ALERT

Number: **767-57A0076**
Original Issue: October 26, 2000
Revision 3: April 04, 2012
ATA System: 5750

SUBJECT: WINGS - Trailing Edge and Trailing Edge Devices - Inboard Main Flap - Hinge Fitting Assembly Inspection and Replacement

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Original Issue: October 26, 2000
Revision 3: April 04, 2012
ATA System: 5750

Revision Transmittal Sheet

SUBJECT: WINGS - Trailing Edge and Trailing Edge Devices - Inboard Main Flap - Hinge Fitting Assembly Inspection and Replacement

This revision includes all pages of the service bulletin.

COMPLIANCE INFORMATION RELATED TO THIS REVISION

Federal Aviation Administration (FAA) Airworthiness Directive AD 2003-13-01 is related to this service bulletin.

No more work is necessary on airplanes which previously accomplished Part 3 - Terminating Action of this service bulletin.

No more work is necessary on airplanes that have been previously inspected in accordance with the original issue, Revision 1, or Revision 2 that have hinge fittings with the tool runout.

No more work is necessary on airplanes that have been previously inspected in accordance with the original issue, Revision 1, or Revision 2 that have hinge fittings without the tool runout but continued inspections are required at reduced intervals as follows:

1. Airplanes that were last inspected in accordance with Part 1 - Detailed Inspection: Repeat Part 1 - Detailed Inspection or Do Part 2 - Detailed and Eddy Current Inspection within 300 flight-cycles of the last Part 1 - Detailed Inspection.

2. Airplanes that were last inspected in accordance with Part 2 - Detailed and Eddy Current Inspection: Repeat Part 2 - Detailed and Eddy Current Inspection or Do Part 1 - Detailed Inspection within 750 flight-cycles, from the last Part 2 - Detailed and Eddy Current Inspection or before 300 flight-cycles after the Revision 3 date of this service bulletin, whichever is later, but not to exceed 1,500 flight cycles.

Do continued inspections and actions in accordance with Paragraph 1.E., Compliance.

REASON FOR REVISION

This revision is sent to reduce the compliance time for the repeat inspection interval of the inboard trailing edge main flap outboard hinge fittings and change the area and limit to the outboard half only. Subsequent to the release of Revision 2 of this service bulletin, one operator reported finding a fractured hinge fitting assembly. The fracture occurred on a hinge fitting assembly, that did not have the runout option, at approximately 780 flight-cycles after its last inspection, which was a significant number of flight-cycles before the next scheduled repeat Part 2 inspection. As a result, the repeat inspection interval for Part 2 Inspection is reduced from 1500 flight-cycles to 750 flight-cycles. An examination of the fractured hinge fitting assembly showed that the crack

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started at the edge of the current inspection area. The service bulletin illustrations have been updated to clearly show the expected crack location and direction. A new Boeing Service Related Problem (SRP) 767-SRP-57-0251 was initiated as a result of this in service report. This service bulletin also corrects the existing warranty date to show remedies are available for airplanes in warranty as of March 8, 2000 instead of August 3, 2000. The latest service bulletin format standards have also been updated where applicable.

Terminology has been changed in the Work Instructions to agree with the terminology defined in Paragraph 3.A., General Information - Notes.

These sections are changed:

1. Service Bulletin Title updated.

2. Summary - Background - Reference to Boeing Service Related Problem (SRP) 767-SRP-57-0251 added.

3. Summary - Industry Support Information - Warranty date updated.

4. Summary - Illustration - Illustration updated to show the expected crack location and direction.

5. Paragraph 1.C., Reason - Reference to Boeing Service Related Problem (SRP) 767-SRP-57-0251 added.

6. Paragraph 1.D., Description - Affected Maintenance Zone Table added.

7. Paragraph 1.G., Manpower - Table updated.

8. Paragraph 1.J.1., Existing Data - Reference to Boeing Service Related Problem (SRP) 767-SRP-57-0251 added.

9. Paragraph 1.K.1, Publications - Table updated.

10. Paragraph 1.K.2., Damage Tolerance Based Structural Inspections - Damage Tolerance Inspections (DTI) statement added.

11. Paragraph 2.B., Industry Support Information - Warranty date updated.

12. Paragraph 3.A., General Information - General notes updated.

13. Paragraph 3.B., Work Instructions - Titles updated and the latest service bulletin format standards have also been updated where applicable.

14. Figure 1 - Compliance information in the logic table updated.

15. Figure 2 - Illustrations and step table updated to incorporate the new inspection requirements.

16. Figure 3 - Illustrations and step table updated to incorporate the new inspection requirements.

The data given in Information Notice 767-57A0076 IN 01 is included in this revision.

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

Pages with no vertical lines have no important changes.

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REVISION HISTORY

Original Issue:	October 26, 2000
Revision 1:	March 29, 2001
Revision 2:	November 22, 2006
Revision 3:	April 04, 2012

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ALERT

Number: **767-57A0076**
Original Issue: October 26, 2000
Revision 3: April 04, 2012
ATA System: 5750

Summary

SUBJECT: WINGS - Trailing Edge and Trailing Edge Devices - Inboard Main Flap - Hinge Fitting Assembly Inspection and Replacement

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

Accomplishment of this service bulletin will detect cracks, prevent fractures and ensure the structural integrity of the inboard trailing edge main flap outboard hinge fittings. Fracture of the hinge fitting assemblies could result in the inboard aft flap becoming unrestrained potentially striking the aircraft upon departure, resulting in significant damage to the surrounding structure and cause potential personal injury.

One operator reported lug fractures on both the inboard and outboard hinge fittings of the outboard hinge assembly mounted to the main flap. The hinge assembly provides one of two primary attachment points of the inboard trailing edge aft flap. The outboard hinge fitting was fractured just above the lug hole. The fractured hinge fittings were found during a routine maintenance inspection. The airplane had accumulated 9,598 flight-hours and 5,393 flight-cycles.

During root cause analysis of the fractured hinge fitting it was discovered that an optional tool runout was not present on the damaged fitting assembly. The tool runout option allows the part to be machined thicker within the area reported to be fractured. Boeing has received no reports of cracks or fractures on fittings that have the optional tool runout.

Replacement of the hinge fittings without the tool runout option will ensure the structural integrity of the aft flap, prevent damage to the surrounding structure and the potential for personal injury.

Subsequent to the release of Revision 2 of this service bulletin, one operator reported finding a fractured hinge fitting assembly. The fracture occurred on a hinge fitting assembly, that did not have the runout option, at approximately 780 flight-cycles after its last inspection, which was a significant number of flight-cycles before the next scheduled repeat Part 2 inspection. The service bulletin illustrations have been updated to clearly show the expected crack location and direction. A new Boeing Service Related Problem (SRP) 767-SRP-57-0251 was initiated as a result of this in service report.

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ALERT **ALERT**

Boeing Service Related Problem (SRP) 767-SRP-57-0119 and 767-SRP-57-0251 are related to this service bulletin.

ACTION

Inspect the inboard trailing edge main flap outboard hinge fittings of the left and right wing for cracks, fractures and tool runout option. If any cracks or fractures are found, complete terminating action. If fittings have the tool runout option and no cracks or fractures are found, no further action is required. If fittings do not have the tool runout option and no cracks or fractures are found, repeat inspections until terminating action is completed.

EFFECTIVITY

767-200/300/300F Airplanes. Refer to Paragraph 1.A.1., Airplanes, for the list of affected airplanes.

COMPLIANCE

Refer to FIGURE 1 Logic Diagram for Inspection and Maintenance Alternatives.

Federal Aviation Administration (FAA) Airworthiness Directive AD 2003-13-01 is related to this service bulletin.

INDUSTRY SUPPORT INFORMATION

Boeing warranty remedies are available for airplanes in warranty as of March 8, 2000. Please refer to Paragraph 2.B., Industry Support Information.

MANPOWER

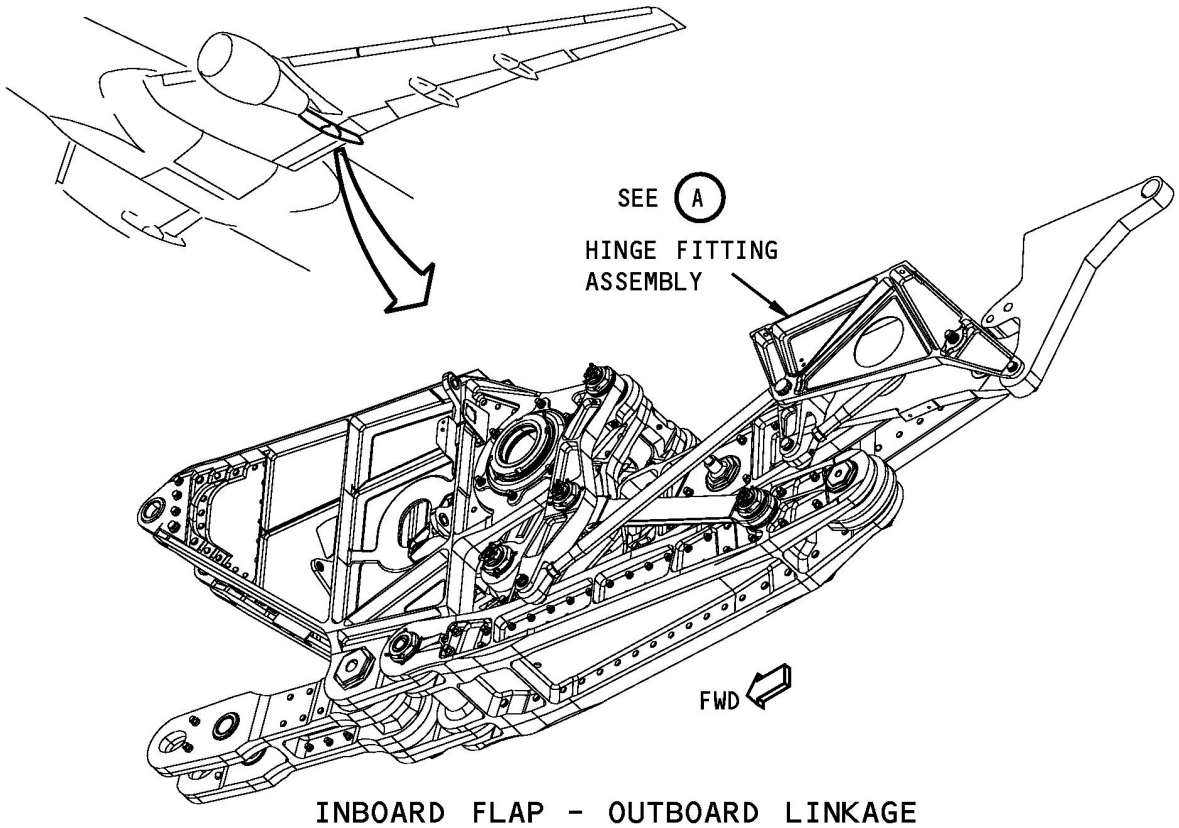
Refer to Paragraph 1.G., Manpower.

MATERIAL INFORMATION

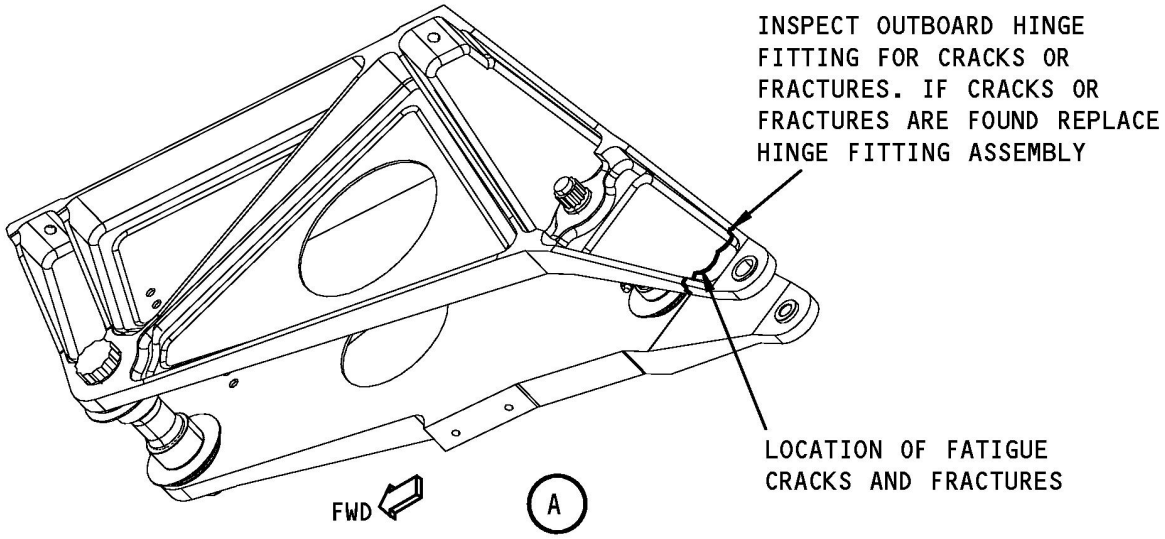
Operator Supplied Parts/Materials.

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

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INBOARD FLAP - OUTBOARD LINKAGE



LEFT WING SHOWN
RIGHT WING SIMILAR

V37977

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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

Refer to Service Bulletin Index Document D624T001 Part 3 for Airplane Variable Number, Line Number, and Serial Number data.

This service bulletin is for the airplanes shown below.

GROUP	CONFIGURATION	DESCRIPTION
1	-	767-200/-300/-300F airplanes line numbers 1 - 825.

Airplane Models:

767-200, 767-300, 767-300F

Variable Number	Group
VA001 - VA020	1
VA301 - VA315	1
VA501 - VA530	1
VA701 - VA719	1
VA801 - VA810	1
VB001 - VB002	1

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Variable Number	Group
VB051 - VB055	1
VB101 - VB125	1
VB201 - VB202	1
VB251 - VB253	1
VB281 - VB284	1
VB301 - VB302	1
VB321 - VB332	1
VB371 - VB373	1
VB401	1
VB441 - VB444	1
VE001 - VE003	1
VE021 - VE023	1
VE041 - VE043	1
VE061 - VE069	1
VE083 - VE086	1
VE101 - VE104	1
VE116 - VE118	1
VE121 - VE126	1
VE141 - VE152	1
VE171 - VE172	1
VF001 - VF002	1
VF041 - VF042	1
VF051	1
VF061 - VF062	1
VF071 - VF072	1
VF091 - VF093	1
VF101 - VF102	1
VF161 - VF162	1
VF171 - VF172	1
VF180 - VF184	1
VF251	1
VK001 - VK016	1
VK021 - VK022	1

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Variable Number	Group
VK031 - VK056	1
VK081 - VK113	1
VK131 - VK133	1
VK141 - VK148	1
VK161 - VK164	1
VK171	1
VK181	1
VK186	1
VL001 - VL006	1
VL011	1
VL701 - VL703	1
VL751 - VL755	1
VL806 - VL807	1
VL871 - VL873	1
VL891 - VL900	1
VL911 - VL914	1
VL931 - VL932	1
VL941	1
VN001 - VN041	1
VN051 - VN064	1
VN081 - VN099	1
VN111 - VN127	1
VN130 - VN137	1
VN151 - VN158	1
VN163 - VN168	1
VN171 - VN174	1
VN191 - VN198	1
VN211 - VN212	1
VN221 - VN225	1
VN231 - VN234	1
VN241 - VN243	1
VN251 - VN276	1
VN291 - VN293	1

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Variable Number	Group
VN301 - VN314	1
VN371 - VN372	1
VN376	1
VN381 - VN388	1
VN421 - VN427	1
VN436	1
VN471 - VN472	1
VN491 - VN513	1
VN531 - VN532	1
VN536 - VN537	1
VN541 - VN542	1
VN546 - VN547	1
VN551	1
VN556 - VN557	1
VN561 - VN562	1
VN631 - VN638	1
VN651 - VN658	1
VN671 - VN672	1
VN676	1
VN681 - VN691	1
VN731 - VN732	1
VN751 - VN753	1
VN791 - VN792	1
VN811 - VN813	1
VN921 - VN922	1
VN931 - VN936	1
VN951 - VN953	1
VN966 - VN972	1
VR051 - VR055	1
VR201 - VR209	1
VR251	1
VR256 - VR257	1
VR401	1

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Variable Number	Group
VR421 - VR422	1
VR426	1
VR441	1
VR461	1
VR471 - VR472	1
VS051 - VS056	1
VS061	1
VS066 - VS070	1
VS073 - VS078	1
VS091 - VS102	1
VS111 - VS113	1
VS131 - VS133	1
VS136 - VS137	1
VS176 - VS177	1
VS186 - VS187	1
VS196 - VS203	1
VS206 - VS208	1
VS211	1
VS216 - VS217	1
VS246 - VS248	1
VS261 - VS262	1
VS266 - VS274	1
VS291	1
VS301 - VS303	1
VS306 - VS308	1
VS316	1
VS321 - VS324	1
VS366 - VS367	1
VS381 - VS382	1
VS391 - VS392	1
VS401	1
VS466 - VS470	1
VS486	1

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Variable Number	Group
VS496 - VS497	1
VS506 - VS507	1
VW701 - VW721	1
VW851	1

2. Spares Affected

   Examine your inboard trailing edge main flap spares supply for the outboard hinge fitting assemblies without the tool runout as identified in Paragraph 2.C., Parts Necessary for Each Airplane. If any parts are found, refer to Paragraph 2.C. for the recommended use.

B. Concurrent Requirements

None.

C. Reason

Accomplishment of this service bulletin will detect cracks, prevent fractures and ensure the structural integrity of the inboard trailing edge main flap outboard hinge fittings. Fracture of the hinge fittings could result in the inboard aft flap becoming unrestrained potentially striking the aircraft upon departure, resulting in significant damage to the surrounding structure and cause potential personal injury.

One operator reported lug fractures on both the inboard and outboard hinge fittings of the outboard hinge assembly mounted to the main flap. The hinge assembly provides one of two primary attachment points of the inboard trailing edge aft flap. The outboard hinge fitting was fractured just above the lug hole. The fractured hinge fittings were found during a routine maintenance inspection. The airplane had accumulated 9,598 flight-hours and 5,393 flight-cycles.

During root cause analysis of the fractured hinge fitting it was discovered that an optional tool runout was not present on the damaged fitting assembly. The tool runout option allows the part to be machined thicker within the area reported to be fractured. Boeing has received no reports of cracks or fractures on fittings that have the optional tool runout.

Replacement of the hinge fittings without the tool runout option will ensure the structural integrity of the aft flap, prevent damage to the surrounding structure and the potential for personal injury.

Subsequent to the release of Revision 2 of this service bulletin, one operator reported finding a fractured hinge fitting assembly. The fracture occurred on a hinge fitting assembly, that did not have the runout option, at approximately 780 flight-cycles after its last inspection, which was a significant number of flight-cycles before the next scheduled repeat Part 2 inspection. The service bulletin illustrations have been updated to clearly show the expected crack location and direction. A new Boeing Service Related Problem (SRP) 767-SRP-57-0251 was initiated as a result of this in service report.

Revision 1 was sent to inform operators of the following changes:

1. Revise Figure 2 and 3 to add an isometric view to further clarify the tool runout inspections.

2. Revise Figure 2 and 3 to add allowable surface mismatch tolerances for the inboard and outboard hinge fitting assemblies.

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3. Revise industry support information to add warranty remedies.

4. Revise effectivity to limit airplanes to all 767-200, 767-300 and 767-300F line numbers 1 through 825.

Revision 2 was sent to add optional parts for the replacement outboard hinge fitting assemblies. The optional parts are the same as the existing replacement parts except the production handling holes are omitted.

Revision 2 makes the following changes to the service bulletin:

— Revised the warranty date in the Summary and Material Information section.
— Add optional parts for the replacement outboard hinge fittings in the Material Information section and in Figure 4.
— Added note to the Material Information section and Figure 4 that the replacement hinge fitting may require different length installation bolts due to variations in the thickness of the installation stack-up.
— Revise the Accomplishment Instructions, Part 3, Step 3 and 5 to show the correct access panels 555JT and 655JT.
— Revise the Accomplishment Instructions to clarify that the work is accomplished on both the left and right wing.
— Add reference to the related FAA Airworthiness Directive (AD).

Revision 3 is sent to reduce the compliance time for the repeat inspection interval of the inboard trailing edge main flap outboard hinge fittings and change the area and limit to the outboard half only. Subsequent to the release of Revision 2 of this service bulletin, one operator reported finding a fractured hinge fitting assembly. The fracture occurred on a hinge fitting assembly, that did not have the runout option, at approximately 780 flight-cycles after its last inspection, which was a significant number of flight-cycles before the next scheduled repeat Part 2 inspection. As a result, the repeat inspection interval for Part 2 Inspection is reduced from 1500 flight-cycles to 750 flight-cycles. An examination of the fractured hinge fitting assembly showed that the crack started at the edge of the current inspection area. The service bulletin illustrations have been updated to clearly show the expected crack location and direction. A new Boeing Service Related Problem (SRP) 767-SRP-57-0251 was initiated as a result of this in service report. This service bulletin also corrects the existing warranty date to show remedies are available for airplanes in warranty as of March 8, 2000 instead of August 3, 2000. The latest service bulletin format standards have also been updated where applicable.

Boeing Service Related Problem (SRP) 767-SRP-57-0119 and 767-SRP-57-0251 are related to this service bulletin.

D. Description

Inspect the inboard trailing edge main flap outboard hinge fittings of the left and right wing for cracks, fractures and tool runout option. If any cracks or fractures are found, complete terminating action. If fittings have the tool runout option and no cracks or fractures are found, no further action is required. If fittings do not have the tool runout option and no cracks or fractures are found, repeat inspections until terminating action is completed.

Revision 1 - No more work was necessary on airplanes changed as shown in the original issue of this service bulletin.

Revision 2 - No more work was necessary on airplanes changed as shown in the original issue or Revision 1 of this service bulletin.

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Revision 3 - No more work is necessary on airplanes which previously accomplished Part 3 - Terminating Action of this service bulletin.

No more work is necessary on airplanes that have been previously inspected in accordance with the original issue, Revision 1, or Revision 2 that have hinge fittings with the tool runout.

No more work is necessary on airplanes that have been previously inspected in accordance with the original issue, Revision 1, or Revision 2 that have hinge fittings without the tool runout but continued inspections are required at reduced intervals as follows:

1. Airplanes that were last inspected in accordance with Part 1 - Detailed Inspection: Repeat Part 1 - Detailed Inspection or Do Part 2 - Detailed and Eddy Current Inspection within 300 flight-cycles of the last Part 1 - Detailed Inspection.

2. Airplanes that were last inspected in accordance with Part 2 - Detailed and Eddy Current Inspection: Repeat Part 2 - Detailed and Eddy Current Inspection or Do Part 1 - Detailed Inspection within 750 flight-cycles, from the last Part 2 - Detailed and Eddy Current Inspection or before 300 flight-cycles after the Revision 3 date of this service bulletin, whichever is later, but not to exceed 1,500 flight cycles.

Do continued inspections and actions in accordance with Paragraph 1.E., Compliance.

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

Affected Maintenance Zones	
Model	**Zone**
767-200, 767-300, 767-300F	571, 671

E. Compliance

Refer to FIGURE 1 Logic Diagram for Inspection and Maintenance Alternatives.

Federal Aviation Administration (FAA) Airworthiness Directive AD 2003-13-01 is related to this service bulletin.

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.

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This service bulletin has been approved by the FAA. In addition, the Manager of the FAA Seattle Aircraft Certification Office approves the Inspections and Terminating Action defined in this service bulletin as an alternative method of compliance to the requirements of paragraph (a), (b) and (f) of AD 2003-13-01. All provisions of AD 2003-13-01 that are not specifically referenced in the above statement remain fully applicable and must be complied with.

G. Manpower

The table below shows an estimate of the man-hours necessary to do the fitting inspections and replacement for each airplane. This estimate is for direct labor only, done by an experienced crew. Adjust the estimate with operator man-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 examine the work
— Time to cure the materials
— Time to make the parts
— Time to find the tools.

Part 1 - Detailed Inspection

Task	Number of Persons	Man-Hours	Elapsed Time (Hours)
Open Access	2	2.0	1.0
Detailed Inspection	1	1.0	1.0
Close Access	2	2.0	1.0
TOTAL FOR EACH WING		5.0	3.0
TOTAL FOR EACH AIRPLANE		10.0	6.0

Part 2 - Detailed and Eddy Current Inspection

Task	Number of Persons	Man-Hours	Elapsed Time (Hours)
Open Access	2	2.0	1.0
Detailed Inspection	1	1.0	1.0
Eddy Current Inspection	1	1.5	1.5
Close Access	2	2.0	1.0
TOTAL FOR EACH WING		(a)	(a)
TOTAL FOR EACH AIRPLANE		(a)	(a)
(a) The total task hours and elapsed hours are not given as the work necessary for each wing and airplane is variable.			

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Part 3 - Terminating Action

Task	Number of Persons	Man-Hours	Elapsed Time (Hours)
Open Access	2	2.0	1.0
Replace Fitting	2	12.0	6.0
Close Access	2	2.0	1.0
TOTAL FOR EACH WING		16.0	8.0
TOTAL FOR EACH AIRPLANE		32.0	16.0

H. Weight and Balance Changes

None

I. Electrical Load Data

Not changed

J. References

1. Existing Data:

   a. Boeing Service Related Problem (SRP) 767-SRP-57-0119, 767-SRP-57-0251

   b. Component Maintenance Manual (CMM) 57-53-27

   c. Federal Aviation Administration (FAA) Airworthiness Directive (AD) 2003-13-01

   d. Standard Overhaul Practices Manual (SOPM) 20-30-03, 20-41-02, 20-50-10, 20-50-19

   e. 767 Aircraft Maintenance Manual (AMM) 06-44-00, 27-51-00

   f. 767 Non-Destructive Testing (NDT) Manual Part 6, 51-00-01, Part 6, 51-00-19

2. Data supplied with this Service Bulletin:

   None.

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

Drawing Number	Title
113T2101	FLAP INSTL - INBD T.E. FLAP
113T2000	FLAP INSTL - INBD T.E. FLAP
113T2201	MAIN FLAP INSTL - INBD T.E. FLAP

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

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K. Publications Affected

1. Publications:

Publication	Chapter-Section
767 Illustrated Parts Catalog	27-51
Component Maintenance Manual	57-53

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 but no new DTIs are necessary.

L. Interchangeability and Intermixability of Parts

Refer to Paragraph 2.C., Parts Necessary for Each Airplane, for interchangeability and intermixability information.

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2. MATERIAL INFORMATION

A. Material - Price and Availability

The operator can supply the parts and materials shown in Paragraph 2.C., Parts Necessary for Each Airplane, and Paragraph 2.D., Parts Necessary to Change Spares. As an alternative, operators can purchase the parts from Boeing Spares. This service bulletin does not show the Boeing price and supply data.

B. Industry Support Information

Boeing warranty remedies are available for 767 airplanes in warranty as of March 08, 2000. For inspection task hour reimbursement for airplanes in warranty as of that date, send a warranty claim to Boeing Commercial Airplanes Group - Warranties. If the condition described in this service bulletin is found during the inspection for airplanes in warranty as of that date and additional task hours and parts are required, send a warranty claim to Boeing Commercial Airplanes Group - Warranties. Please refer to this service bulletin number and reference the airplane variable numbers in your purchase order.

C. Parts Necessary For Each Airplane

1. Kits/Parts:

   None.

2. Parts and Materials Supplied by the Operator:

Part Number / Specification	QTY	Name	Notes
113T2271-43 113T2271Y43 (Optional)	1	Outboard Hinge Fitting Assy - Left Wing	(a)
113T2271-44 113T2271Y44 (Optional)	1	Outboard Hinge Fitting Assy - Right Wing	(a)
BACB30LE5K19	4	Bolt	(b) (e)
BACB30LE5K19X	4	Bolt (Optional 1/64 Oversize)	(b) (e)
BACB30LE5K20	4	Bolt	(b) (e)
BACB30LE5K20X	4	Bolt (Optional 1/64 Oversize)	(b) (e)
BACS40R015D015F	4	Shim	(d)
BACS40R015D017F	4	Shim	(d)
BACW10BP5CD	8	Washer	(d)
BACW10BP51CD	8	Washer (Optional 1/64 Oversize)	(d)
BACW10BP5DP	8	Washer	(d)
BACW10BP51DP	8	Washer (Optional 1/64 Oversize)	(d)
NAS1805-5L	8	Nut	(d)
BMS 5-95	8 Ounces	Sealant	(c)

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Part Number / Specification	QTY	Name	Notes
BMS 10-11 Type I	4 Ounces	Primer	(c)
MIL-G-23827	4 Ounces	Grease	(c)
(a) The 113T2271Y( ) optional part is identical to the 113T2271-( ) part except the optional part omits the handling holes used in production.			
(b) Refer to 767 Structural Repair Manual Chapter 51 for alternative fasteners.			
(c) See the Qualified Products List at the end of the Boeing Material Specification (BMS) for supplier data.			
(d) Use original shims located between the fitting assembly and the flap skin to maintain the original hinge line geometry of the fittings. However if original shims are damaged, replace shims. Maintain the thickness and location of the original shims.			
(e) Due to variations in the hinge fitting installation stack-up thickness, it is possible that different fastener lengths may be required. It is acceptable to install a different fastener length of the same bolt type if required.			

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.

Existing Part Number	QTY	Name	New Part Number	Notes
113T2271-13	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-14	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-23	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-24	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-29	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-30	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-33	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
113T2271-34	1	Hinge Fitting Assembly	-	(a) (b) (c) (d)
(a) Hinge Fitting Assemblies with tool runout found to have no cracks or fractures during inspections in accordance with this service bulletin.				
(b) Make the change in accordance with this service bulletin.				
(c) 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.				
(d) You can use the existing part to replace the new or changed part. If you use the existing part, you cancel the effect of the change given in this service bulletin.				

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4. Parts Removed and Not Replaced:

None.

D. Parts Necessary to Change Spares

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

Part Number	QTY	Name	Notes
113T2271-43 113T2271Y43 (Optional)	1	Outboard Hinge Fitting Assy - Left Wing	(d)
113T2271-44 113T2271Y44 (Optional)	1	Outboard Hinge Fitting Assy - Right Wing	(d)
BACB30LE5K19	4	Bolt	(a) (e)
BACB30LE5K19X	4	Bolt (Optional 1/64 Oversize)	(a) (e)
BACB30LE5K20	4	Bolt	(a) (e)
BACB30LE5K20X	4	Bolt (Optional 1/64 Oversize)	(a) (e)
BACS40R015D015F	4	Shim	(c)
BACS40R015D017F	4	Shim	(c)
BACW10BP5CD	8	Washer	(c)
BACW10BP51CD	8	Washer (Optional 1/64 Oversize)	(c)
BACW10BP5DP	8	Washer	(c)
BACW10BP51DP	8	Washer (Optional 1/64 Oversize)	(c)
NAS1805-5L	8	Nut	(c)
BMS 5-95	8 ounces	Sealant	(b)
BMS 10-11 Type I	4 ounces	Primer	(b)
MIL-G-23827	4 ounces		(b)
(a) Refer to 767 Structural Repair Manual Chapter 51 for alternative fasteners.			
(b) See the Qualified Products List at the end of the Boeing Material Specification (BMS) for supplier data.			
(c) Use original shims located between the fitting assembly and the flap skin to maintain the original hinge line geometry of the fittings. However if original shims are damaged, replace shims. Maintain the thickness and location of the original shims.			
(d) The 113T2271Y( ) optional part is identical to the 113T2271-( ) part except the optional part omits the handling holes used in production.			
(e) Due to variations in the hinge fitting installation stack-up thickness, it is possible that different fastener lengths may be required. It is acceptable to install a different fastener length of the same bolt type if required.			

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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.

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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.

2. 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 limits to tighten nuts and bolts are in SRM Chapter 51

4. Use the approved fastener and process 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.

6. A Detailed Inspection 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. 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.

8. 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.

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9. 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.

10. 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.

11. This service bulletin includes functional test procedures for the systems changed by this service bulletin. More functional tests can possibly be necessary in accordance with standard maintenance practices because of interruption to other airplane systems.

12. Some Boeing parts are supplied in a temporary configuration. Those parts are identified with a 'U', 'W', or 'Y' in place of the '-' (dash) in the part number. It is permitted to install parts identified with a 'U', 'W', or 'Y' as an alternative to the '-' (dash) part number. Boeing Drawing 005W0900 contains more data.

B. WORK INSTRUCTIONS

Part 1 - Detailed Inspection

WARNING: TRAILING EDGE FLAPS ARE FAST ACTING. MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF TRAILING EDGE FLAPS AND THE FLAP DRIVE MECHANISMS BEFORE YOU MOVE THE FLAP CONTROL LEVER. ONCE THE TRAILING FLAPS ARE DEPLOYED LOCKS MUST BE INSTALLED TO PREVENT POSSIBLE INJURY DUE TO INADVERTENT OPERATION OF THE FLAPS.

1. Extend and deactivate the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

2. Remove the number 3 and 6 trailing edge aft flap adjustment access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

Left Wing	Right Wing
571GL	671GL
571GR	671GR

3. On the left and right wing, do a detailed inspection of the inboard trailing edge main flap outboard hinge fittings for cracks, fractures and tool runout option in accordance with FIGURE 2.

4. If cracked or fractured fittings are found, do Part 3 - Terminating Action.

5. If fittings have the tool runout option and no cracks or fractures are found, mark the incorporation of this service bulletin on each hinge fitting assembly by rubber stamp or stencil method. No further action is required. Refer to SOPM 20-50-10 as an accepted procedure.

6. If fittings do not have the tool runout option and no cracks or fractures are found, repeat the inspections at the intervals shown in accordance with FIGURE 1 until terminating action is completed.

7. Install the number 3 and 6 trailing edge aft flap adjustment access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

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Left Wing	Right Wing
571GL	671GL
571GR	671GR

8. Activate and retract the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

9. Put the airplane back to a serviceable condition.

Part 2 - Detailed and Eddy Current Inspection

WARNING: TRAILING EDGE FLAPS ARE FAST ACTING. MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF TRAILING EDGE FLAPS AND THE FLAP DRIVE MECHANISMS BEFORE YOU MOVE THE FLAP CONTROL LEVER. ONCE THE TRAILING FLAPS ARE DEPLOYED LOCKS MUST BE INSTALLED TO PREVENT POSSIBLE INJURY DUE TO INADVERTENT OPERATION OF THE FLAPS.

1. Extend and deactivate the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

2. Remove the number 3 and 6 trailing edge aft flap adjustment access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

Left Wing	Right Wing
571GL	671GL
571GR	671GR

3. On the left and right wing, do a detailed and eddy current inspection of the inboard trailing edge main flap outboard hinge fittings for cracks, fractures and tool runout option in accordance with FIGURE 3.

4. If cracked or fractured fittings are found, do Part 3 - Terminating Action.

5. If fittings have the tool runout option and no cracks or fractures are found, mark the incorporation of this service bulletin on each hinge fitting assembly by rubber stamp or stencil method. No further action is required. Refer to SOPM 20-50-10 as an accepted procedure.

6. If fittings do not have the tool runout option and no cracks or fractures are found, repeat the inspections at the intervals in accordance with FIGURE 1 until terminating action is completed.

7. Install the number 3 and 6 trailing edge aft flap adjustment access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

Left Wing	Right Wing
571GL	671GL
571GR	671GR

8. Activate and retract the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

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9. Put the airplane back to a serviceable condition.

Part 3 - Terminating Action

WARNING: TRAILING EDGE FLAPS ARE FAST ACTING. MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF TRAILING EDGE FLAPS AND THE FLAP DRIVE MECHANISMS BEFORE YOU MOVE THE FLAP CONTROL LEVER. ONCE THE TRAILING FLAPS ARE DEPLOYED LOCKS MUST BE INSTALLED TO PREVENT POSSIBLE INJURY DUE TO INADVERTENT OPERATION OF THE FLAPS.

1. Extend and deactivate the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

2. Remove the number 3 and 6 trailing edge main flap fairing mid sections listed below. Refer to 767 AMM 06-44-00 for location of these fairing sections.

Left Wing	Right Wing
571DB	671DB

3. Remove the number 3 and 6 trailing edge main flap upper skin access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

Left Wing	Right Wing
555JT	655JT

4. On the left and right wing, replace the inboard trailing edge main flap outboard hinge fittings in accordance with FIGURE 4.

   NOTE: The outboard hinge fitting and the inboard hinge fitting are attached together to make the hinge fitting assembly. If cracks or fractures are found on the outboard hinge fitting, it is necessary to change both (inboard and outboard) hinge fittings.

5. Install the number 3 and 6 trailing edge main flap upper skin access panels listed below. Refer to 767 AMM 06-44-00 for location of these panels.

Left Wing	Right Wing
555JT	655JT

6. Install the number 3 and 6 trailing edge main flap fairing mid sections listed below. Refer to 767 AMM 06-44-00 for location of these fairing sections.

Left Wing	Right Wing
571DB	671DB

7. Activate and retract the trailing edge flaps. Refer to 767 AMM 27-51-00 as an accepted procedure.

8. Put the airplane back to a serviceable condition.

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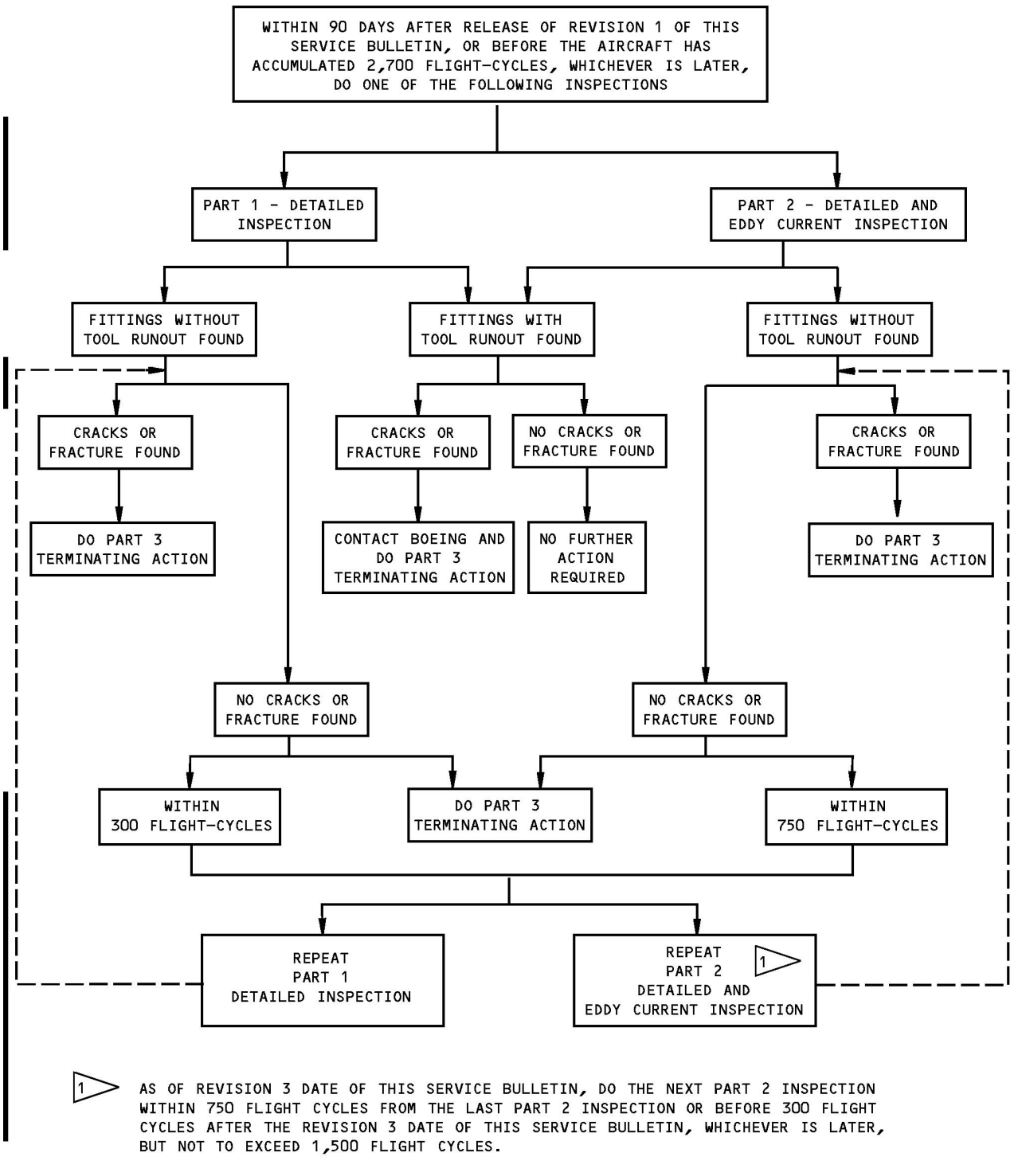


FIGURE 1: LOGIC DIAGRAM OF INSPECTION AND MAINTENANCE ALTERNATIVES (SHEET 1 OF 1)

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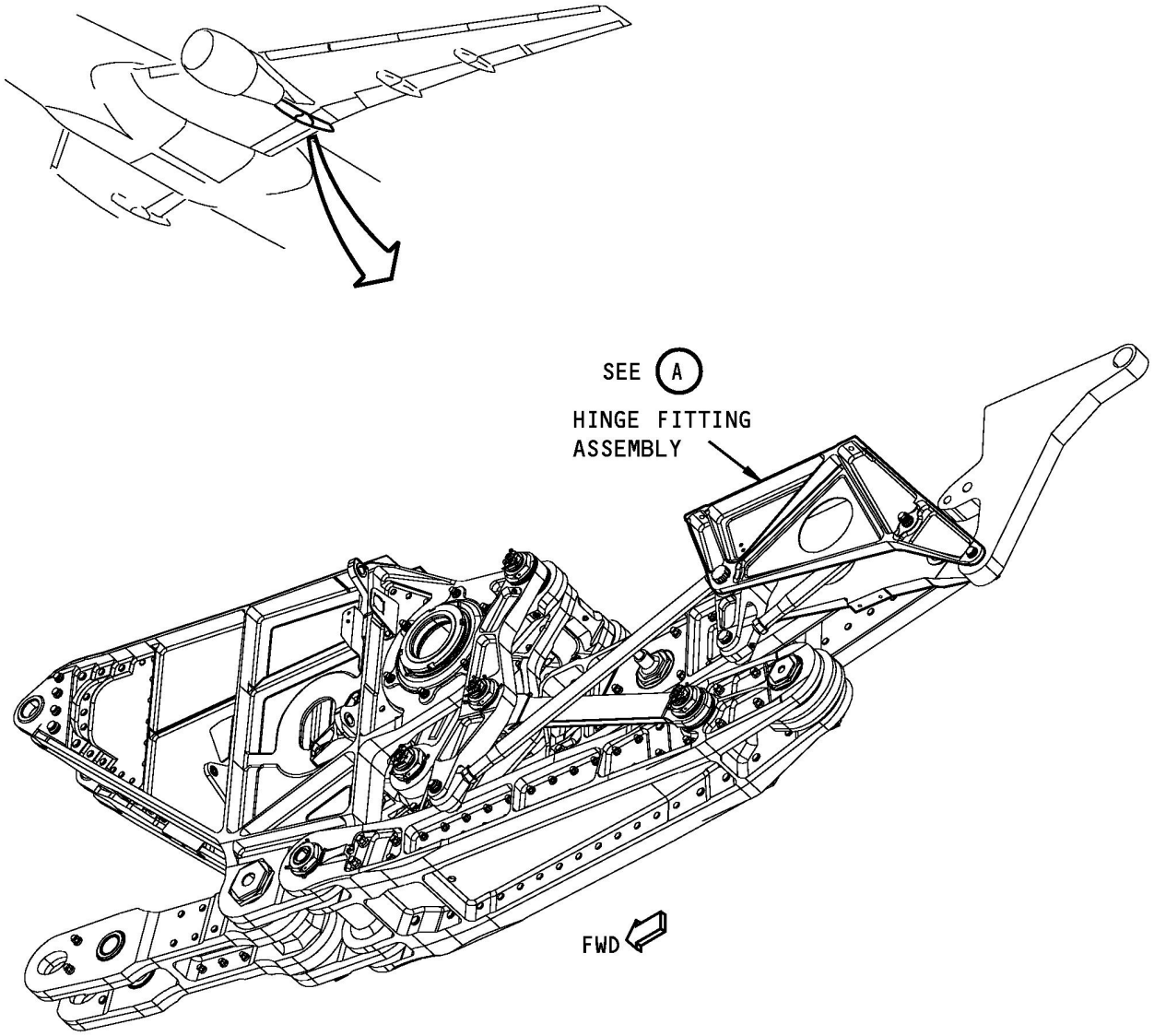


FIGURE 2: OUTBOARD HINGE FITTING - DETAILED INSPECTION (SHEET 1 OF 4)

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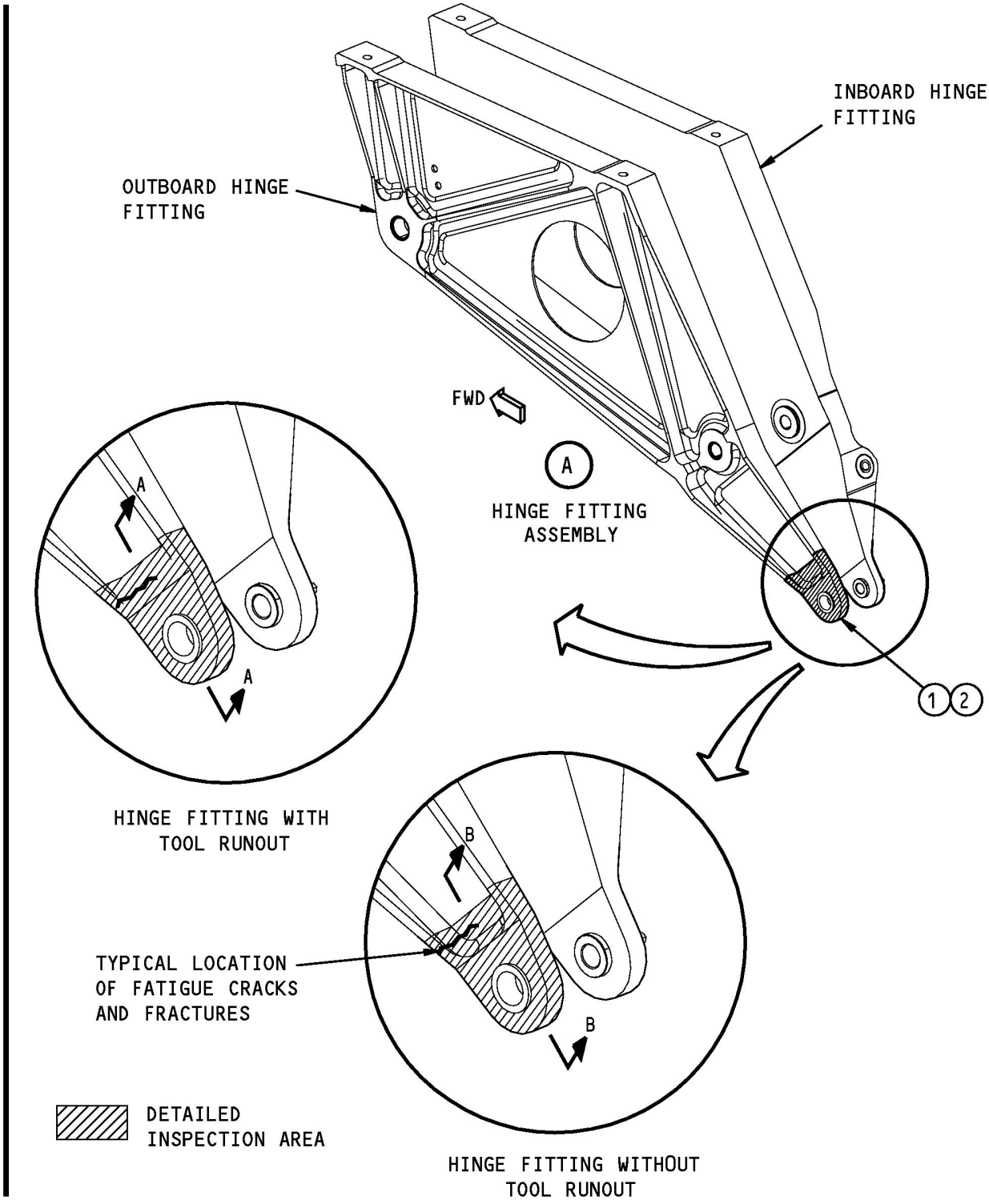
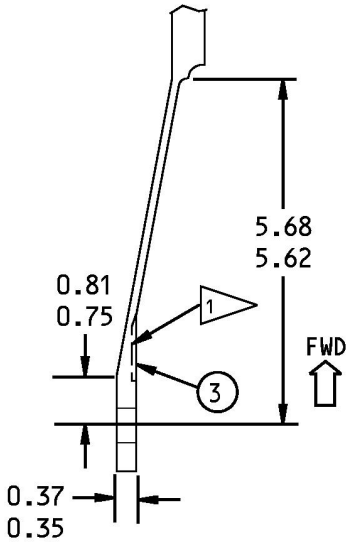
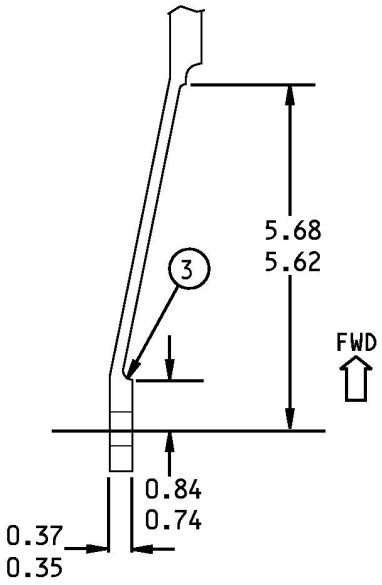


FIGURE 2: OUTBOARD HINGE FITTING - DETAILED INSPECTION (SHEET 2 OF 4)

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A–A
OUTBOARD HINGE FITTING
WITH TOOL RUNOUT



B–B
OUTBOARD HINGE FITTING
WITHOUT TOOL RUNOUT

V48850

FIGURE 2: OUTBOARD HINGE FITTING - DETAILED INSPECTION (SHEET 3 OF 4)

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ALERT **ALERT**

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 one side of the airplane.

STEP	TASK	NAME	IDENTIFICATION	QTY	MORE DATA
1	Clean	Outboard Hinge Fitting	113T2271-( )	1	to remove loose dirt, grease and oil. Refer to SOPM 20-30-03 as an accepted procedure.
2	Inspect	Outboard Hinge Fitting	113T2271-( )	1	Do a Detailed Inspection for cracks or fractures as indicated. (a)
3	Inspect	Outboard Hinge Fitting	113T2271-( )	1	Do a Detailed Inspection to find out if the hinge fitting configuration is machined with or without a tool runout. Hinge fittings with the tool runout option will be thicker in the lug area as indicated. (b)
(a) On outboard hinge fitting only. Both faces on the outboard hinge fitting require inspection in the area shown.					
(b) This step is not required for the repeat inspections if the tool runout condition has previously been determined.					

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

FLAG NOTE	MORE DATA
1	A (0.000 - 0.030) of an inch surface mismatch is allowable on the outboard fitting as indicated.

FIGURE 2: OUTBOARD HINGE FITTING - DETAILED INSPECTION (SHEET 4 OF 4)

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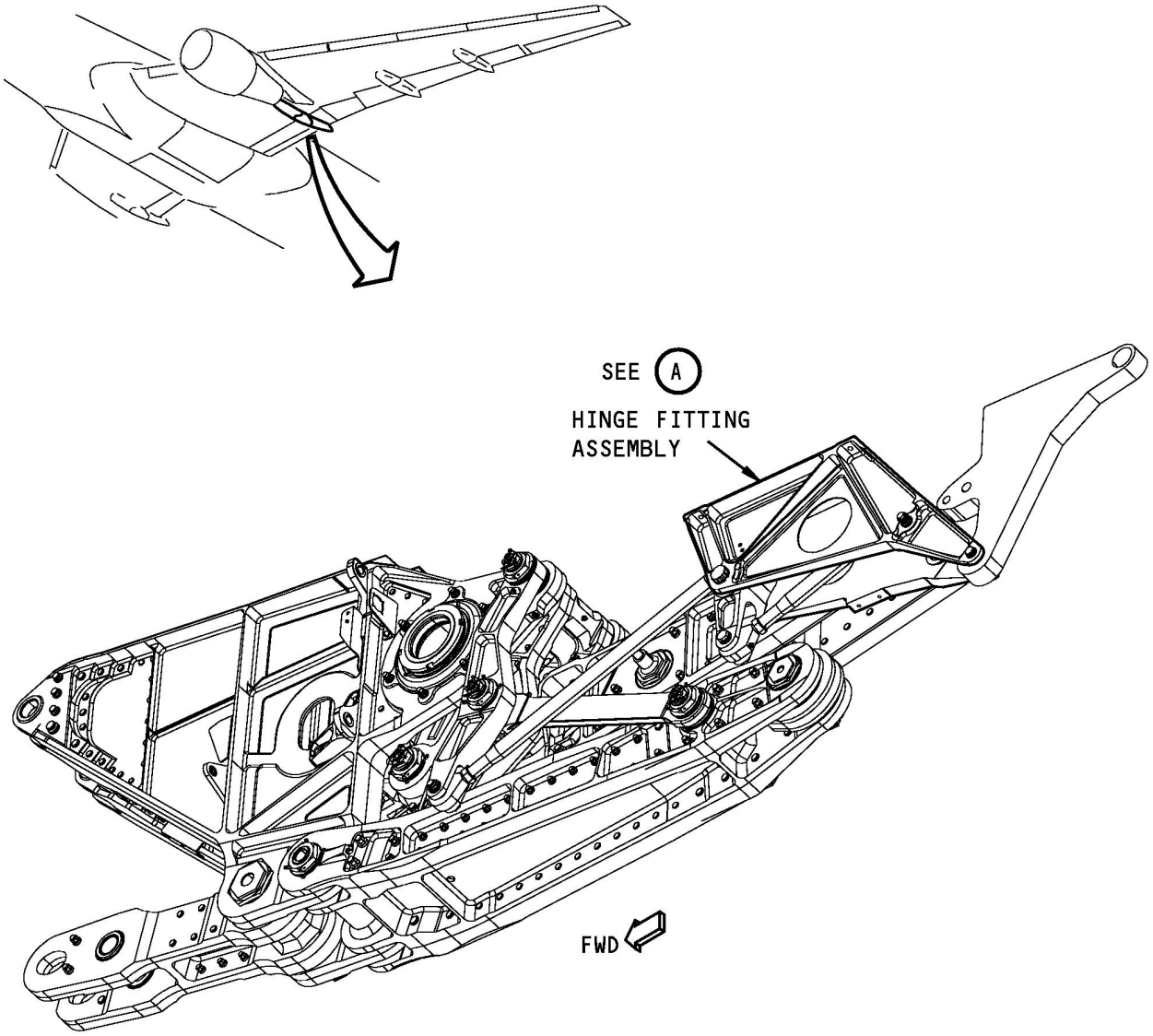


FIGURE 3: OUTBOARD HINGE FITTING - DETAILED AND EDDY CURRENT INSPECTION (SHEET 1 OF 5)

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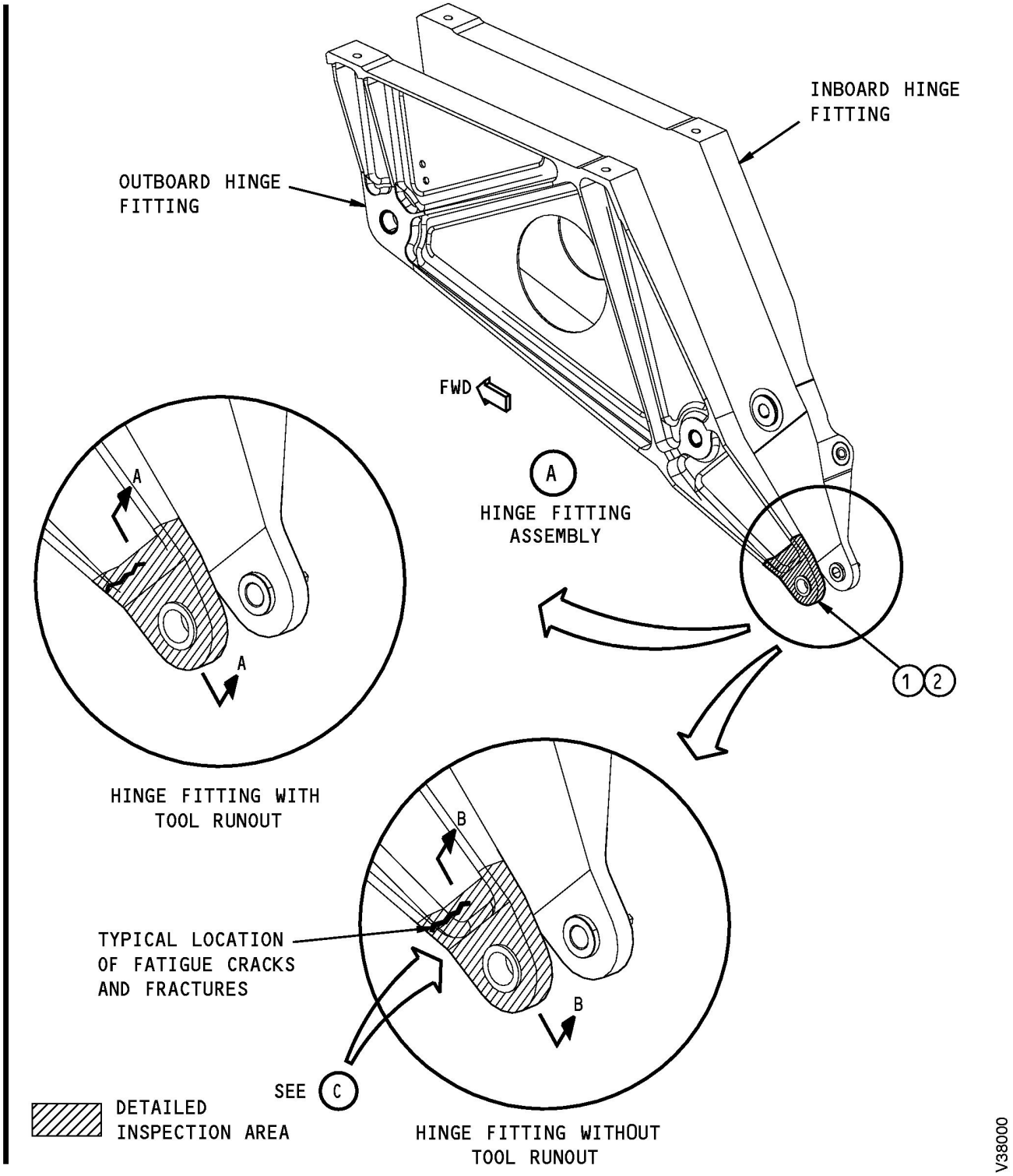
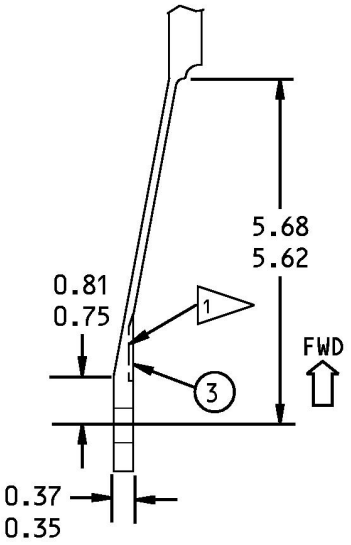
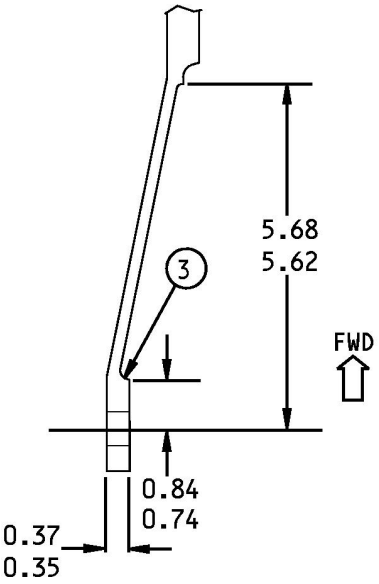


FIGURE 3: OUTBOARD HINGE FITTING - DETAILED AND EDDY CURRENT INSPECTION (SHEET 2 OF 5)

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A–A
OUTBOARD HINGE FITTING
WITH TOOL RUNOUT



B–B
OUTBOARD HINGE FITTING
WITHOUT TOOL RUNOUT

V48851

FIGURE 3: OUTBOARD HINGE FITTING - DETAILED AND EDDY CURRENT INSPECTION (SHEET 3 OF 5)

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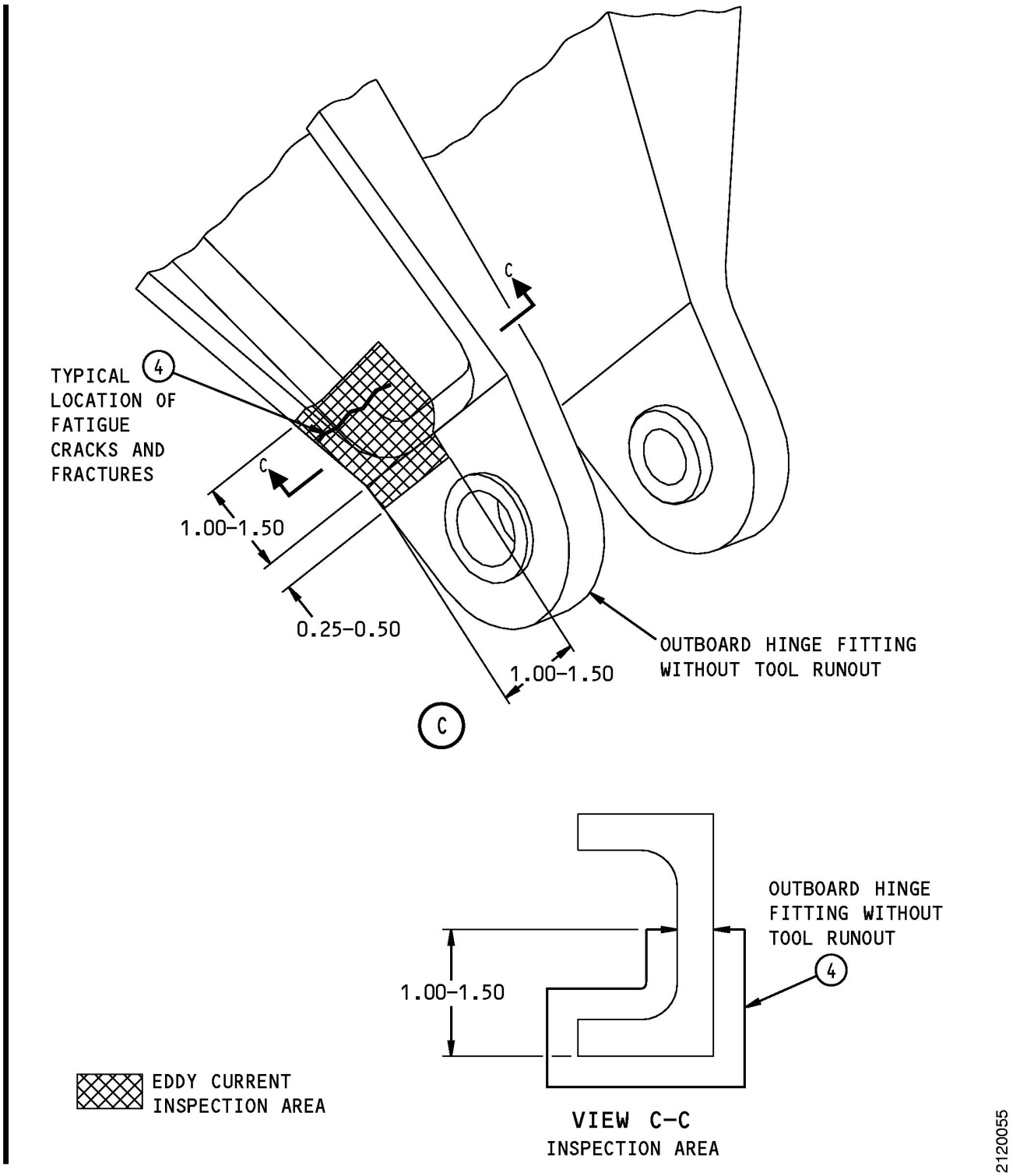


FIGURE 3: OUTBOARD HINGE FITTING - DETAILED AND EDDY CURRENT INSPECTION (SHEET 4 OF 5)

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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 one side of the airplane.

STEP	TASK	NAME	IDENTIFICATION	QTY	MORE DATA
1	Clean	Out-board Hinge Fitting	113T2271-( )	1	to remove loose dirt, grease and oil. Refer to SOPM 20-30-03 as an accepted procedure.
2	Inspect	Out-board Hinge Fitting	113T2271-( )	1	Do a Detailed Inspection for cracks or fractures as indicated. (a)
3	Inspect	Out-board Hinge Fitting	113T2271-( )		Do a Detailed Inspection to find out if the hinge fitting configuration is machined with or without the tool runout. Hinge fittings with the tool runout option will be thicker in the lug area as indicated. (b)
4	Inspect	Out-board Hinge Fitting	113T2271-( )	1	Do an Eddy Current inspection. Use a right angle pencil probe with a maximum drop of 0.1 inch to inspect the area for cracks in accordance with 767 NDT Part 6, 51-00-01 or 767 NDT Part 6, 51-00-19. (a) (c)
(a) On outboard hinge fitting only. Both faces on the outboard hinge fitting require inspection in the area shown.					
(b) This step is not required for the repeat inspections if the tool runout condition has previously been determined.					
(c) This step is not necessary if the outboard hinge fitting has the tool runout option.					

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

FLAG NOTE	MORE DATA
1	A (0.000 - 0.030) of an inch surface mismatch is allowable on the outboard fitting as indicated.

FIGURE 3: OUTBOARD HINGE FITTING - DETAILED AND EDDY CURRENT INSPECTION (SHEET 5 OF 5)

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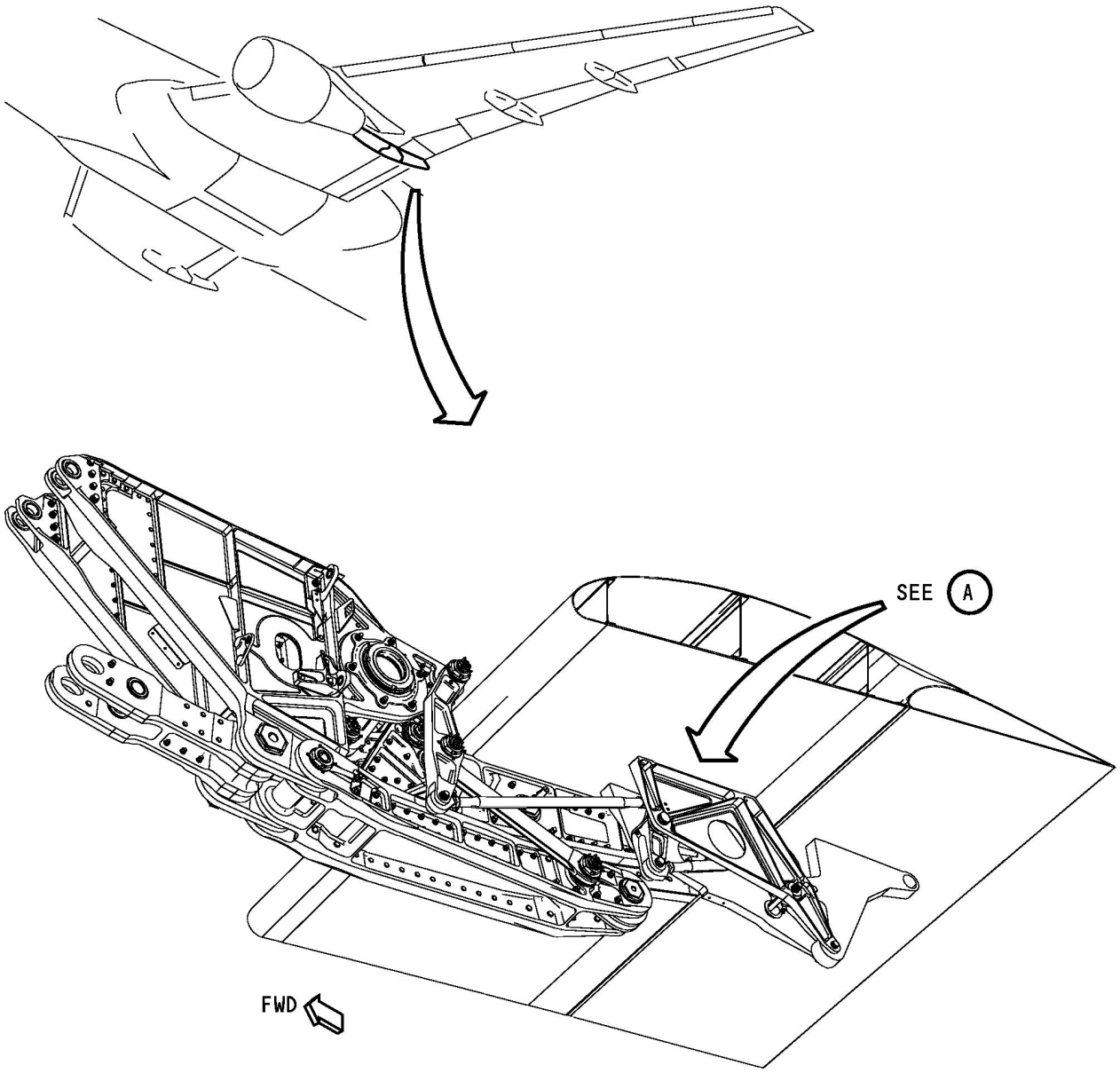


FIGURE 4: HINGE FITTING ASSEMBLY - REPLACEMENT (SHEET 1 OF 4)

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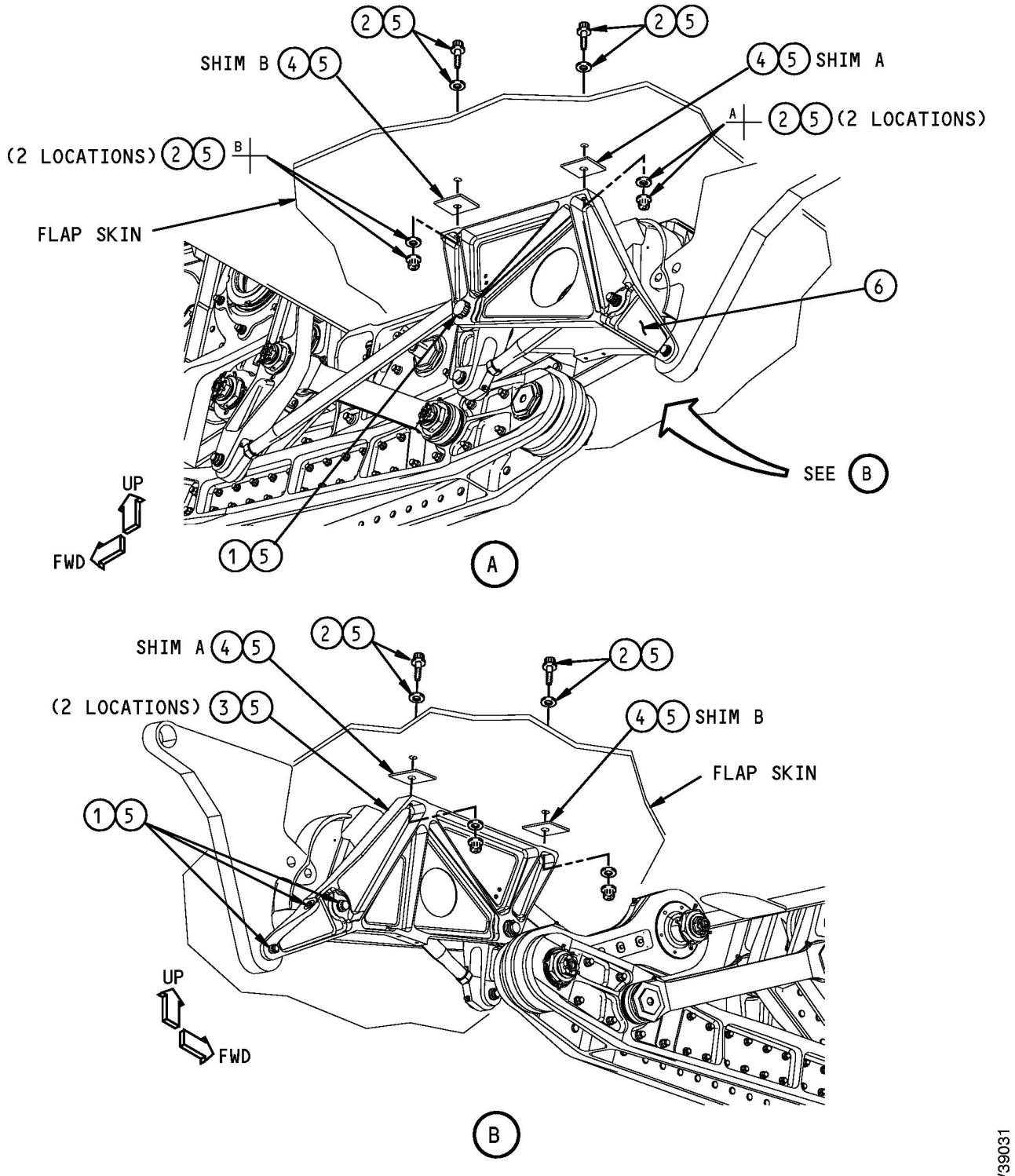


FIGURE 4: HINGE FITTING ASSEMBLY - REPLACEMENT (SHEET 2 OF 4)

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ALERT ALERT

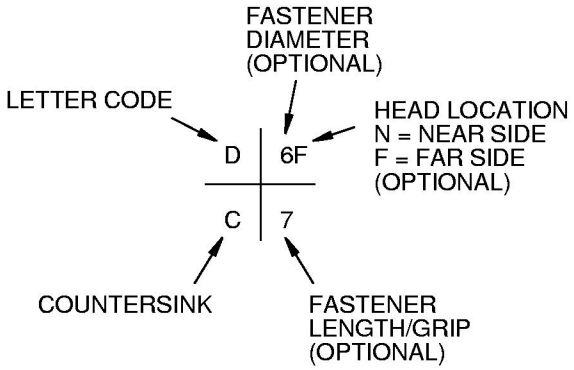
The step numbers shown below agree with the numbers shown in the circle symbols in the figure. The QTY numbers shown below are the number of parts necessary for one side of the airplane.

STEP	TASK	NAME	IDENTIFICATION	QTY	MORE DATA
1	Remove / Keep	Fasteners	-	4	Maintain fasteners location and stack-up for later installation. Refer to CMM 57-53-27 as an accepted procedure.
2	Remove	Fasteners	-	4	
3	Remove	Hinge Fitting Assembly	113T2271-( )	1	
4	Remove / Keep	Shims "A"	BACS40R015D015F	2	Maintain original location of shims. If shims are damaged, replace shims maintaining the original thickness. Apply BMS 10-11 Type I primer to replacement shims and any bare surfaces of the original shims. Refer to SOPM 20-41-02 as an accepted procedure.
		Shims "B"	BACS40R015D017F	2	
5	Install (New)	Hinge Fitting Assembly (Left)	113T2271-43 or 113T2271Y43 (Optional)	1	(a) Locate and install hinge fitting with kept or identical replacement shims in the same location to maintain the original hinge line geometry of the fitting. Refer to CMM 57-53-27 as an accepted procedure. Fay seal shims and install fasteners wet with BMS 5-95 common to fitting assembly and the main flap. Refer to SOPM 20-50-19 as an accepted procedure. Install kept fasteners common to the flap linkage and hinge fittings with MIL-G-23827 grease. Refer to CMM 57-53-27 as an accepted procedure.
		Hinge Fitting Assembly (Right)	113T2271-44 or 113T2271Y44 (Optional)	1	
		Shims "A" (Kept)	BACS40R015D015F	2	
		Shims "B" (Kept)	BACS40R015D017F	2	
		Fasteners (New)	-	4	
		Fasteners (Kept)	-	4	
6	Identify	Rubber Stamp or Stencil	-	-	the incorporation of this service bulletin on each hinge fitting assembly. Refer to SOPM 20-50-10 as an accepted procedure.

(a) The 113T2271Y( ) optional part is identical to the 113T2271-( ) part except the optional part omits the handling holes used in production.

FIGURE 4: HINGE FITTING ASSEMBLY - REPLACEMENT
(SHEET 3 OF 4)

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EXAMPLE OF FASTENER SYMBOL

S36173

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.

CODE	NAME		IDENTIFICATION	MORE DATA
A	Bolt	Nominal	BACB30LE5K19	(a) Install bolts wet with BMS 5-95 Sealant. Refer to SOPM 20-50-19 as an accepted procedure.
		Optional 1/64 Oversize	BACB30LE5K19X	
	Washer	Nominal	BACW10BP5CD	
		Optional 1/64 Oversize	BACW10BP51CD	
	Washer	Nominal	BACW10BP5DP	
		Optional 1/64 Oversize	BACW10BP51DP	
	Nut		NAS1805-5L	
B	Bolt	Nominal	BACB30LE5K20	(a) Install bolts wet with BMS 5-95 Sealant. Refer to SOPM 20-50-19 as an accepted procedure.
		Optional 1/64 Oversize	BACB30LE5K20X	
	Washer	Nominal	BACW10BP5CD	
		Optional 1/64 Oversize	BACW10BP51CD	
	Washer	Nominal	BACW10BP5DP	
		Optional 1/64 Oversize	BACW10BP51DP	
	Nut		NAS1805-5L	
(a) Due to variations in the hinge fitting installation stack-up thickness, it is possible that different fastener lengths may be required. It is acceptable to install a different fastener length of the same bolt type if required.				

FIGURE 4: HINGE FITTING ASSEMBLY - REPLACEMENT
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