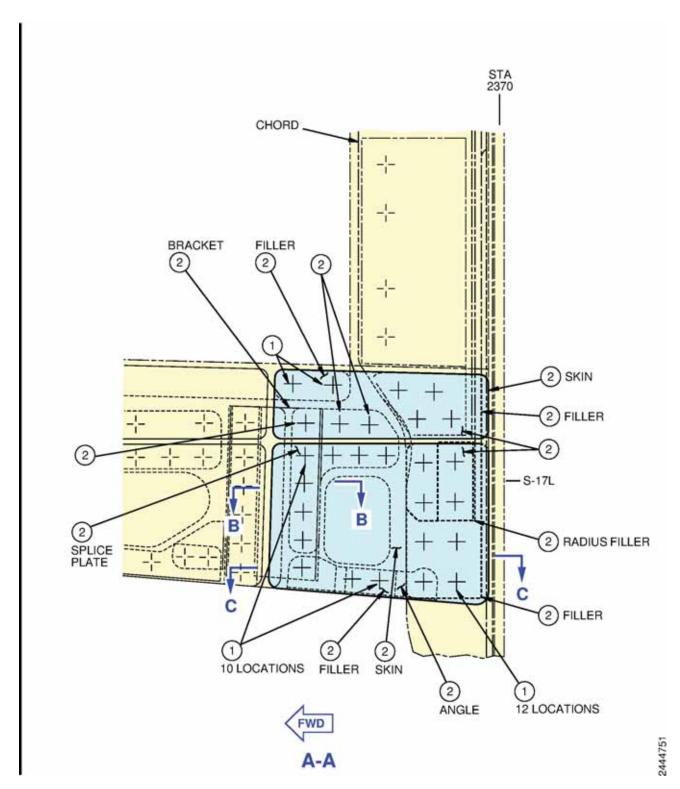


FIGURE 25: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 1 OF 4)



# FIGURE 25: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 2 OF 4)

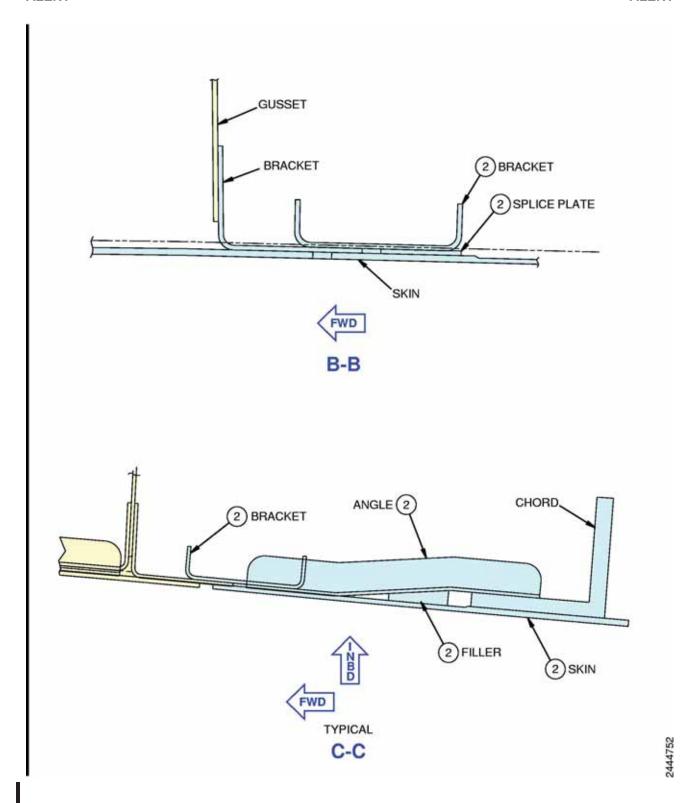
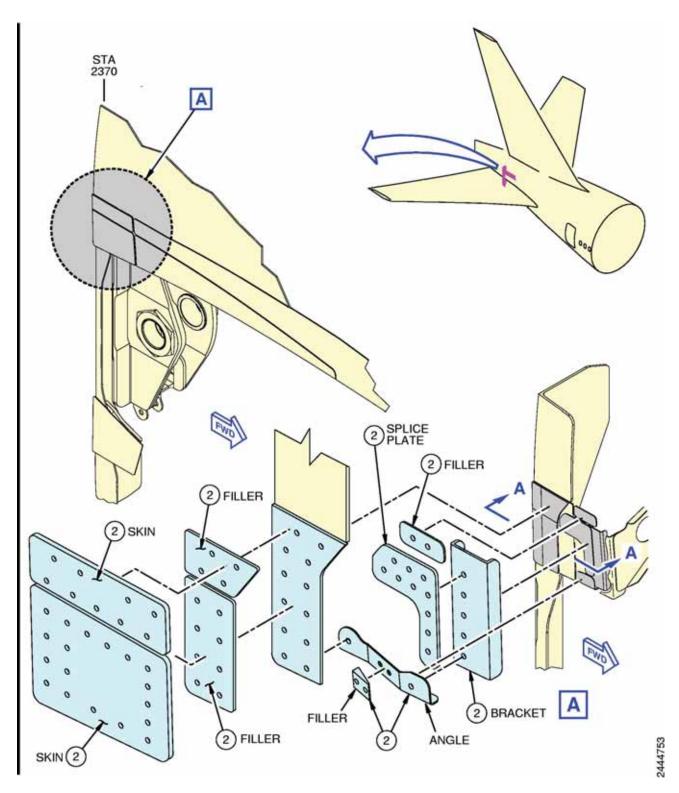


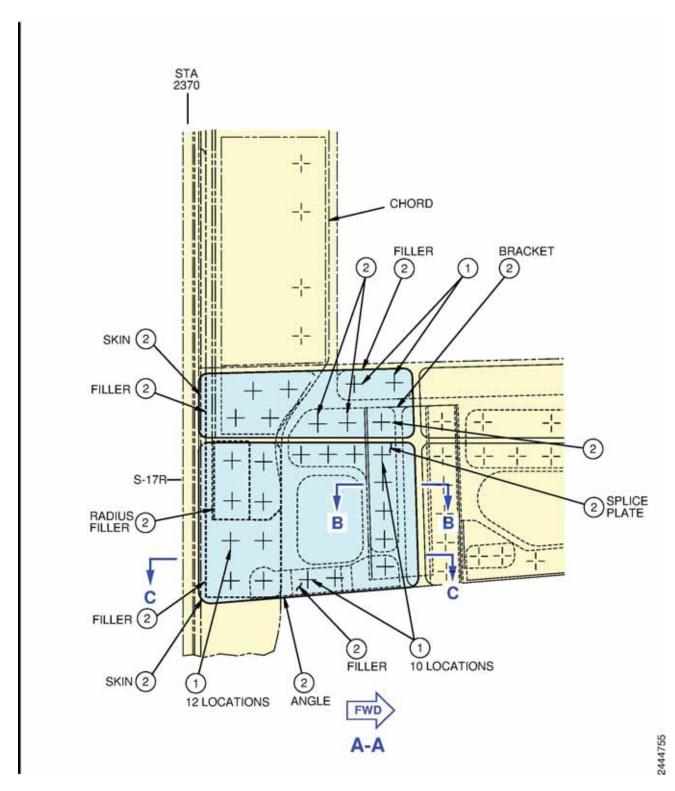
FIGURE 25: LEFT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 3 OF 4)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

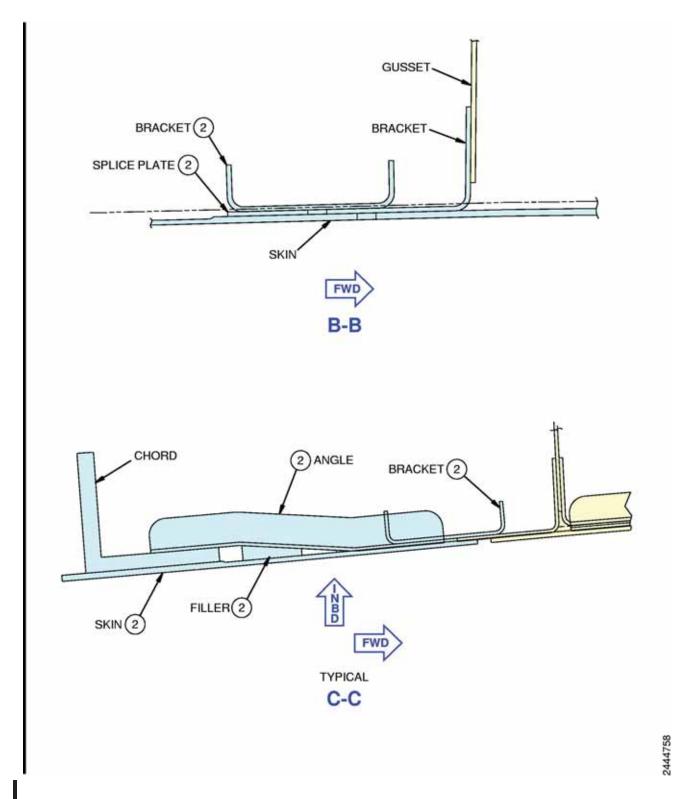
| Step | Task     | Name                           | Identification | Qty | More Data |
|------|----------|--------------------------------|----------------|-----|-----------|
| 1    | Remove   | FASTENER                       | -              | 24  |           |
| 2    | Remove / | FASTENER                       | -              | 3   |           |
|      | Keep     | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      |          | SKIN                           | 148W2912-1     | 1   |           |
|      |          | SKIN                           | 148W2912-3     | 1   |           |
|      |          | FILLER                         | 148W2917-9     | 1   |           |
|      |          | FILLER                         | 148W2917-11    | 1   |           |
|      |          | FILLER                         | 148W2917-7     | 1   |           |
|      |          | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |          | FILLER                         | BACF3T03M14S8B | 1   |           |
|      |          | SPLICE PLATE                   | 148W2918-3     | 1   |           |
|      |          | BRACKET                        | 148W2920-1     | 1   |           |



# FIGURE 26: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 1 OF 4)



### FIGURE 26: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 2 OF 4)



#### FIGURE 26: RIGHT SIDE - STA 2370 SKIN PANEL REMOVAL (SHEET 3 OF 4)

The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for this figure.

| Step | Task        | Name                           | Identification | Qty | More Data |
|------|-------------|--------------------------------|----------------|-----|-----------|
| 1    | Remove      | FASTENER                       | -              | 24  |           |
| 2    | Remove/Keep | FASTENER                       | -              | 3   |           |
|      |             | RADIUS FILLER                  | 148W9710-15    | 1   |           |
|      |             | SKIN                           | 148W2912-2     | 1   |           |
|      |             | SKIN                           | 148W2912-4     | 1   |           |
|      |             | FILLER                         | 148W2917-9     | 1   |           |
|      |             | FILLER                         | 148W2917-11    | 1   |           |
|      |             | FILLER                         | 148W2917-7     | 1   |           |
|      |             | ANGLE - FAIRING<br>ASSY, UPPER | 148W2914-( )   | 1   |           |
|      |             | FILLER                         | BACF3T03M14S8B | 1   |           |
|      |             | SPLICE PLATE                   | 148W2918-4     | 1   |           |
|      |             | BRACKET                        | 148W2920-2     | 1   |           |

ALERT

Logic diagrams are provided as an aid only. Information contained in Paragraph 1.E., Compliance is the primary source for compliance times. Information contained in Paragraph 3.B., Work Instructions is the primary source for tasks required for compliance.

1. The table below gives the description for the parts and conditions called out in the logic diagram.

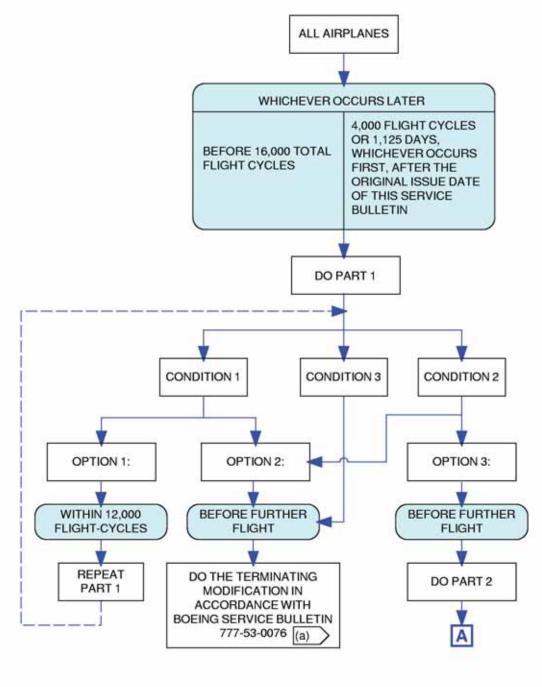
| Title       | Description   |
|-------------|---|
| PART 1      | STATION 2370 PIVOT BULKHEAD FORWARD CHORD - DET AND HFEC INSPECTION             |
| PART 2      | STATION 2370 PIVOT BULKHEAD FORWARD CHORD - SMALL CRACK REPAIR                  |
| PART 3      | STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION |
| CONDITION 1 | NO FORWARD CHORD CRACK IS FOUND   |
| CONDITION 2 | ANY FORWARD CHORD CRACK IS FOUND, AND NO CRACK FOUND IS GREATER THAN 0.160 INCH |
| CONDITION 3 | ANY FORWARD CHORD CRACK FOUND IS GREATER THAN 0.160 INCH                        |
| CONDITION 6 | NO FORWARD CHORD UPPER LOCATION OR ADJACENT STRUCTURE CRACK IS FOUND            |
| CONDITION 7 | ANY FORWARD CHORD UPPER LOCATION OR ADJACENT STRUCTURE CRACK IS FOUND           |

2. The table below gives the description for the flag notes called out in the logic diagram.

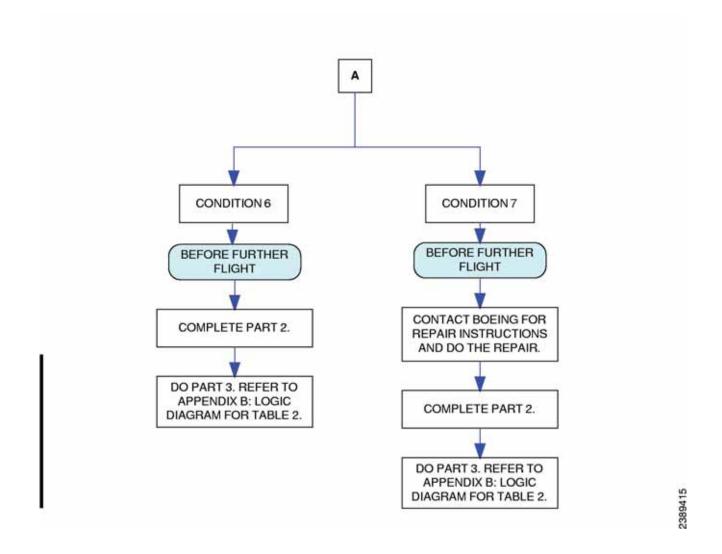
| Flag Note Letter | Description   |
|------------------|---|
| (a)              | Modification in accordance with Boeing Service Bulletin 777-53-0076 is terminating action to the repeat inspections in this service bulletin. |

APPENDIX A: LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 1: DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD (SHEET 1 OF 3)

#### LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 1: DETAILED AND HFEC INSPECTION OF THE STA 2370 PIVOT BULKHEAD FORWARD CHORD



APPENDIX A: LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 1: DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD (SHEET 2 OF 3)



APPENDIX A: LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 1: DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD (SHEET 3 OF 3)

Logic diagrams are provided as an aid only. Information contained in Paragraph 1.E., Compliance is the primary source for compliance times. Information contained in Paragraph 3.B., Work Instructions is the primary source for tasks required for compliance.

1. The table below gives the description for the parts and conditions called out in the logic diagram.

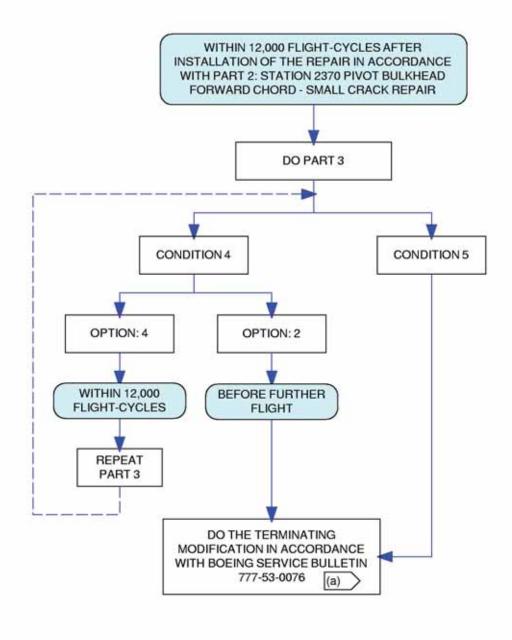
| Title       | Description   |
|-------------|---|
| PART 3      | STATION 2370 PIVOT BULKHEAD FORWARD CHORD - POST-REPAIR DET AND HFEC INSPECTION |
| CONDITION 4 | NO FORWARD CHORD CRACK IS FOUND DURING POST-REPAIR IN-<br>SPECTIONS             |
| CONDITION 5 | ANY FORWARD CHORD CRACK IS FOUND DURING POST-REPAIR IN-<br>SPECTIONS            |

2. The table below gives the description for the flag notes called out in the logic diagram.

| Flag Note Letter | Description   |
|------------------|---|
| (a)              | Modification in accordance with Boeing Service Bulletin 777-53-0076 is terminating action to the repeat inspections in this service bulletin. |

APPENDIX B: LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 2: POST-REPAIR DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD (SHEET 1 OF 2)

#### LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 2: POST REPAIR DETAILED AND HFEC INSPECTION OF THE STA 2370 PIVOT BULKHEAD FORWARD CHORD



APPENDIX B: LOGIC DIAGRAM FOR PARAGRAPH 1.E., COMPLIANCE: TABLE 2: POST-REPAIR DETAILED AND HFEC INSPECTION OF THE STATION 2370 PIVOT BULKHEAD FORWARD CHORD (SHEET 2 OF 2)

Original Issue: January 14, 2015 Revision 1 December 14, 2015 2385678

#### **Boeing Part Demand Intent**

After review of this service bulletin (SB), Boeing asks that the primary engineer fill out this survey to

| Ctt N                   | taurat   |  |  |  |  |
|-------------------------|--|--|--|--|--|
| Contact                 | Contact Name:  |  |  |  |  |
| Date:                   |  |  |  |  |  |
| Contact E               | -mail:   |  |  |  |  |
| Yes                     | ☐ No Have/will you recomme   | end to your airline to accomplish this SB?   |  |  |  |
| Yes                     | ☐ No Would issuance of an  | Airworthiness Directive change this decision?  |  |  |  |
| When wo                 | uld you likely be starting this SB in  | ncorporation? Month/ Year  |  |  |  |
| How man                 | y airplanes per month do you plan  | to accomplish? Airplane/Month  |  |  |  |
| How man                 | y total airplanes do you plan to co  | mplete? Total Airplanes  |  |  |  |
|                         | ction related SBs, are you plannin<br>es regardless of condition?            | g to replace on condition, or a fleet campaign to replace on   |  |  |  |
| On C                    | ondition   |  |  |  |  |
| If you are<br>Your inpu | not incorporating this SB at this ti<br>t will help us provide better custor | me will you please help us understand the reason(s) why?<br>mer support.   |  |  |  |
| Cost                    | Prohibitive Continue Inspect   | ions Other   |  |  |  |
| Operator                | Comments:  |  |  |  |  |
|                         |  |  |  |  |  |
| Within 45               | days of the SB issue, or as soon   | after as possible, please scan this form and send to:  |  |  |  |
| sbsolutio               | ns@boeing.com  | A: A:  |  |  |  |
| constitute<br>a commit  | a commitment on any part of the<br>ment on the part of Boeing to deliv       | ey will be used for planning purposes only and does not<br>airlines to purchase the parts in question, nor does it constitute<br>yer the parts in question. This survey is a projection to help<br>to better support the customers schedule. |  |  |  |

APPENDIX C: BOEING PART DEMAND INTENT (SHEET 1 OF 1)