

CHAPTER

54

**NACELLES/
PYLONS**



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222	May 15/2022		205	May 15/2023		430	BLANK	
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604	BLANK		603	Sep 15/2021		409	Sep 15/2021	
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409	Sep 15/2021		406	Sep 15/2021		604	Sep 15/2021	
410	BLANK		407	Sep 15/2021		605	Sep 15/2021	
54-51-02			408	Sep 15/2021		606	BLANK	
601	Sep 15/2021		409	Sep 15/2021		54-51-06		
602	Sep 15/2021		410	Sep 15/2021		401	Jan 15/2022	
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54-51-03			413	Sep 15/2021		404	BLANK	
401	Sep 15/2021		414	Sep 15/2021		54-52-00		
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403	Sep 15/2021		54-52-04			403	Sep 15/2021	
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601	Sep 15/2021		405	Sep 15/2021		408	BLANK	
602	Sep 15/2021		406	Sep 15/2021		54-52-07		
603	Sep 15/2021		407	Sep 15/2021		401	Sep 15/2021	
604	BLANK		408	Sep 15/2021		402	Sep 15/2021	
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401	Sep 15/2021		410	Sep 15/2021		404	Sep 15/2021	
402	Sep 15/2021		411	Jan 15/2022		405	Sep 15/2021	
403	Sep 15/2021		412	Sep 15/2021		406	Sep 15/2021	
404	Sep 15/2021		413	Sep 15/2021		407	Jan 15/2023	
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202	Sep 15/2021		602	Sep 15/2021		602	Jan 15/2022	
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<u>AFT FAIRING THERMAL SEAL - REMOVAL/INSTALLATION</u>	54-52-08		401	SIA ALL
Aft Fairing Thermal Seal Removal TASK 54-52-08-000-801			401	SIA ALL
Aft Fairing Thermal Seal Installation TASK 54-52-08-400-801			404	SIA ALL
<u>LEADING EDGE GAP COVERS - REMOVAL/INSTALLATION</u>	54-52-09		401	SIA ALL
Leading Edge Gap Covers Removal TASK 54-52-09-000-801			401	SIA ALL
Leading Edge Gap Covers Installation TASK 54-52-09-400-801			404	SIA ALL
<u>STRUT ACCESS PANELS - REMOVAL/INSTALLATION</u>	54-53-01		401	SIA ALL
Strut Access Panel Removal TASK 54-53-01-000-801			401	SIA ALL
Strut Access Panel Installation TASK 54-53-01-400-801			405	SIA ALL
<u>FORWARD STRUT FIRESEAL - MAINTENANCE PRACTICES</u>	54-54-00		201	SIA ALL
Forward Strut Fireseal Inspection TASK 54-54-00-200-801			201	SIA ALL
Forward Strut Fireseal Removal TASK 54-54-00-000-801			202	SIA ALL
Forward Strut Fireseal Installation TASK 54-54-00-400-801			206	SIA ALL
<u>STRUT FIRESEAL AND FIRESEAL DEPRESSOR - INSPECTION/CHECK</u>	54-54-00		601	SIA ALL
Strut Fireseal Depressor Inspection TASK 54-54-00-200-802			601	SIA ALL
Forward Strut Fireseal Inspection TASK 54-54-00-200-803			604	SIA ALL

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CHAPTER 54
NACELLES/PYLONS

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>STRUT THERMAL BARRIERS - REMOVAL/INSTALLATION</u>	54-54-01		401	SIA ALL
Strut Forward Thermal Barrier Removal TASK 54-54-01-000-801			401	SIA ALL
Strut Forward Thermal Barrier Installation TASK 54-54-01-400-801			405	SIA ALL
Strut Mid Thermal Barrier Removal TASK 54-54-01-000-802			406	SIA ALL
Strut Mid Thermal Barrier Installation TASK 54-54-01-400-802			411	SIA ALL
Strut Aft Thermal Barrier Removal TASK 54-54-01-000-803			413	SIA ALL
Strut Aft Thermal Barrier Installation TASK 54-54-01-400-803			418	SIA ALL
<u>STRUT THERMAL BARRIERS - INSPECTION/CHECK</u>	54-54-01		601	SIA ALL
Strut Thermal Barriers Inspection TASK 54-54-01-200-801			601	SIA ALL
<u>STRUT THERMAL BARRIERS - REPAIRS</u>	54-54-01		801	SIA ALL
Strut Thermal Barrier Repair On-Aircraft TASK 54-54-01-300-801			801	SIA ALL
Strut Thermal Barrier Repair Off-Aircraft TASK 54-54-01-300-802			804	SIA ALL
<u>AFT PYLON SEAL REMOVAL/INSTALLATION</u>	54-54-02		401	SIA ALL
Aft Pylon Seal Removal TASK 54-54-02-000-801			401	SIA ALL
Aft Pylon Seal Installation TASK 54-54-02-400-801			404	SIA ALL
<u>STRUT DRAINS - MAINTENANCE PRACTICES</u>	54-55-01		201	SIA ALL
Condensate Drain Cleaning TASK 54-55-01-100-801			201	SIA ALL
Strut Fan Cowl Support Beam Drain - Operational Test TASK 54-55-01-200-801			204	SIA ALL

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CHAPTER 54
NACELLES/PYLONS

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
Strut Drain - Functional Test TASK 54-55-01-720-801			207	SIA ALL
Strut Seal Plane Access Panels - Functional Test TASK 54-55-01-720-802			209	SIA ALL
<u>AFT FAIRING STRUT DRAINS - MAINTENANCE PRACTICES</u>	54-55-02		201	SIA ALL
Aft Fairing Drain Tube and Drain Fitting Cleaning TASK 54-55-02-100-801			201	SIA ALL
<u>AFT FAIRING STRUT DRAINS - INSPECTION/CHECK</u>	54-55-02		601	SIA ALL
Aft Fairing Drain Inspection TASK 54-55-02-100-802			601	SIA ALL
Aft Fairing Drain Clearance Check TASK 54-55-02-220-801			603	SIA ALL

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NACELLES/PYLONS - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES

TASK 54-05-03-210-801

1. EXTERNAL - GENERAL VISUAL: LEFT FORWARD ENGINE MOUNT ASSEMBLY

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
413	Engine 1 - Fan Cowl, Left
414	Engine 1 - Fan Cowl, Right

C. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1

D. Inspection

SUBTASK 54-05-03-010-001

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1

NOTE: Open fan cowl.

SUBTASK 54-05-03-210-001

- (2) Do a general visual inspection of the left forward engine mount assembly, including side links, hanger, and link pins.

SUBTASK 54-05-03-910-001

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-001

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1

———— **END OF TASK** ————

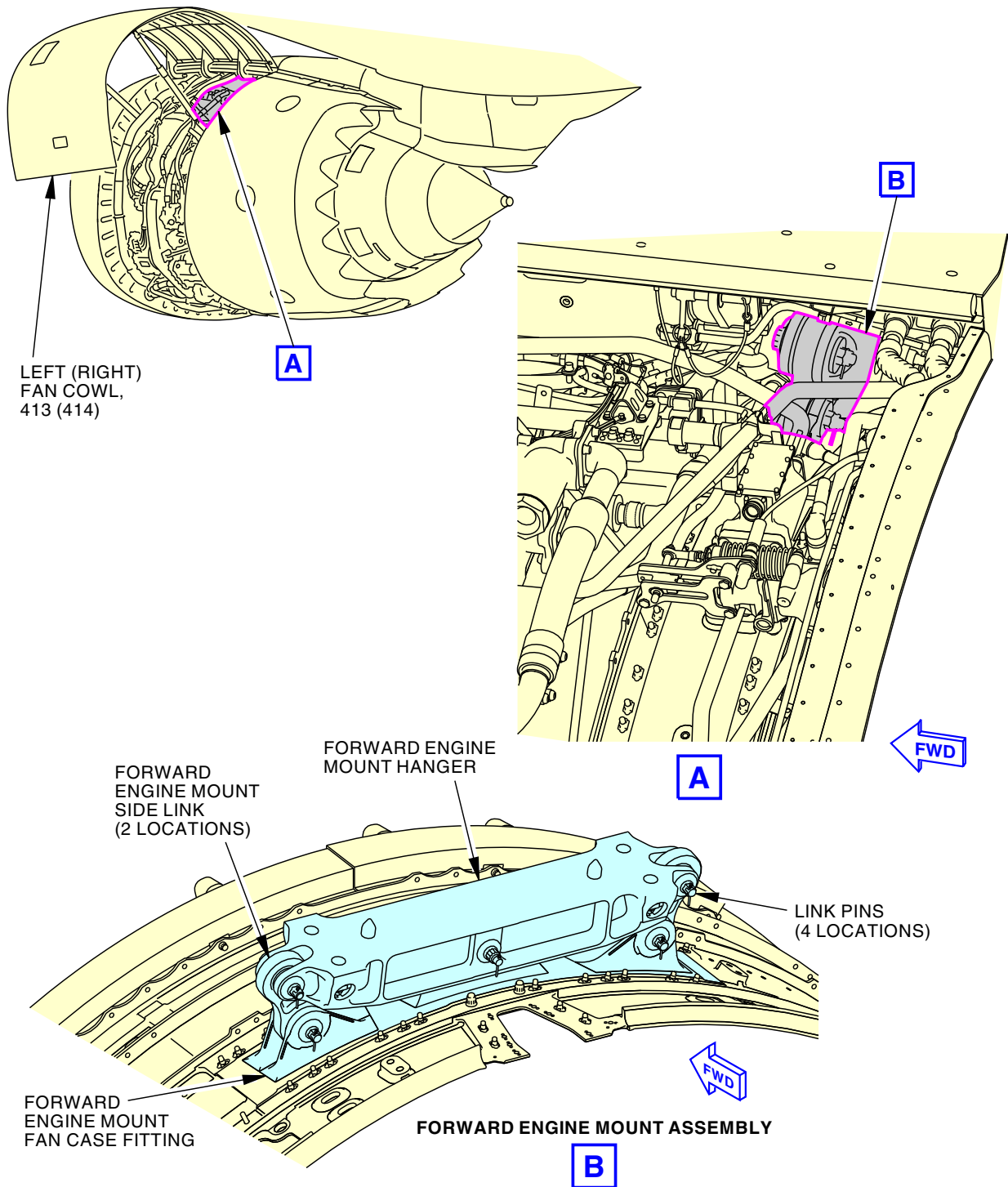
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416206 S00061539992_V1

Left Strut Forward Engine Mount Assembly General Visual (External)
Figure 201/54-05-03-990-801

EFFECTIVITY
SIA ALL

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TASK 54-05-03-210-802

2. **EXTERNAL - GENERAL VISUAL: RIGHT FORWARD ENGINE MOUNT ASSEMBLY**

(Figure 202)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
423	Engine 2 - Fan Cowl, Left
424	Engine 2 - Fan Cowl, Right

C. Access Panels

Number	Name/Location
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

D. Inspection

SUBTASK 54-05-03-010-002

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

SUBTASK 54-05-03-210-002

- (2) Do a general visual inspection of the right engine forward mount assembly, including side links, hanger, and link pins.

SUBTASK 54-05-03-910-002

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-002

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2

————— **END OF TASK** —————

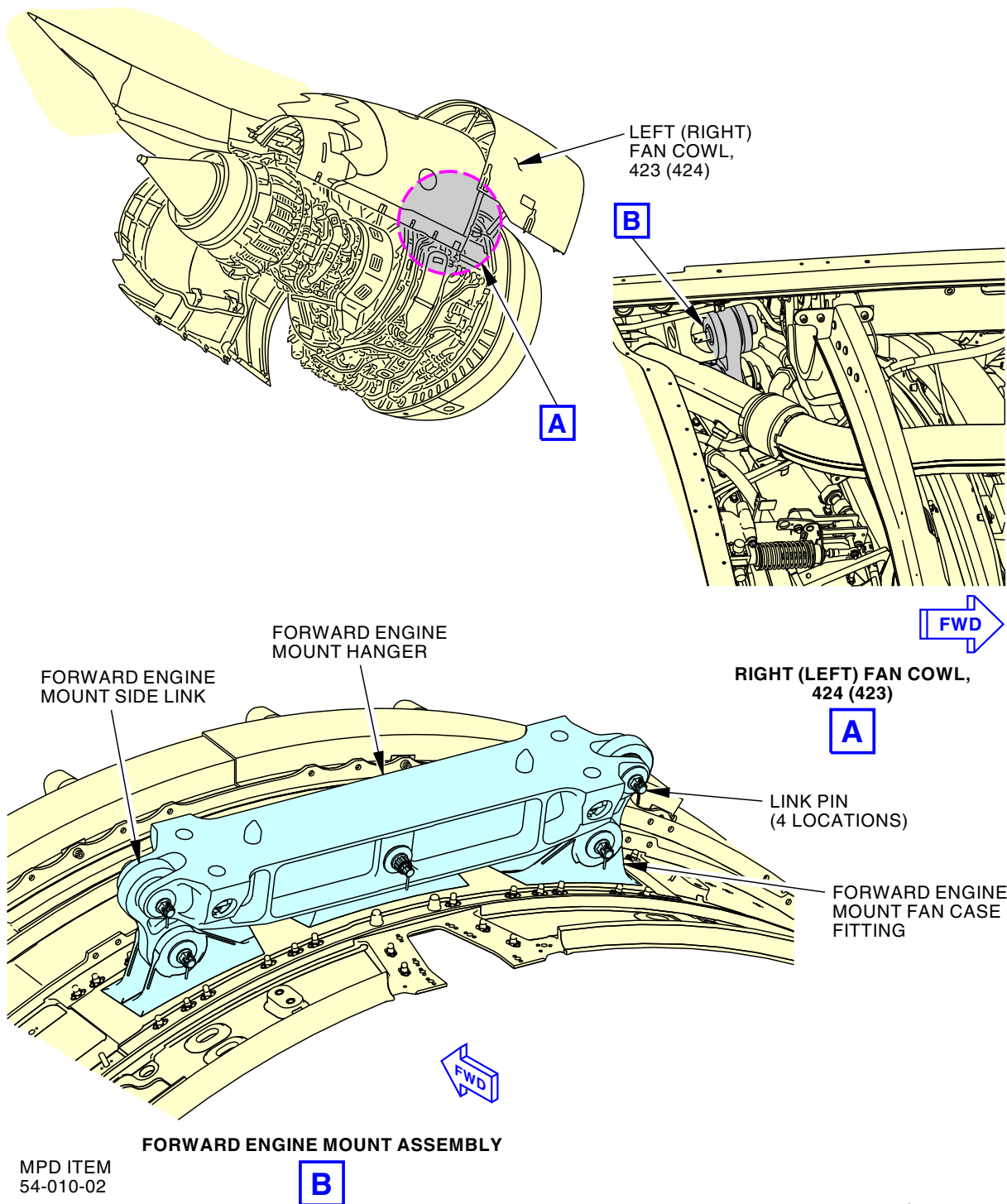
EFFECTIVITY
SIA ALL

D633AM101-SIA

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2416207 S00061539994_V1

Right Strut Forward Engine Mount Assembly General Visual (External)
Figure 202/54-05-03-990-802

EFFECTIVITY
SIA ALL

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D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-803

3. INTERNAL - GENERAL VISUAL: LEFT STRUT ATTACH BOLTS AT FORWARD ENGINE MOUNT
(Figure 203)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
413	Engine 1 - Fan Cowl, Left
414	Engine 1 - Fan Cowl, Right

C. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1

D. Inspection

SUBTASK 54-05-03-010-003

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1

NOTE: Remove fan cowl.

SUBTASK 54-05-03-210-003

- (2) Do a general visual inspection of the left strut attach bolts at forward engine mount.

SUBTASK 54-05-03-910-003

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-003

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1

————— **END OF TASK** —————

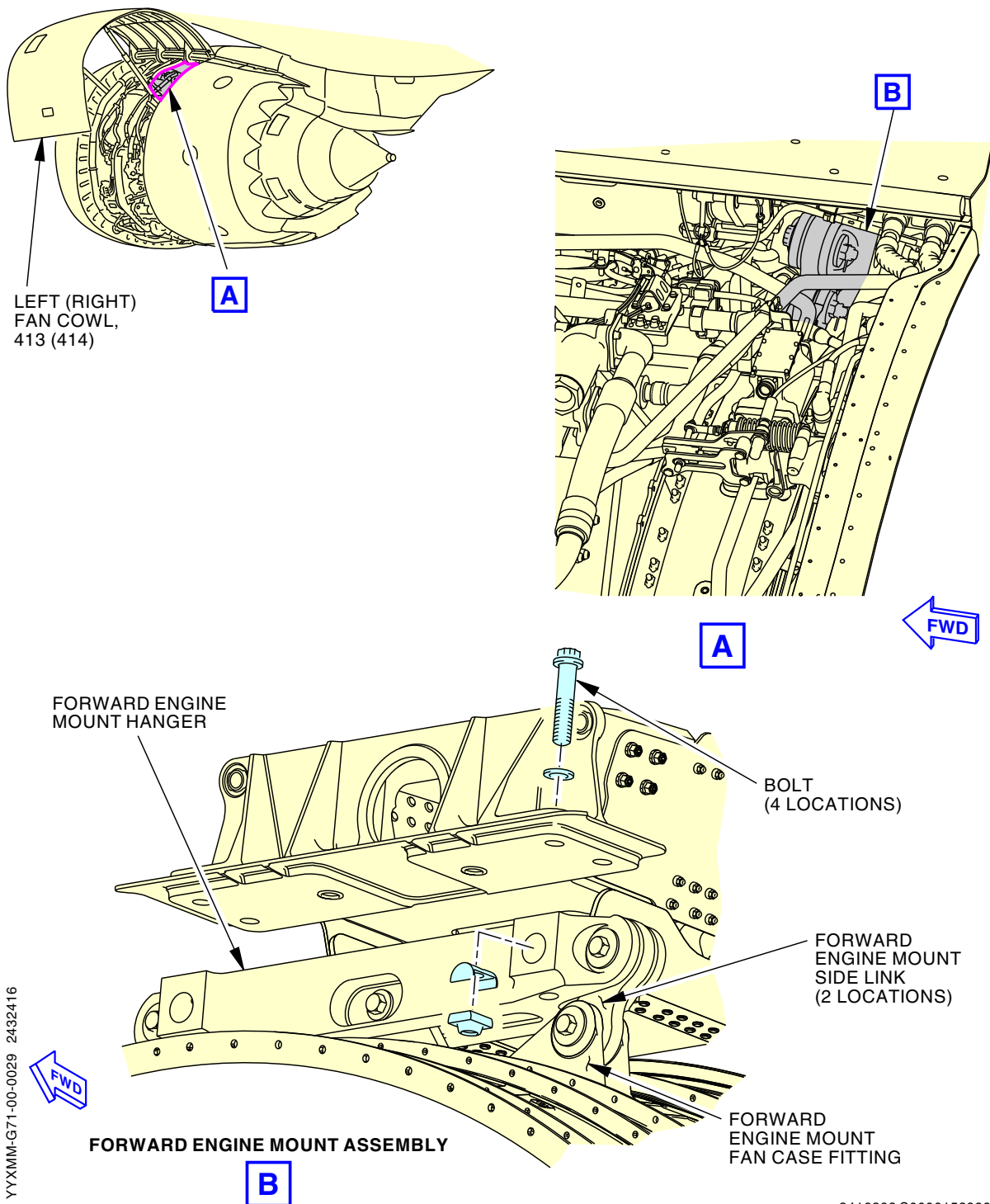
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416208 S00061539996_V3

Forward Engine Mount Bolts - General Visual (Internal) Inspection
Figure 203/54-05-03-990-803

EFFECTIVITY
SIA ALL

54-05-03

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



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TASK 54-05-03-210-804

4. **INTERNAL - GENERAL VISUAL: RIGHT STRUT ATTACH BOLTS AT FORWARD ENGINE MOUNTS**
(Figure 204)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
423	Engine 2 - Fan Cowl, Left
424	Engine 2 - Fan Cowl, Right

C. Access Panels

Number	Name/Location
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

D. Inspection

SUBTASK 54-05-03-010-004

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

NOTE: Remove fan cowl.

SUBTASK 54-05-03-210-004

- (2) Do a general visual inspection of the right strut attach bolts at forward engine mount.

SUBTASK 54-05-03-910-004

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-004

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

———— **END OF TASK** ————

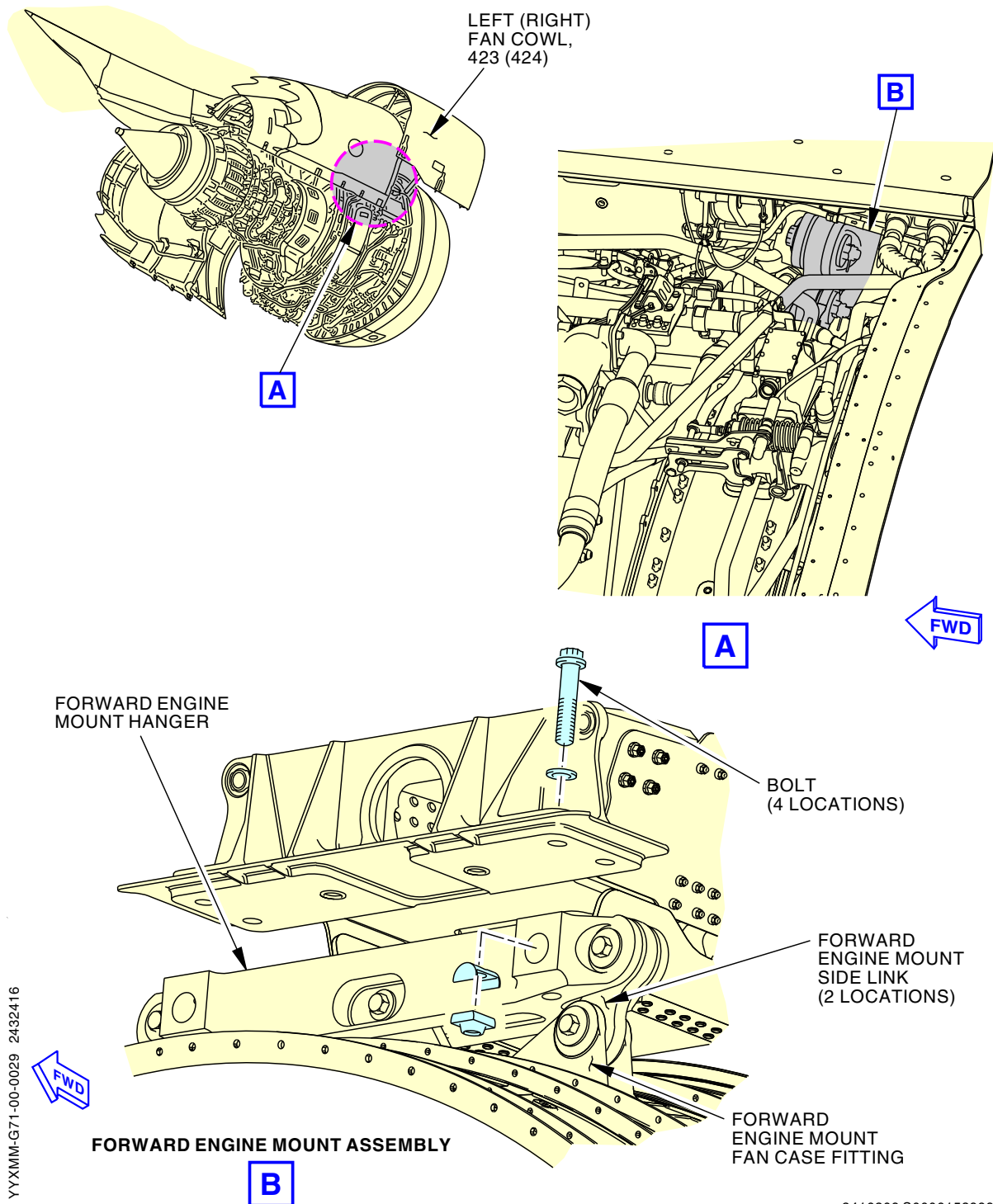
EFFECTIVITY
SIA ALL

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Right Forward Engine Mount Bolts General Visual (Internal) Inspection
Figure 204/54-05-03-990-804

EFFECTIVITY
SIA ALL

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AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-805

5. **INTERNAL - GENERAL VISUAL: LEFT STRUT FORWARD AND AFT ENGINE MOUNT TO STRUT
SHEAR PINS**

(Figure 205)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

C. Location Zones

Zone	Area
413	Engine 1 - Fan Cowl, Left
414	Engine 1 - Fan Cowl, Right
433	Engine 1 - Strut Torque Box

D. Inspection

NOTE: Engine removal required.

SUBTASK 54-05-03-210-005

(1) Do a general visual inspection of the forward and aft engine mount to strut shear pins.

SUBTASK 54-05-03-910-005

(2) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

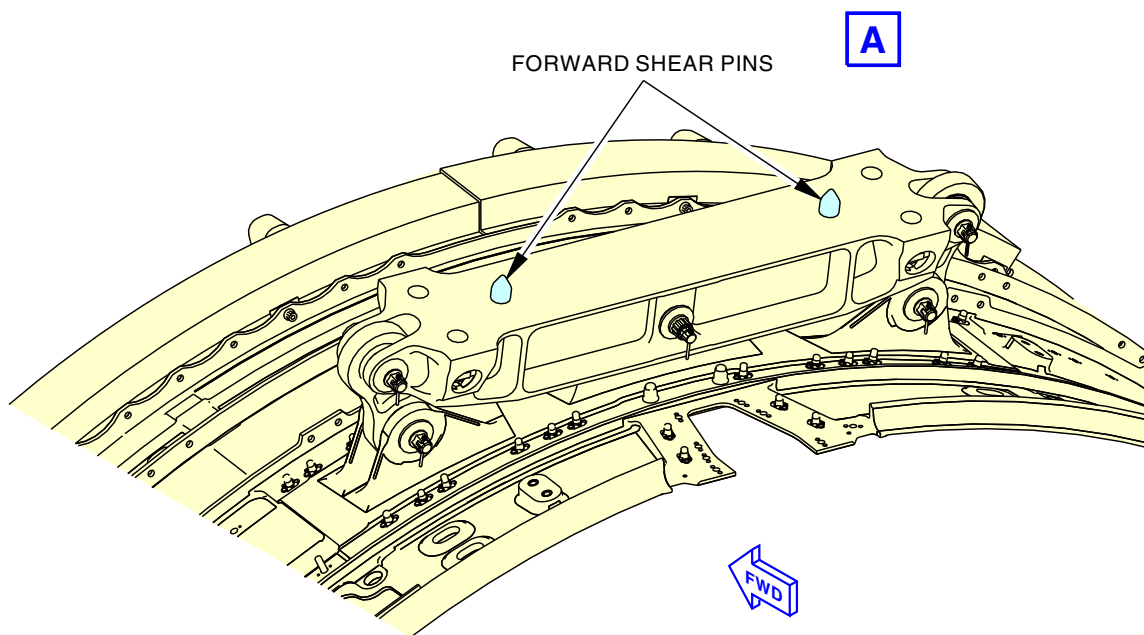
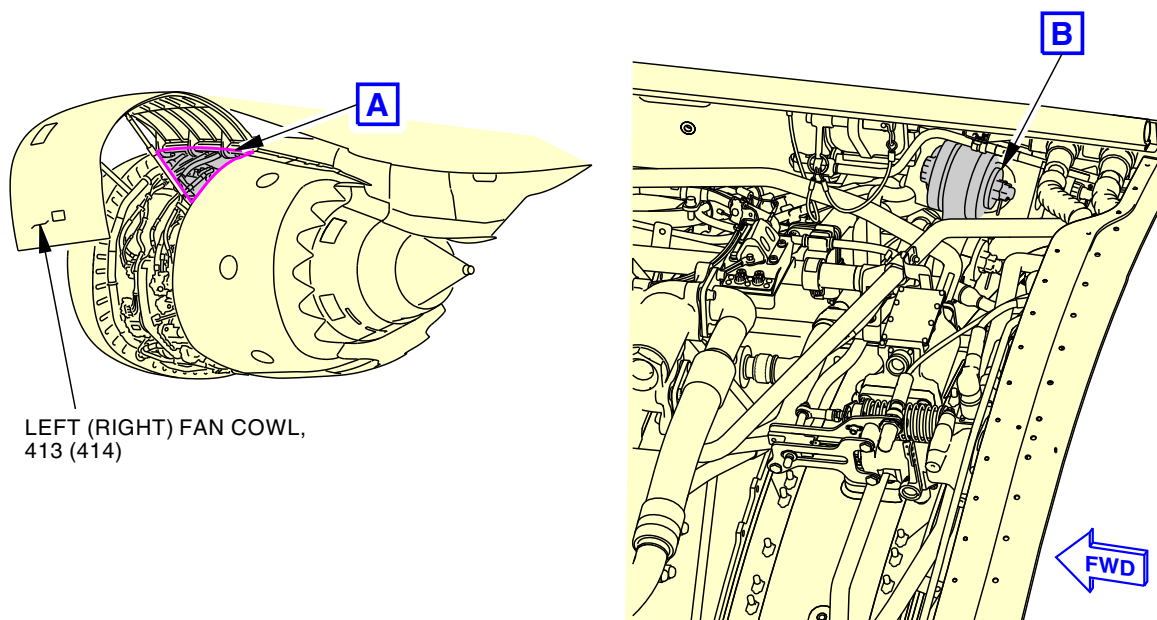
ECCN 9E991 BOEING PROPRIETARY - See title page for details

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AIRCRAFT MAINTENANCE MANUAL



FORWARD ENGINE MOUNT ASSEMBLY

MPD ITEM
54-020-01

2416210 S00061540000_V1

Left Strut Forward and Aft Engine Mount Assemblies General Visual (Internal)
Figure 205/54-05-03-990-805 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

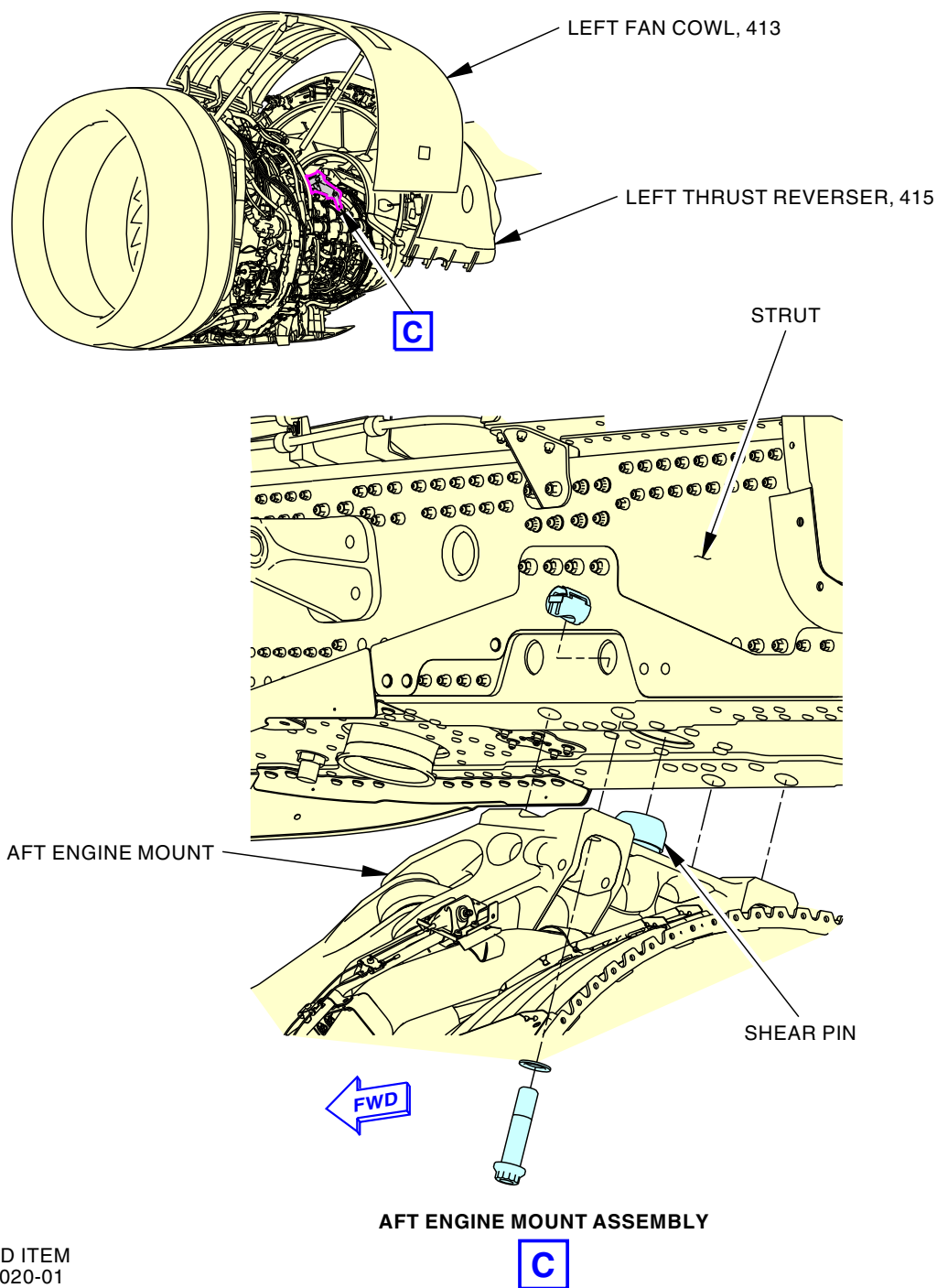
ECCN 9E991 BOEING PROPRIETARY - See title page for details

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MPD ITEM
54-020-01

2416211 S00061540001_V2

Left Strut Forward and Aft Engine Mount Assemblies General Visual (Internal)
Figure 205/54-05-03-990-805 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

54-05-03

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AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-806

6. **INTERNAL - GENERAL VISUAL: RIGHT STRUT FORWARD AND AFT ENGINE MOUNT TO STRUT
SHEAR PINS**

(Figure 206)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This procedure is a scheduled maintenance task.

B. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

C. Location Zones

Zone	Area
423	Engine 2 - Fan Cowl, Left
424	Engine 2 - Fan Cowl, Right
443	Engine 2 - Strut Torque Box

D. Inspection

NOTE: Engine removal required.

SUBTASK 54-05-03-210-006

(1) Do a general visual inspection of the forward and aft engine mount to strut shear pins.

SUBTASK 54-05-03-910-006

(2) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

———— **END OF TASK** ————

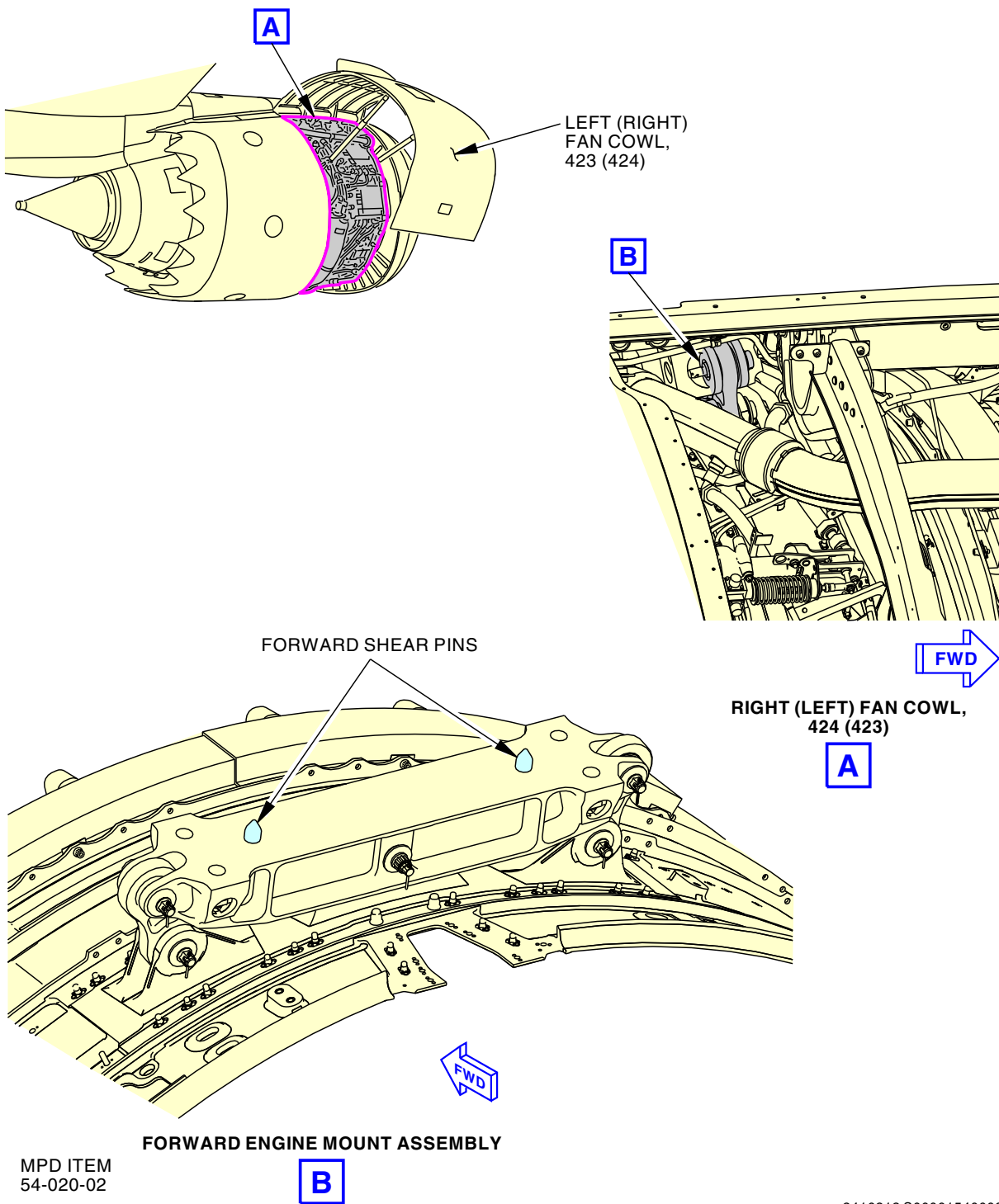
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416212 S00061540003_V1

Right Strut Forward and Aft Engine Mount Assemblies General Visual (Internal)
Figure 206/54-05-03-990-806 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

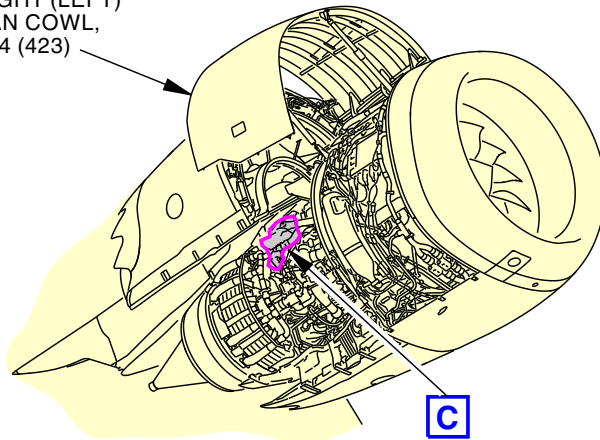
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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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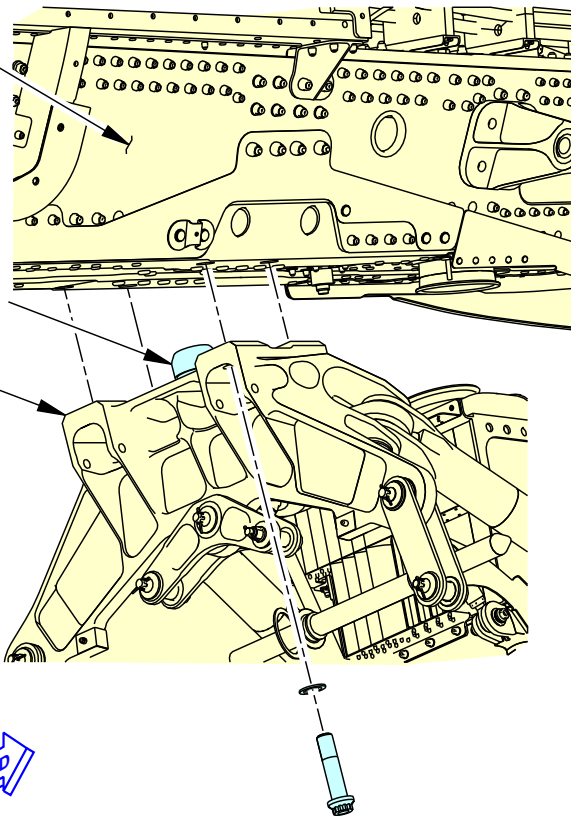
RIGHT (LEFT)
FAN COWL,
424 (423)



STRUT

SHEAR PIN

AFT ENGINE MOUNT



AFT ENGINE MOUNT ASSEMBLY



MPD ITEM
54-020-02

2416213 S00061540004_V2

Right Strut Forward and Aft Engine Mount Assemblies General Visual (Internal)
Figure 206/54-05-03-990-806 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

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AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-807

7. **EXTERNAL - GENERAL VISUAL: LEFT STRUT AFT ENGINE MOUNT ASSEMBLY**

(Figure 207)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
415	Engine 1 - Thrust Reverser, Left
416	Engine 1 - Thrust Reverser, Right

C. Access Panels

Number	Name/Location
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1

D. Inspection

SUBTASK 54-05-03-010-007

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1

SUBTASK 54-05-03-210-007

- (2) Do a general visual inspection of the aft engine mount assembly, including thrust links and thrust link pins; mount to engine left, center and right links, including link pins; hanger and evenner bar; attach bolts.

SUBTASK 54-05-03-910-007

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-007

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1

————— **END OF TASK** —————

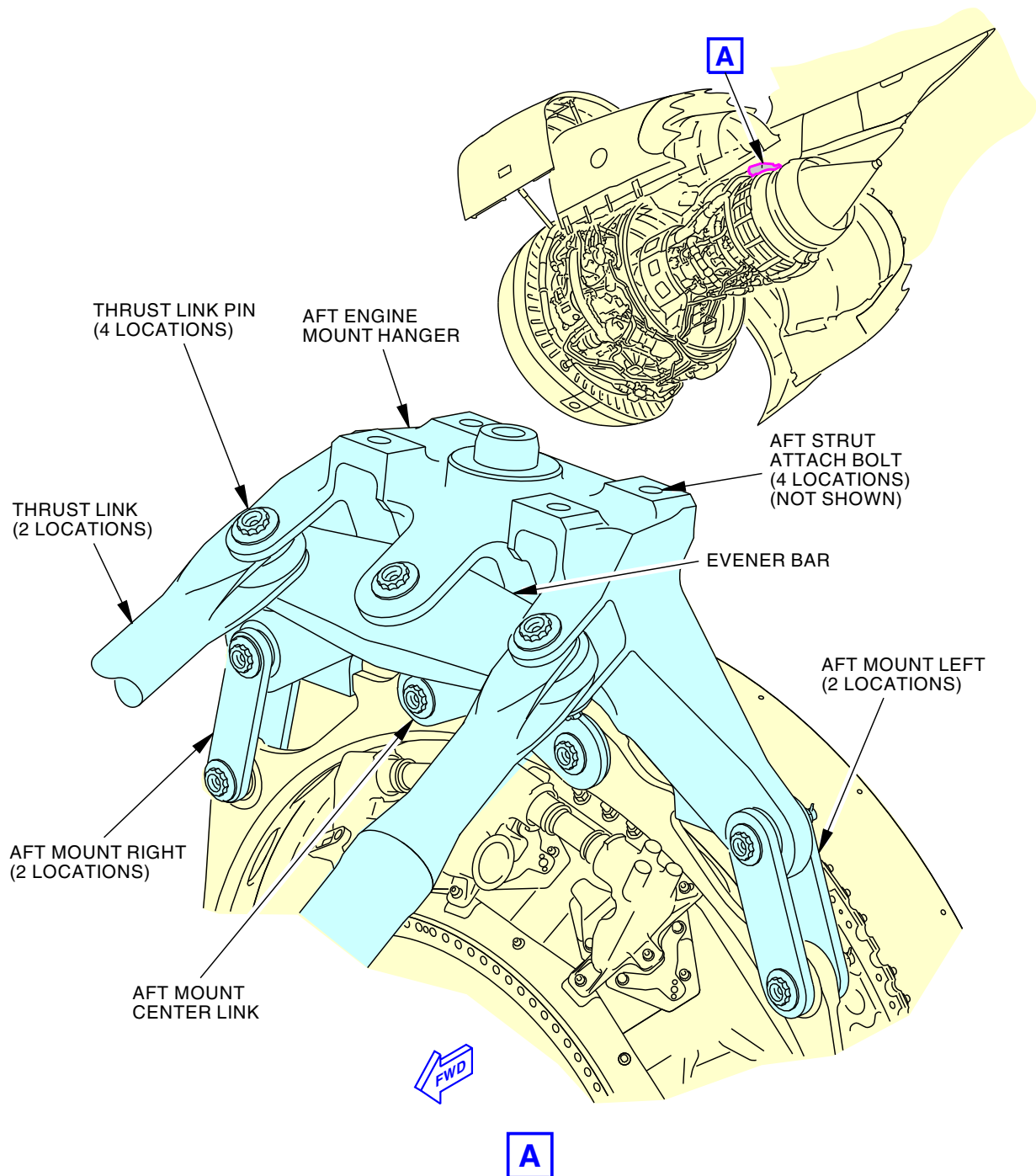
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416214 S00061540006_V1

Left Aft Engine Mount
Figure 207/54-05-03-990-807

EFFECTIVITY
SIA ALL

54-05-03

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D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-808

8. **EXTERNAL - GENERAL VISUAL: RIGHT STRUT AFT ENGINE MOUNT ASSEMBLY**

(Figure 208)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
425	Engine 2 - Thrust Reverser, Left
426	Engine 2 - Thrust Reverser, Right

C. Access Panels

Number	Name/Location
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

D. Inspection

SUBTASK 54-05-03-010-008

- (1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

SUBTASK 54-05-03-210-008

- (2) Do general visual inspection of the aft engine mount assembly, including thrust links and thrust link pins; mount to engine left, center and right links, including link pins; hanger and evener bar; attach bolts.

SUBTASK 54-05-03-910-008

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-008

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2

————— **END OF TASK** —————

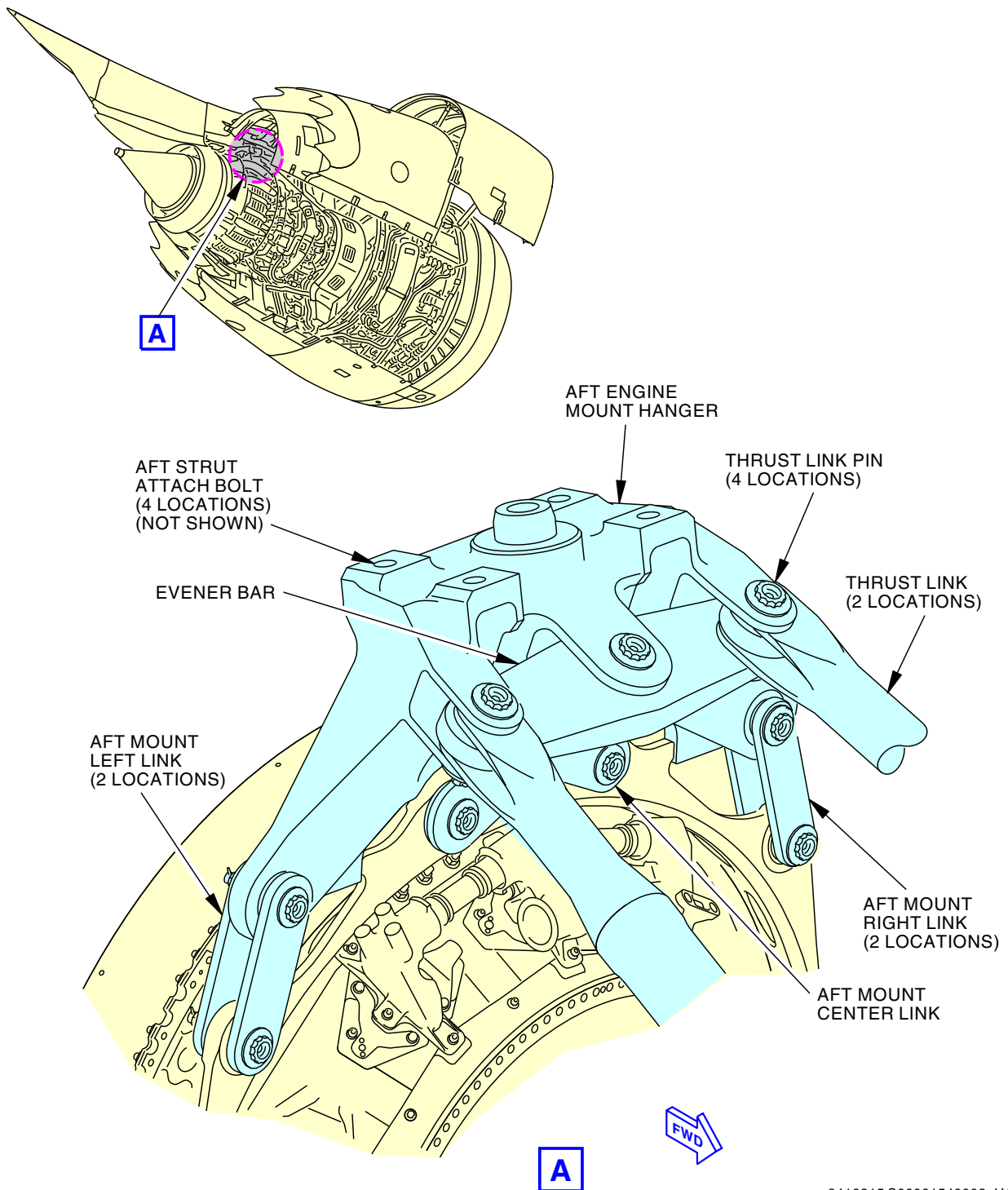
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

54-05-03

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2416215 S00061540008_V1

Right Aft Engine Mount
Figure 208/54-05-03-990-808

EFFECTIVITY
SIA ALL

D633AM101-SIA

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TASK 54-05-03-210-809

9. **INTERNAL - GENERAL VISUAL: LEFT STRUT TO WING ATTACHMENTS**

(Figure 209)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
431	Engine 1 - Forward Strut Fairing
434	Engine 1 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

D. Inspection

SUBTASK 54-05-03-010-009

- (1) Open these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

SUBTASK 54-05-03-210-009

- (2) Do a general visual inspection of the strut to wing upper link, diagonal brace, side links, and strut attachment fittings.

SUBTASK 54-05-03-910-009

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-009

- (4) Close these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

————— **END OF TASK** —————

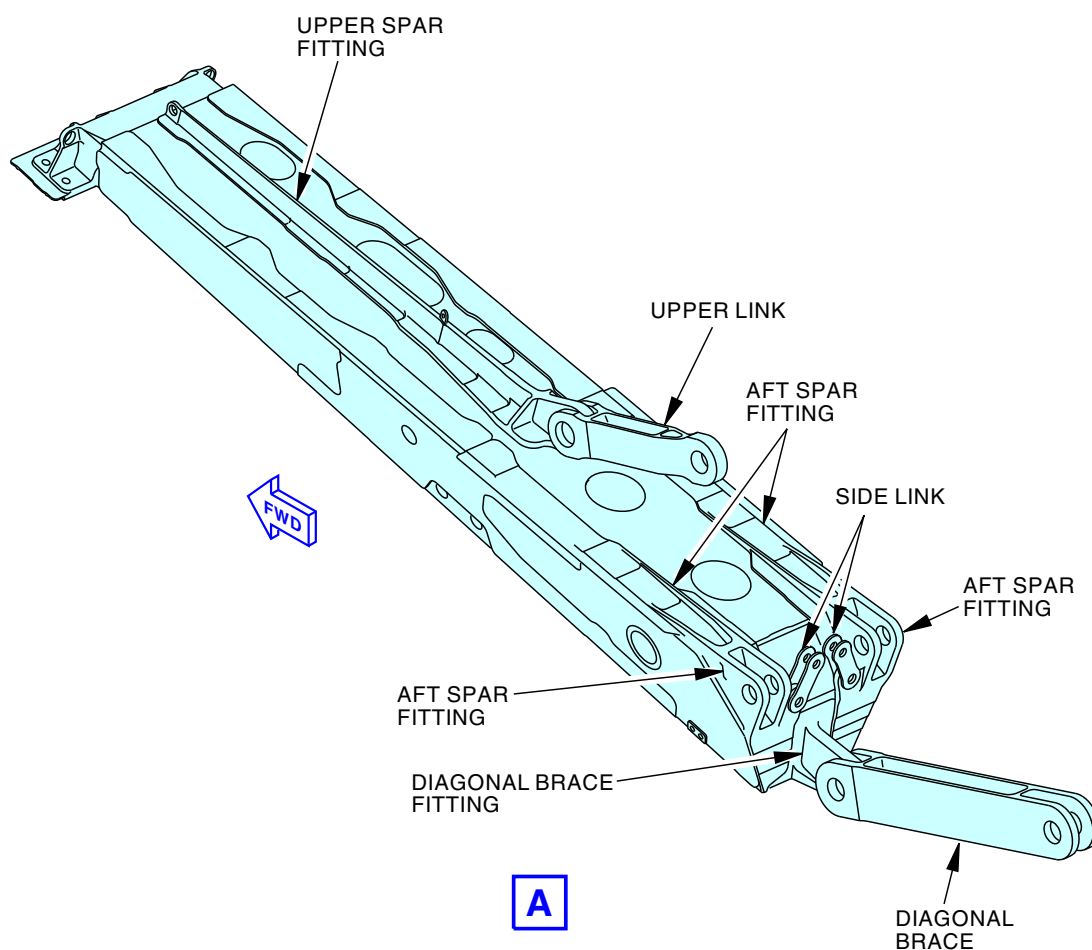
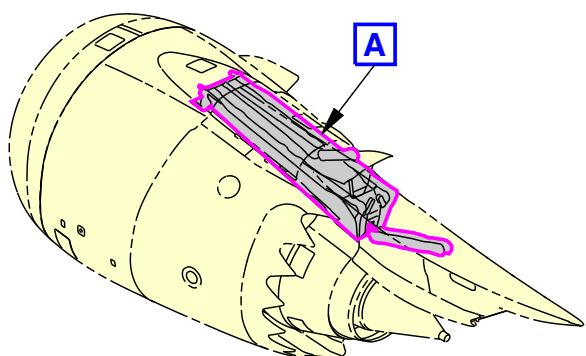
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2416216 S00061540010_V2

Engine Strut-to-Wing Attachments
Figure 209/54-05-03-990-809

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TASK 54-05-03-210-810

10. **INTERNAL - GENERAL VISUAL: RIGHT STRUT TO WING ATTACHMENTS**

(Figure 210)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
441	Engine 2 - Forward Strut Fairing
444	Engine 2 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

D. Inspection

SUBTASK 54-05-03-010-010

- (1) Open these access panels:

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-05-03-210-010

- (2) Do a general visual inspection of the strut to wing upper link, diagonal brace, side links, and strut attachment fittings.

SUBTASK 54-05-03-910-010

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-010

- (4) Close these access panels:

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

————— **END OF TASK** —————

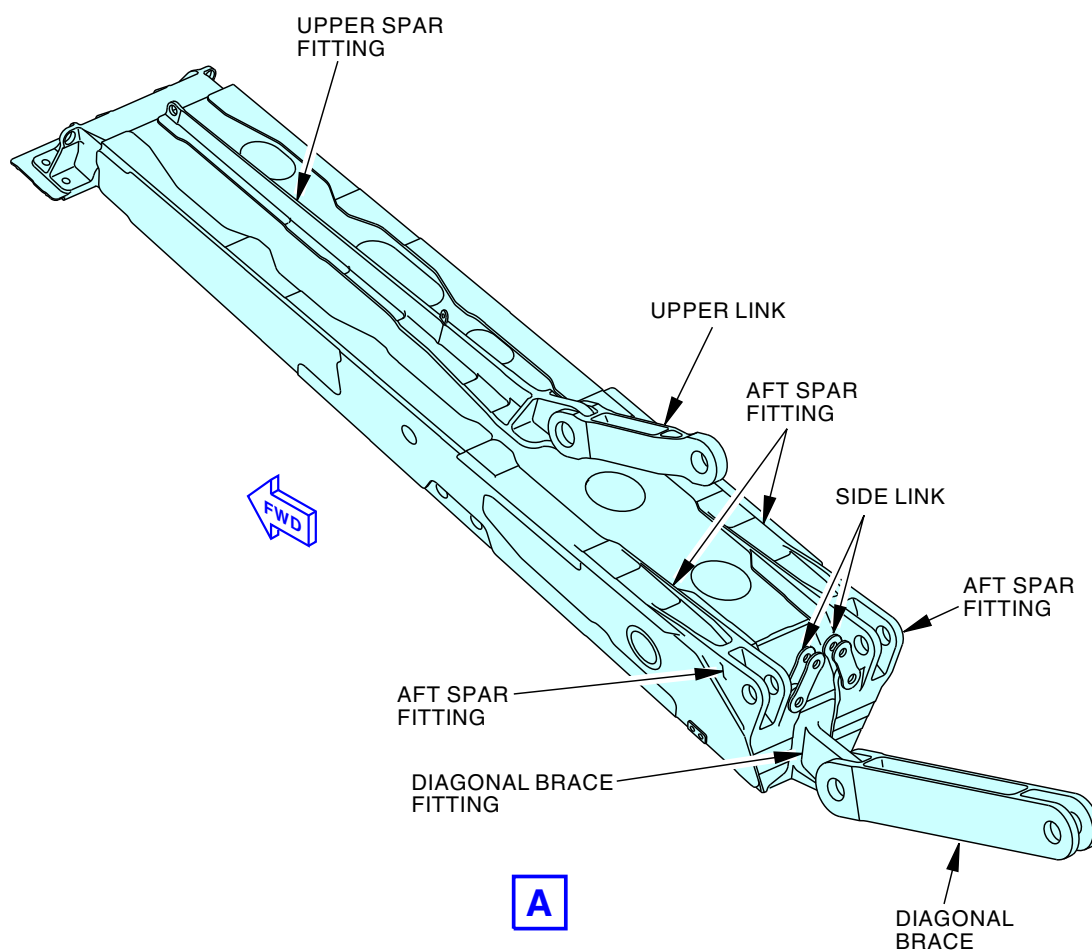
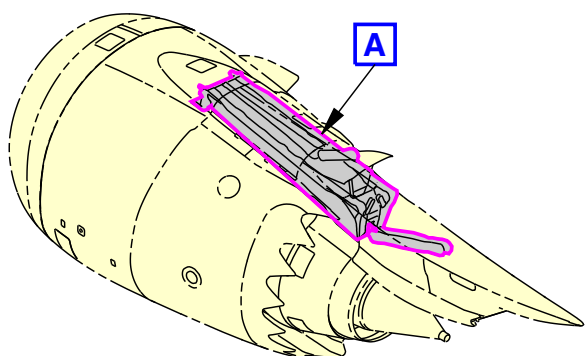
EFFECTIVITY
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2416216 S00061540010_V2

Engine Strut-to-Wing Attachments
Figure 210/54-05-03-990-810

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-211-801

11. INTERNAL - DETAILED: LEFT STRUT TO WING ATTACHMENTS - PINS AND FUSE PINS
(Figure 211)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

B. Location Zones

Zone	Area
431	Engine 1 - Forward Strut Fairing
434	Engine 1 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

D. Inspection

SUBTASK 54-05-03-010-019

- (1) Remove these aft fairing access panels, refer to Aft Fairing Access Panel Removal, TASK 54-52-06-000-801:

- (a) Remove these access panels:

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

SUBTASK 54-05-03-010-011

- (2) Remove these FWD (Forward) fairing access panels:

- (a) Remove these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

SUBTASK 54-05-03-211-001

- (3) Do a detailed inspection of the pins and fuse pins on upper link, midspar, diagonal brace, and side links.

NOTE: Pin removal is not required.

SUBTASK 54-05-03-910-011

- (4) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

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AIRCRAFT MAINTENANCE MANUAL

SUBTASK 54-05-03-410-019

- (5) Install these aft fairing access panels, refer to Aft Fairing Access Panel Installation, TASK 54-52-06-400-801:

- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

SUBTASK 54-05-03-410-011

- (6) Install these FWD fairing access panels:

- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

————— **END OF TASK** —————

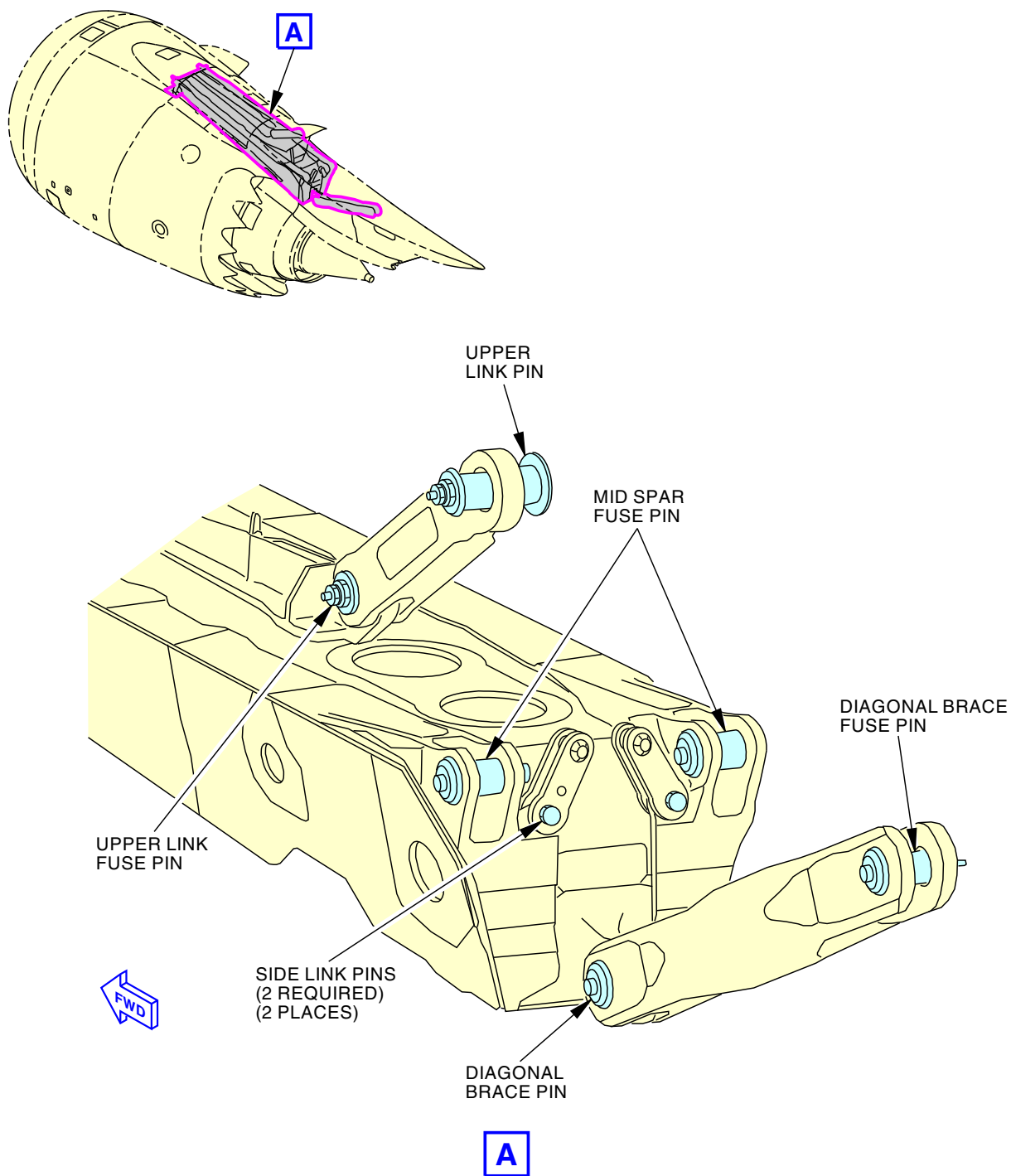
EFFECTIVITY
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2416218 S00061540014_V1

Engine Strut-to-Wing Pins
Figure 211/54-05-03-990-811

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AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-211-802

12. **INTERNAL - DETAILED: RIGHT STRUT TO WING ATTACHMENTS - PINS AND FUSE PINS**

(Figure 212)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

B. Location Zones

Zone	Area
441	Engine 2 - Forward Strut Fairing
444	Engine 2 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

D. Inspection

SUBTASK 54-05-03-010-020

- (1) Remove these aft fairing access panels, refer to Aft Fairing Access Panel Removal, TASK 54-52-06-000-801:

- (a) Remove these access panels:

Number	Name/Location
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-05-03-010-012

- (2) Remove these FWD (Forward) fairing access panels:

- (a) Remove these access panels:

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

SUBTASK 54-05-03-211-002

- (3) Do a detailed inspection of the pins and fuse pins on upper link, midspar, diagonal brace, and side links.

NOTE: Pin removal is not required.

SUBTASK 54-05-03-910-012

- (4) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

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AIRCRAFT MAINTENANCE MANUAL

SUBTASK 54-05-03-410-020

- (5) Install these aft fairing access panels, refer to Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-05-03-410-012

- (6) Install these FWD fairing access panels:

- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

———— **END OF TASK** ————

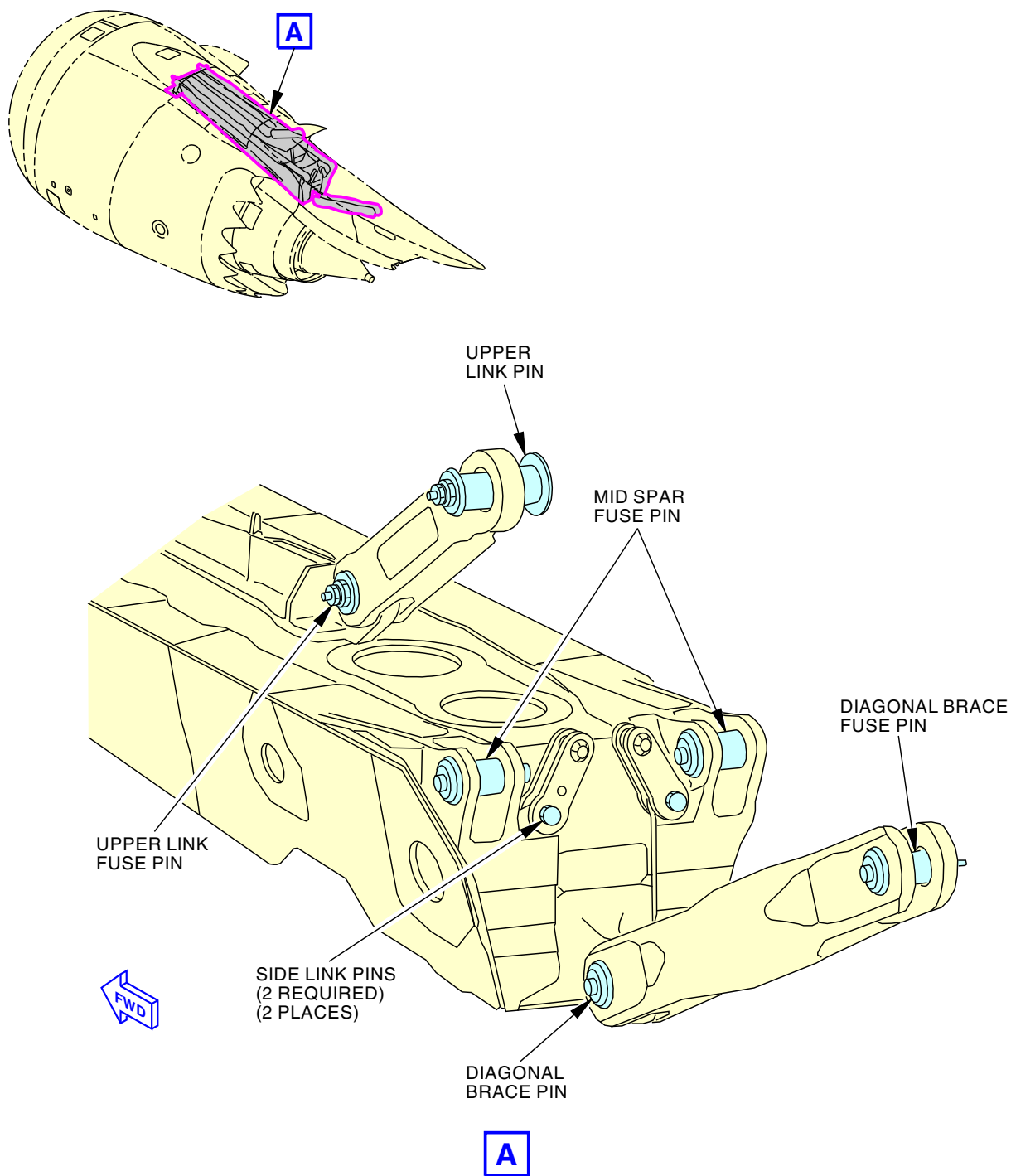
EFFECTIVITY
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2416219 S00061540016_V1

Engine Strut-to-Wing Pins
Figure 212/54-05-03-990-812

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-211-803

13. INTERNAL - DETAILED: LEFT STRUT TO WING ATTACHMENTS

(Figure 213)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
431	Engine 1 - Forward Strut Fairing
434	Engine 1 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

D. Inspection

SUBTASK 54-05-03-010-013

- (1) Open these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

NOTE: TR's must be open to remove access panels 431EL and 431ER.

SUBTASK 54-05-03-211-003

- (2) Do a detailed inspection of the bores of pins and fuse pins on upper link, midspar, diagonal brace, and side links.

NOTE: Pin removal is not required.

SUBTASK 54-05-03-910-013

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-013

- (4) Close these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

EFFECTIVITY
SIA ALL

D633AM101-SIA

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1

————— END OF TASK —————

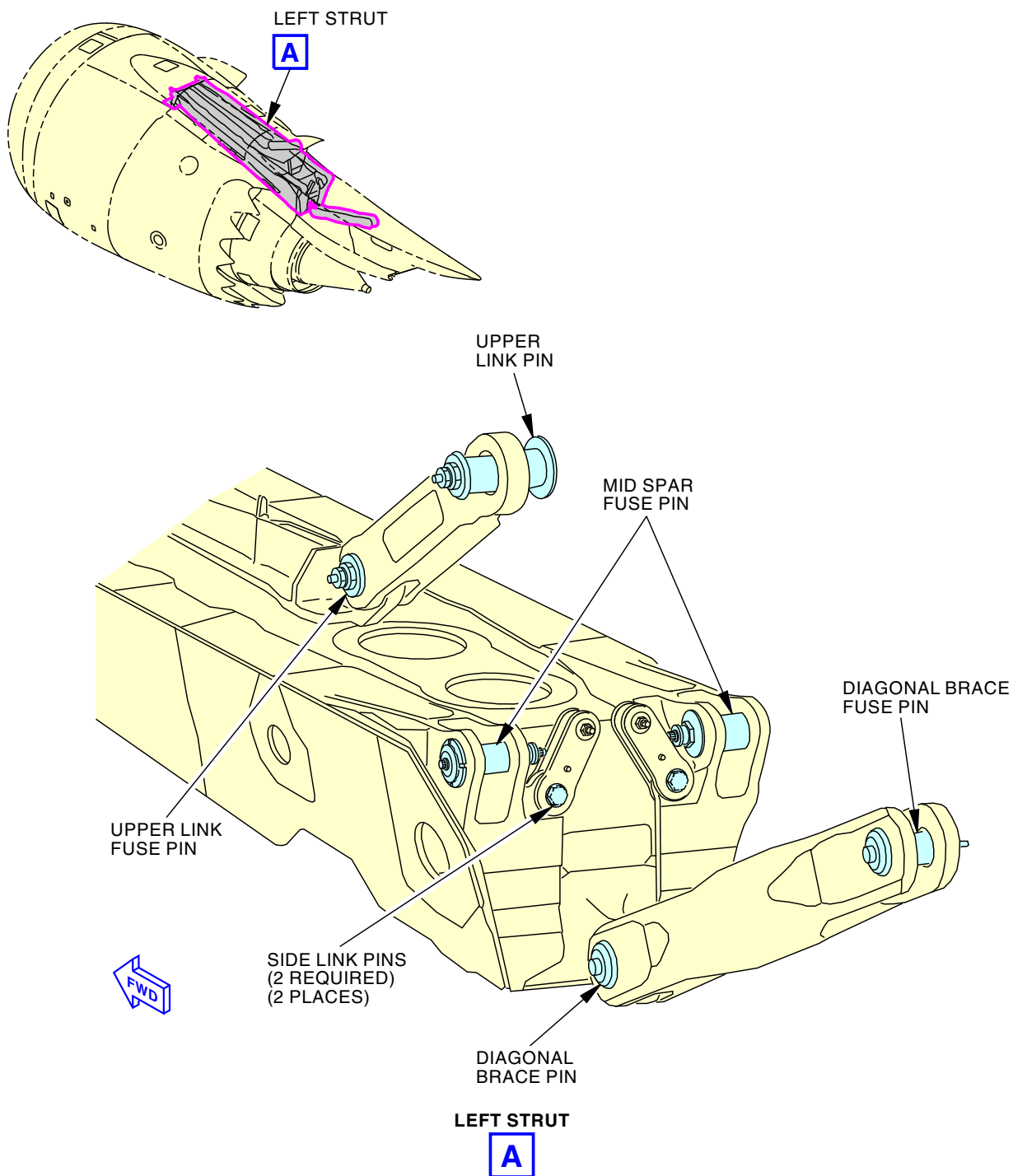
EFFECTIVITY
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D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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MPD ITEM
54-060-01

2416220 S00061540018_V1

Left Strut-To-Wing Pins
Figure 213/54-05-03-990-813

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-211-804

14. INTERNAL - DETAILED: RIGHT STRUT TO WING ATTACHMENTS

(Figure 214)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-809	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
441	Engine 2 - Forward Strut Fairing
444	Engine 2 - Aft Strut Fairing

C. Access Panels

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

D. Inspection

SUBTASK 54-05-03-010-014

- (1) Open these access panels:

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

NOTE: TR's must be open to remove access panels 441EL and 441ER.

SUBTASK 54-05-03-211-004

- (2) Do a detailed inspection of the bores of pins and fuse pins on upper link, midspar, diagonal brace, and side links.

NOTE: Pin removal is not required.

SUBTASK 54-05-03-910-014

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-809.

SUBTASK 54-05-03-410-014

- (4) Close these access panels:

Number	Name/Location
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

EFFECTIVITY
SIA ALL

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

<u>Number</u>	<u>Name/Location</u>
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

————— END OF TASK —————

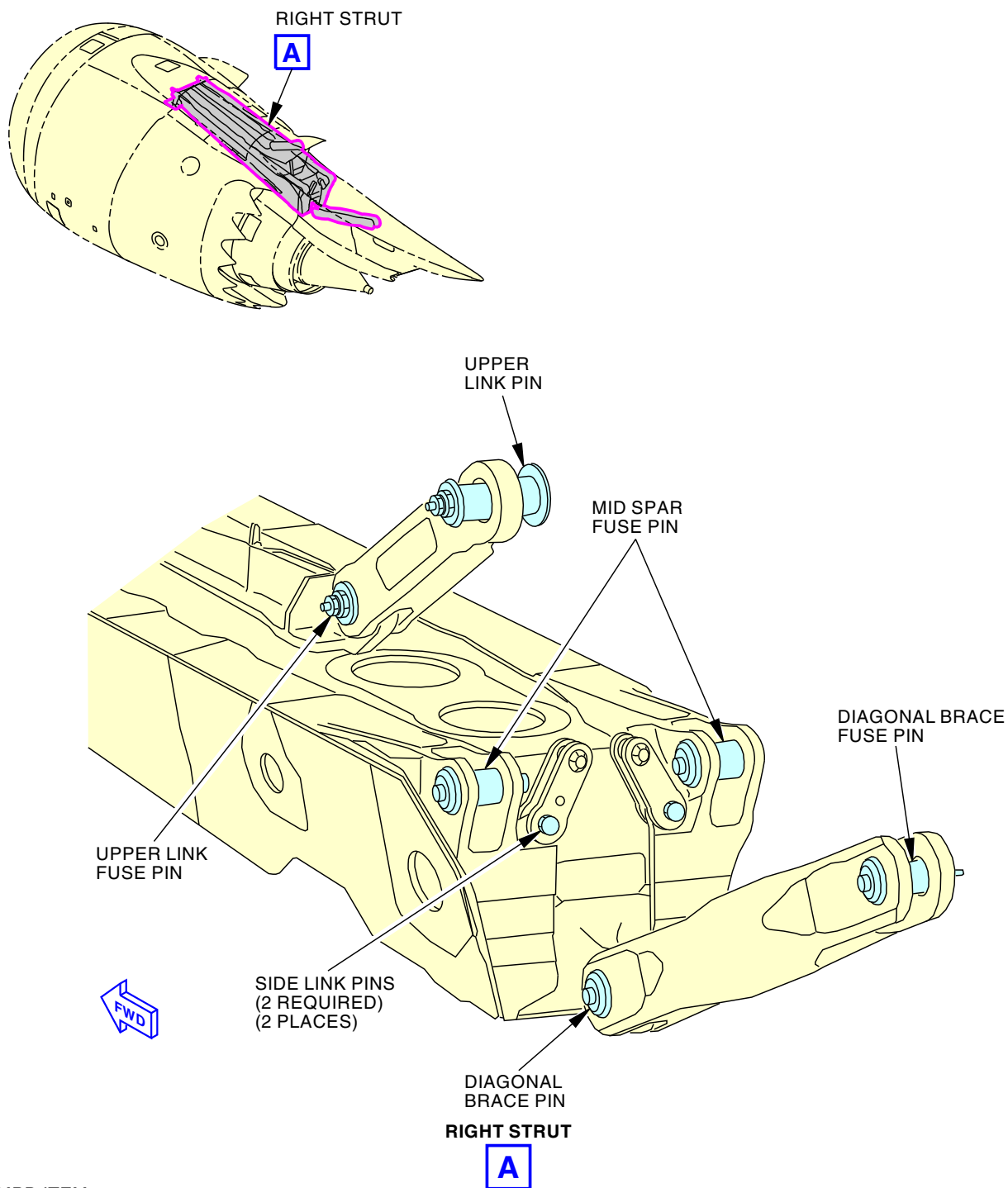
EFFECTIVITY
SIA ALL

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MPD ITEM
54-060-02

2416221 S00061540020_V1

Right Strut-To-Wing-Pins
Figure 214/54-05-03-990-814

EFFECTIVITY
SIA ALL

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737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-811

15. **EXTERNAL - GENERAL VISUAL: LEFT STRUT BOX**

(Figure 215, Figure 216)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-803	737-7/8/8200/9 Basic Task Description (P/B 201)
54-52-01-010-801	Forward Fairing Removal (P/B 401)
54-52-01-410-801	Forward Fairing Installation (P/B 401)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)
54-54-01-000-802	Strut Mid Thermal Barrier Removal (P/B 401)
54-54-01-400-802	Strut Mid Thermal Barrier Installation (P/B 401)
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

B. Location Zones

Zone	Area
433	Engine 1 - Strut Torque Box

C. Access Panels

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
S4331	Left Strut Box External Inspection

D. Inspection

SUBTASK 54-05-03-010-015

- (1) Open the fan cowl panels:
(TASK 71-11-04-010-801-G00)

Number	Name/Location
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1

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SUBTASK 54-05-03-010-031

- (2) Open the thrust reversers:
(TASK 78-31-00-010-801-G00)

<u>Number</u>	<u>Name/Location</u>
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1

NOTE: It is not necessary to remove the engine.

SUBTASK 54-05-03-010-032

- (3) Remove these access panels:
(TASK 54-52-01-010-801)

<u>Number</u>	<u>Name/Location</u>
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1

SUBTASK 54-05-03-010-033

- (4) Remove these access panels:
(TASK 54-52-03-000-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

SUBTASK 54-05-03-010-034

- (5) Special Access:

<u>Number</u>	<u>Name/Location</u>
S4331	Left Strut Box External Inspection

SUBTASK 54-05-03-010-021

- (6) Remove the strut mid thermal barrier, do this task: Strut Mid Thermal Barrier Removal, TASK 54-54-01-000-802.

SUBTASK 54-05-03-210-011

- (7) Do a general visual inspection of the external areas of strut box, including upper and lower spars, forward engine mount bulkhead, aft bulkhead, and side skins.

SUBTASK 54-05-03-910-015

- (8) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-803.

SUBTASK 54-05-03-410-023

- (9) Install the strut mid thermal barrier, do this task: Strut Mid Thermal Barrier Installation, TASK 54-54-01-400-802.

SUBTASK 54-05-03-410-031

- (10) Special Access:

<u>Number</u>	<u>Name/Location</u>
S4331	Left Strut Box External Inspection

EFFECTIVITY
SIA ALL

54-05-03

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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AIRCRAFT MAINTENANCE MANUAL

SUBTASK 54-05-03-410-030

- (11) Install these access panels:

(TASK 54-52-03-400-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

SUBTASK 54-05-03-410-029

- (12) Install these access panels:

(TASK 54-52-01-410-801)

<u>Number</u>	<u>Name/Location</u>
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1

SUBTASK 54-05-03-410-032

- (13) Close the thrust reversers:

(TASK 78-31-00-010-802-G00)

<u>Number</u>	<u>Name/Location</u>
415	Left Thrust Reverser, Engine 1
416	Right Thrust Reverser, Engine 1

SUBTASK 54-05-03-410-033

- (14) Close the fan cowl panels:

(TASK 71-11-04-410-801-G00)

<u>Number</u>	<u>Name/Location</u>
413	Left Fan Cowl, Engine 1
414	Right Fan Cowl, Engine 1

————— END OF TASK —————

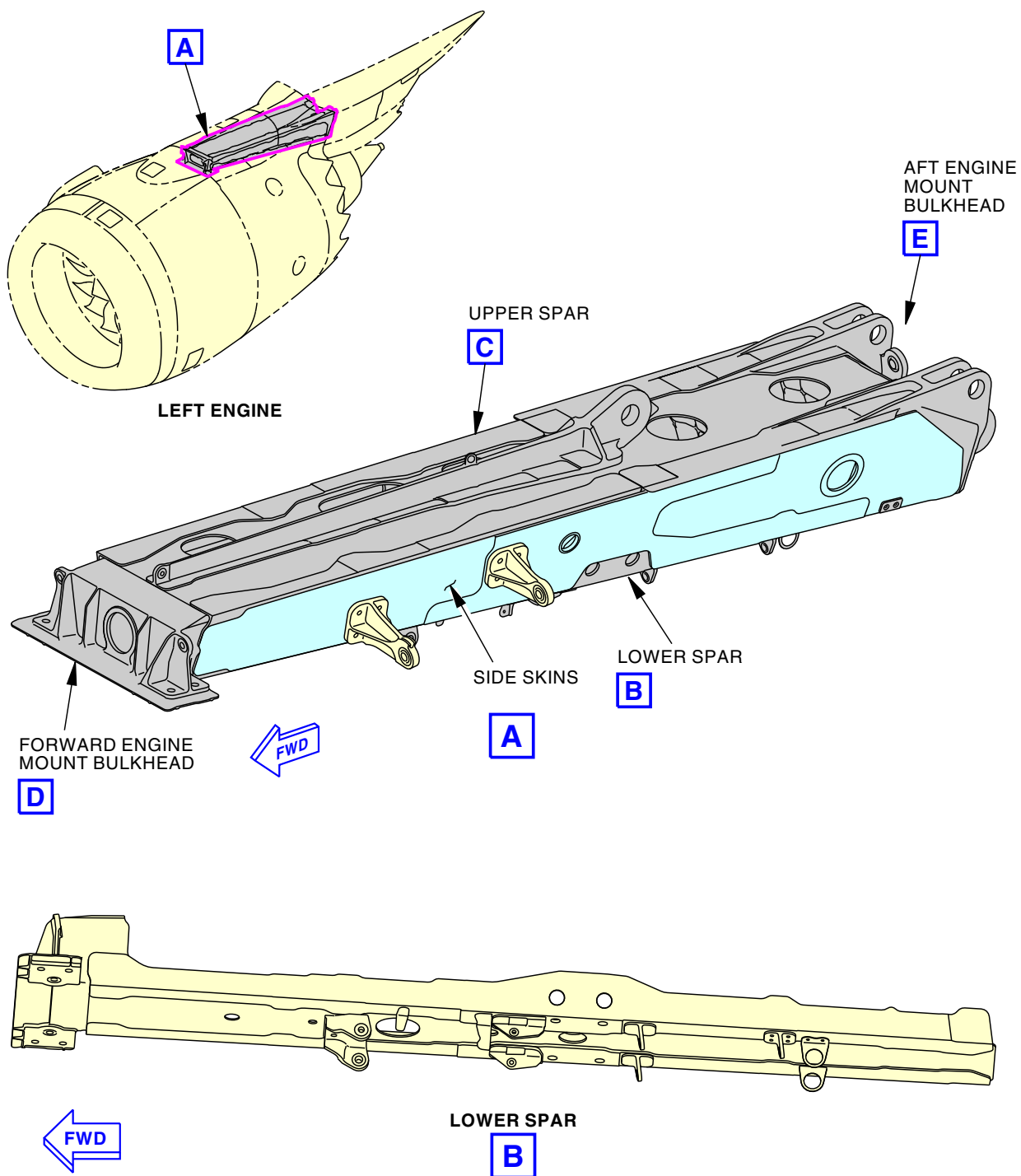
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416222 S00061540022_V2

Left Strut Box - General Visual (External)
Figure 215/54-05-03-990-815

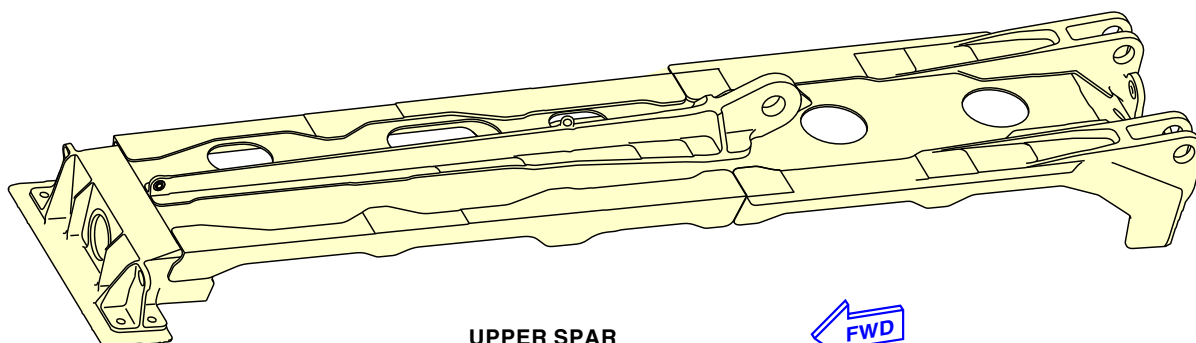
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

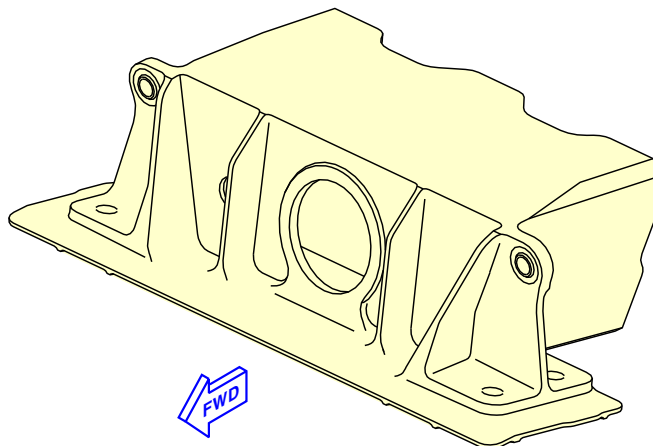
54-05-03

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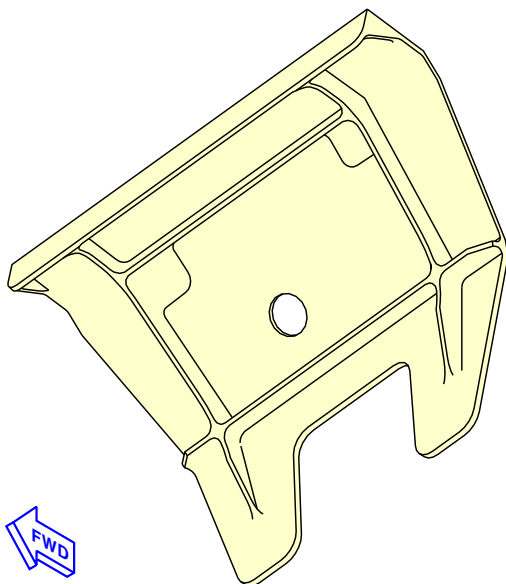
UPPER SPAR

C



FORWARD ENGINE MOUNT BULKHEAD

D



AFT BULKHEAD

E



2416223 S00061540023_V2

Left Strut Box - General Visual (External)
Figure 216/54-05-03-990-816

EFFECTIVITY
SIA ALL

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AIRCRAFT MAINTENANCE MANUAL

TASK 54-05-03-210-812

16. INTERNAL - GENERAL VISUAL: EXTERNAL - RIGHT STRUT BOX

(Figure 217, Figure 218)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-803	737-7/8/8200/9 Basic Task Description (P/B 201)

B. Location Zones

Zone	Area
443	Engine 2 - Strut Torque Box

C. Access Panels

Number	Name/Location
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
S4431	Right Strut Box External Inspection

D. Inspection

SUBTASK 54-05-03-010-016

(1) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

Special Access:

<u>Number</u>	<u>Name/Location</u>
S4431	Right Strut Box External Inspection

NOTE: Remove mid and aft insulation blanket/heat shields. Remove fan cowls. TR's must be open to remove access panels 441EL and 441ER. Engine removal not required.

EFFECTIVITY
SIA ALL

D633AM101-SIA

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SUBTASK 54-05-03-210-012

- (2) Do a general visual inspection of the external areas of strut box, including upper and lower spars, forward engine mount bulkhead, aft bulkhead, and side skins.

SUBTASK 54-05-03-910-016

- (3) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-803.

SUBTASK 54-05-03-410-016

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
423	Left Fan Cowl, Engine 2
424	Right Fan Cowl, Engine 2
425	Left Thrust Reverser, Engine 2
426	Right Thrust Reverser, Engine 2
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

————— **END OF TASK** —————

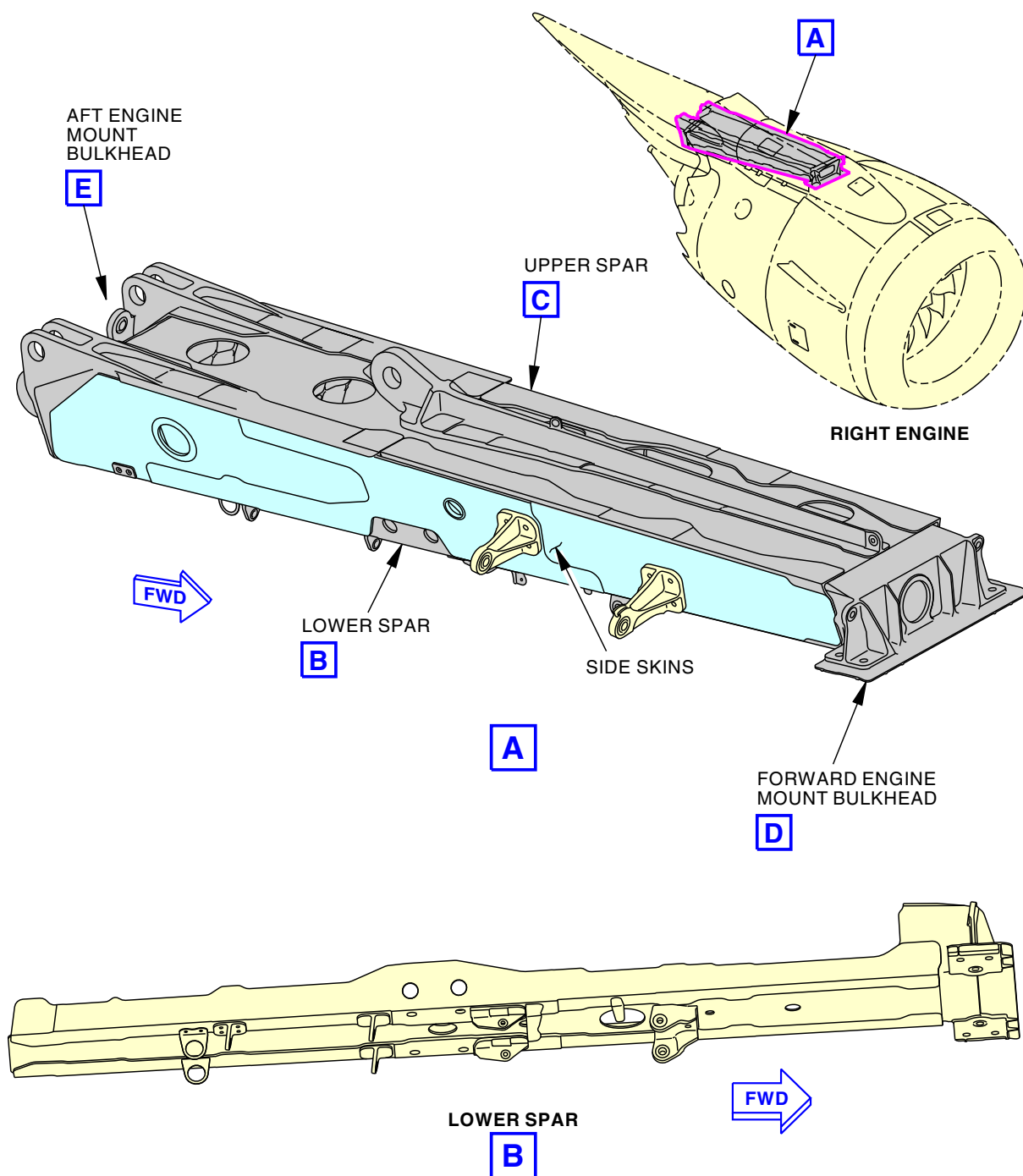
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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2416224 S00061540025_V2

Right Strut Box - General Visual (Internal)
Figure 217/54-05-03-990-817

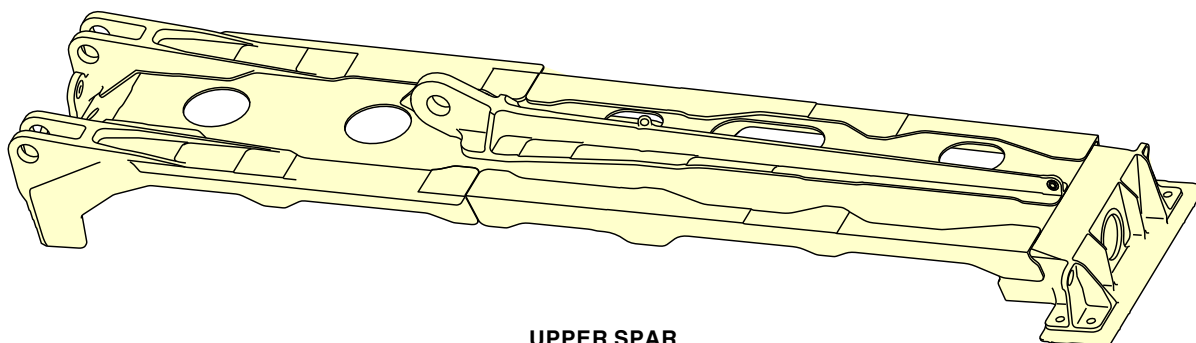
EFFECTIVITY
SIA ALL

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

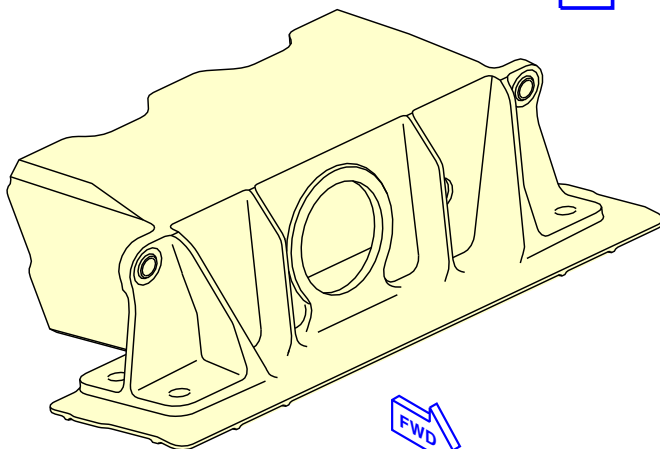
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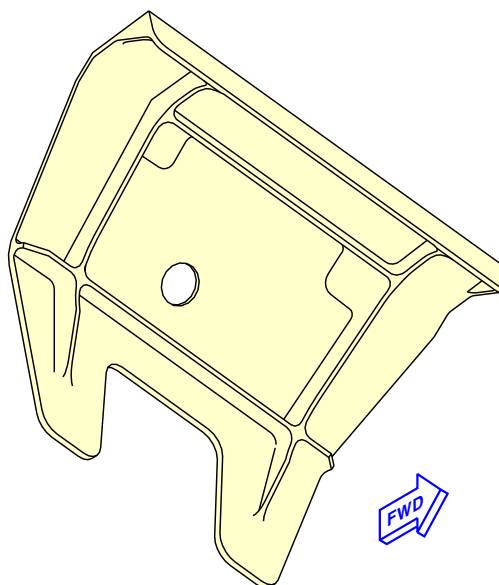
UPPER SPAR

C



FORWARD ENGINE MOUNT BULKHEAD

D



AFT BULKHEAD

E



2416225 S00061540026_V2

Right Strut Box - General Visual (Internal)
Figure 218/54-05-03-990-818

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

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TASK 54-05-03-210-813

17. **INTERNAL - GENERAL VISUAL: INTERNAL - LEFT STRUT BOX**

(Figure 219)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-803	737-7/8/8200/9 Basic Task Description (P/B 201)
54-53-01-000-801	Strut Access Panel Removal (P/B 401)
54-53-01-400-801	Strut Access Panel Installation (P/B 401)

B. Location Zones

Zone	Area
433	Engine 1 - Strut Torque Box

C. Access Panels

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
433CT	Strut, Upper Spar Web, Strut 1
433DT	Strut, Upper Spar Web, Strut 1
S4332	Left Strut Box Internal Inspection

D. Inspection

SUBTASK 54-05-03-010-017

- (1) Open these access panels:

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

Special Access:

Number	Name/Location
S4332	Left Strut Box Internal Inspection

NOTE: Disassemble pneumatic ducts as required. TR's must be open to remove access panels 431EL and 431ER.

SUBTASK 54-05-03-010-027

- (2) Open these access panels:

(TASK 54-53-01-000-801)

Number	Name/Location
433CT	Strut, Upper Spar Web, Strut 1

EFFECTIVITY
SIA ALL

54-05-03

D633AM101-SIA

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(Continued)

<u>Number</u>	<u>Name/Location</u>
433DT	Strut, Upper Spar Web, Strut 1

SUBTASK 54-05-03-210-013

- (3) Do a general visual inspection of the internal areas of strut box, including upper and lower spars, forward and aft engine mount bulkheads, aft and mid bulkheads, and side skins.

SUBTASK 54-05-03-910-017

- (4) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-803.

SUBTASK 54-05-03-410-017

- (5) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1

SUBTASK 54-05-03-410-021

- (6) Close these access panels:

(TASK 54-53-01-400-801)

<u>Number</u>	<u>Name/Location</u>
433CT	Strut, Upper Spar Web, Strut 1
433DT	Strut, Upper Spar Web, Strut 1

————— END OF TASK —————

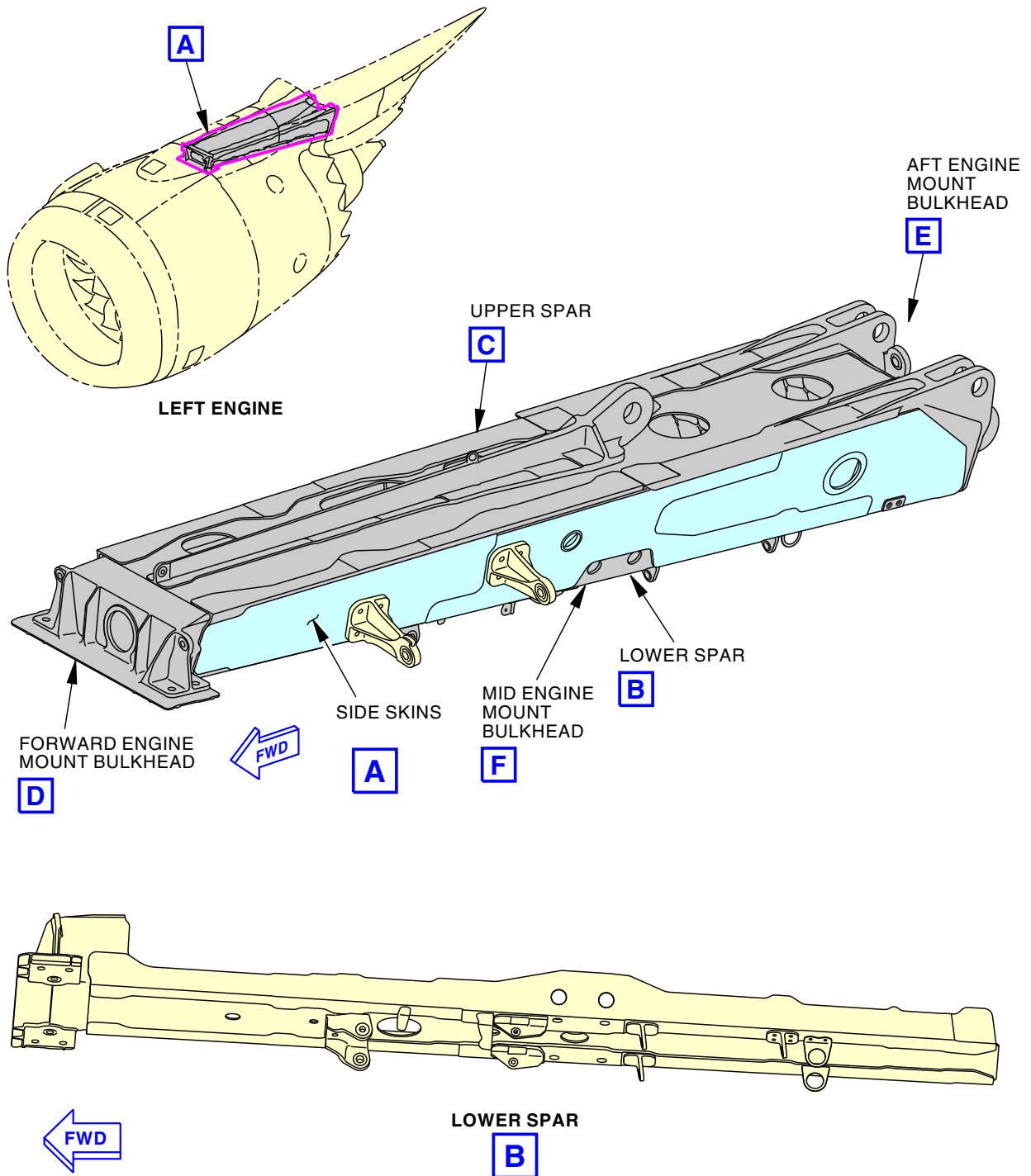
EFFECTIVITY
SIA ALL

D633AM101-SIA

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2416226 S00061540028_V2

Left Strut Box
Figure 219/54-05-03-990-819 (Sheet 1 of 2)

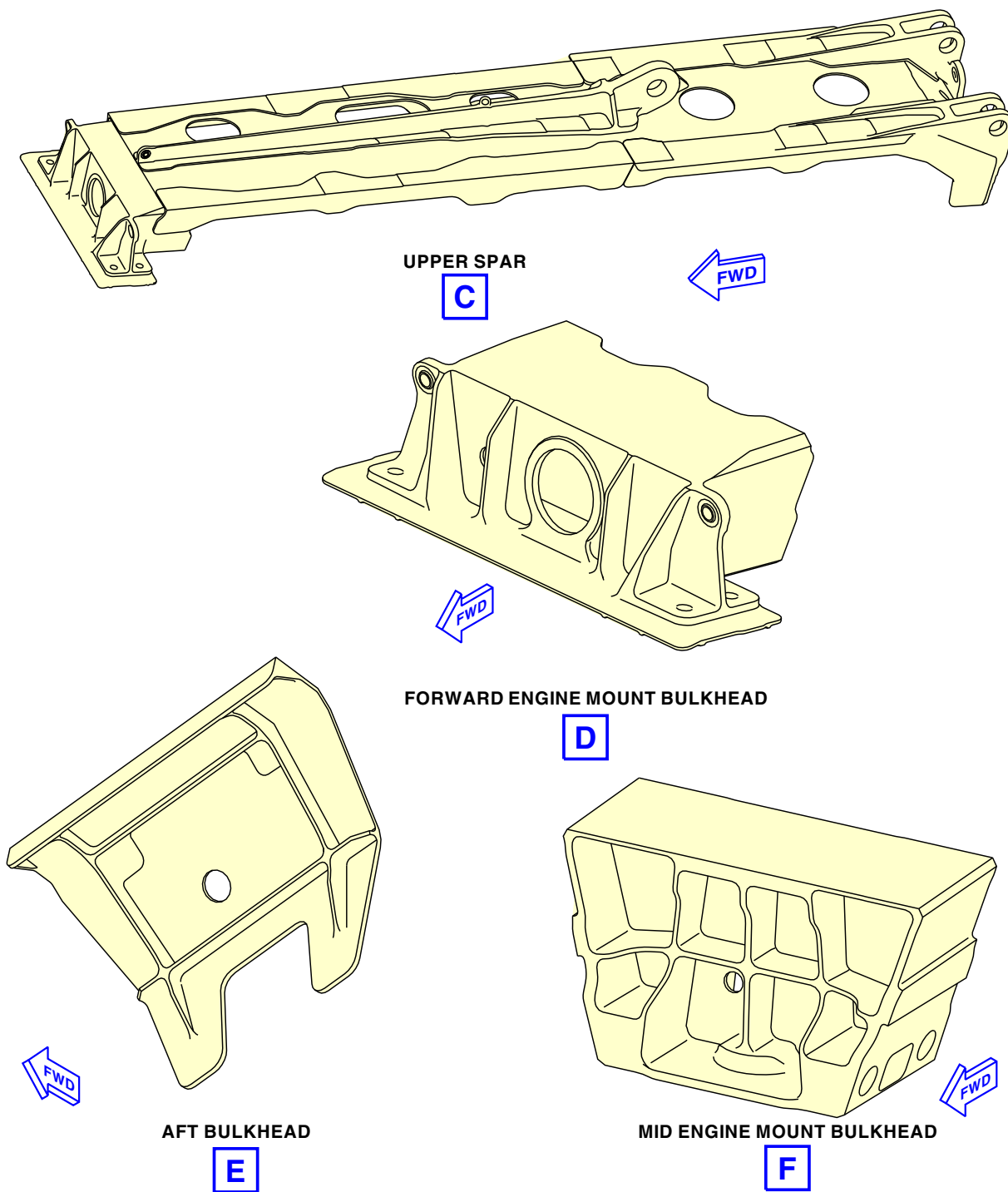
EFFECTIVITY
SIA ALL

D633AM101-SIA

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2416227 S00061540029_V2

Left Strut Box
Figure 219/54-05-03-990-819 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

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TASK 54-05-03-210-814

18. **INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT STRUT BOX**

(Figure 220, Figure 221)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
51-05-01-210-803	737-7/8/8200/9 Basic Task Description (P/B 201)
54-53-01-000-801	Strut Access Panel Removal (P/B 401)
54-53-01-400-801	Strut Access Panel Installation (P/B 401)

B. Location Zones

Zone	Area
443	Engine 2 - Strut Torque Box

C. Access Panels

Number	Name/Location
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
443CT	Strut, Upper Spar Web, Strut 2
443DT	Strut, Upper Spar Web, Strut 2
S4432	Right Strut Box Internal Inspection

D. Inspection

SUBTASK 54-05-03-010-018

- (1) Open these access panels:

Number	Name/Location
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

Special Access:

Number	Name/Location
S4432	Right Strut Box Internal Inspection

NOTE: Disassemble pneumatic ducts as required. TR's must be open to remove access panels 441EL and 441ER.

SUBTASK 54-05-03-010-028

- (2) Open these access panels:

(TASK 54-53-01-000-801)

Number	Name/Location
443CT	Strut, Upper Spar Web, Strut 2

EFFECTIVITY
SIA ALL

D633AM101-SIA

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(Continued)

<u>Number</u>	<u>Name/Location</u>
443DT	Strut, Upper Spar Web, Strut 2

SUBTASK 54-05-03-210-014

- (3) Do a general visual inspection of the internal areas of strut box, including upper and lower spars, forward and aft engine mount bulkheads, aft and mid bulkheads, and side skins.

SUBTASK 54-05-03-910-018

- (4) 737-7/8/8200/9 Basic Task Description, TASK 51-05-01-210-803.

SUBTASK 54-05-03-410-018

- (5) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

SUBTASK 54-05-03-410-022

- (6) Close these access panels:

(TASK 54-53-01-400-801)

<u>Number</u>	<u>Name/Location</u>
443CT	Strut, Upper Spar Web, Strut 2
443DT	Strut, Upper Spar Web, Strut 2

————— END OF TASK —————

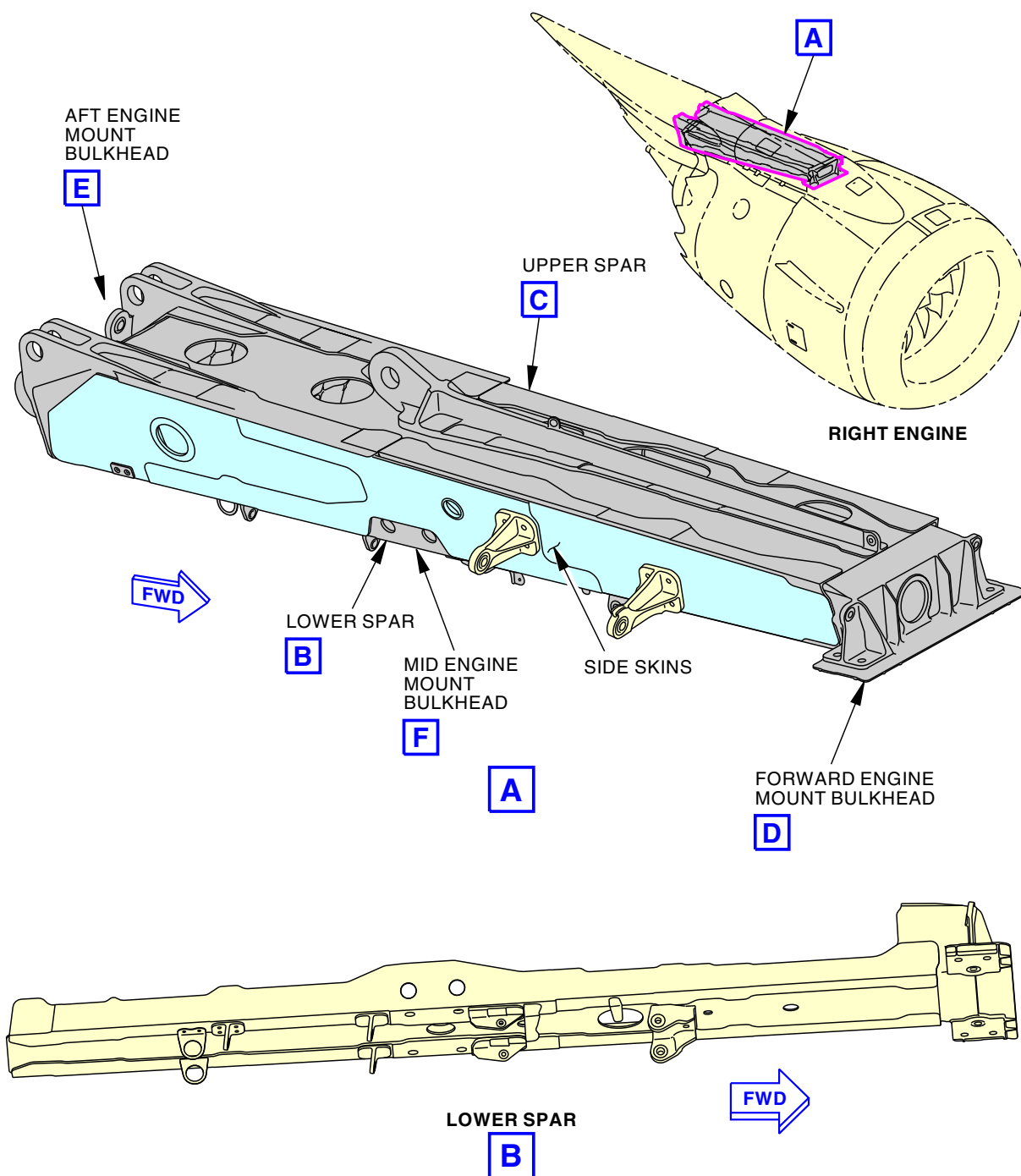
EFFECTIVITY
SIA ALL

D633AM101-SIA

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2416228 S00061540031_V2

Right Strut Box - General Visual (Internal)
Figure 220/54-05-03-990-820

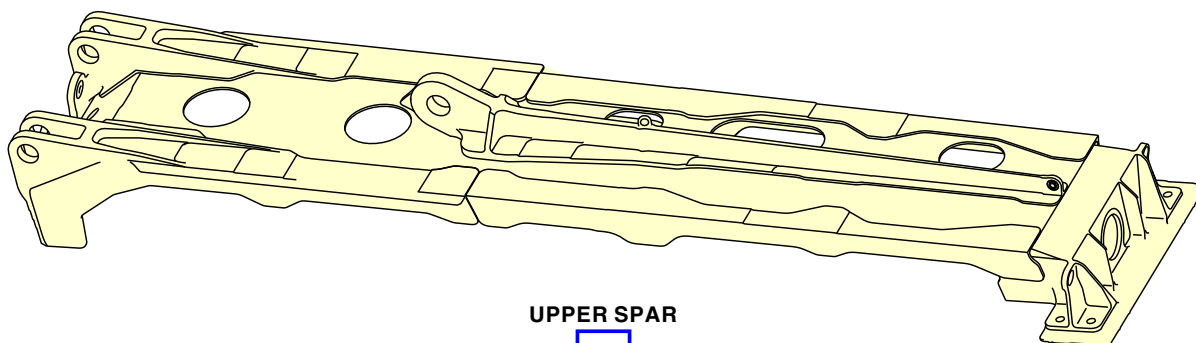
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

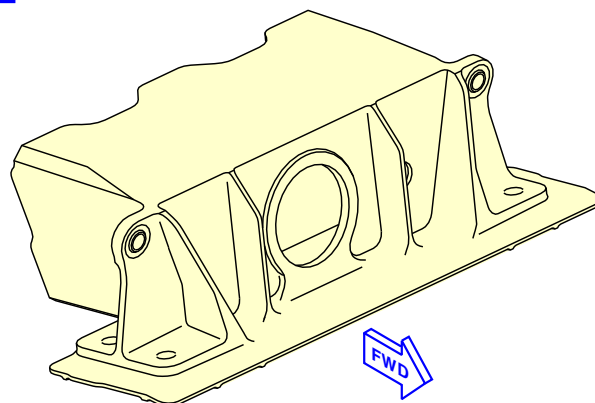
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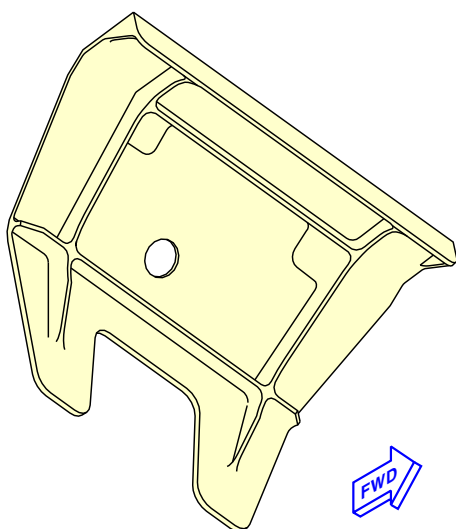
UPPER SPAR

C



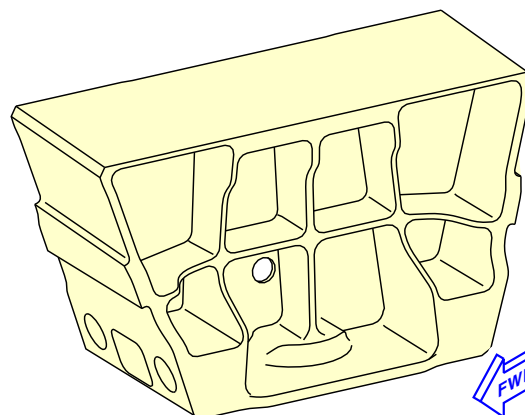
FORWARD ENGINE MOUNT BULKHEAD

D



AFT BULKHEAD

E



MID ENGINE MOUNT BULKHEAD

F

2416229 S00061540032_V2

Right Strut Box - General Visual (Internal)
Figure 221/54-05-03-990-821

EFFECTIVITY
SIA ALL

D633AM101-SIA

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NACELLE STRUT - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) Prepare the strut for maintenance operations
- (2) Put the strut back to its usual condition
- (3) Support the strut with the engine installed
- (4) Remove support from the strut with the engine installed
- (5) Support the strut with the engine removed
- (6) Remove support from the strut with the engine removed
- (7) Support the strut
- (8) Remove support from the strut.

TASK 54-51-01-040-801

2. Prepare the Strut for Maintenance Operations

A. **General**

- (1) This task prepares the strut for maintenance operations. Always do this task when you do maintenance operations on or near the nacelle strut.

B. **References**

Reference	Title
20-40-11-910-801	Static Grounding (P/B 201)
27-81-00-040-801	Leading Edge Flaps and Slats - Deactivation (P/B 201)
78-31-00-040-801-G00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare the Strut for Maintenance Operations**

SUBTASK 54-51-01-910-001

- (1) Do this task: Static Grounding, TASK 20-40-11-910-801.

SUBTASK 54-51-01-040-001



BEFORE YOU MOVE THE FLAP CONTROL LEVER, MAKE SURE THAT ALL PERSONNEL, AND EQUIPMENT ARE SAFE. KEEP THEM AWAY FROM THE LE SLATS, TE FLAPS, AND FLAP DRIVE MECHANISMS. WITH HYDRAULIC POWER REMOVED, ELECTRICAL POWER WILL CAUSE THE FLAPS TO MOVE AUTOMATICALLY WHEN YOU MOVE THE FLAP CONTROL LEVER. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) Do this task: Leading Edge Flaps and Slats - Deactivation, TASK 27-81-00-040-801.

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SUBTASK 54-51-01-040-002



DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (3) To deactivate the thrust reversers, do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-801-G00.

————— END OF TASK —————

TASK 54-51-01-440-801

3. Put the Strut Back to Its Usual Condition

A. General

- (1) This task puts the strut back to its usual condition after maintenance operations. Always do this task when all maintenance operations on the nacelle strut are complete.

B. References

Reference	Title
27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
78-31-00-440-801-G00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Put the Strut Back to Its Usual Condition

SUBTASK 54-51-01-440-001

- (1) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-801-G00.

SUBTASK 54-51-01-440-002

- (2) Do this task: Leading Edge Flaps and Slats - Activation, TASK 27-81-00-440-801.

SUBTASK 54-51-01-910-002

- (3) If all maintenance operations are complete, remove the static ground from the airplane.

————— END OF TASK —————

TASK 54-51-01-580-801

4. Support the Strut with the Engine Installed

A. General

- (1) When you remove a strut attach pin, use this procedure to remove the load from the strut pin.

B. References

Reference	Title
71-11-04-000-801-G00	Fan Cowl Panels Removal (P/B 401)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

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C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2024	Sling - Equipment, Strut Fuse Pin Removal/Installation Part #: C54019-1 Supplier: 81205
SPL-17099	Handling Brackets - Engine Fan Case Part #: 956A8018G02 Supplier: 58828

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Prepare to Support the Engine

SUBTASK 54-51-01-040-003

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-01-010-001

(2) Do this task: Fan Cowl Panels Removal, TASK 71-11-04-000-801-G00.

SUBTASK 54-51-01-010-002

(3) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

F. Install the Strut Support Sling

SUBTASK 54-51-01-480-001



MAKE SURE THAT THE THRUST REVERSERS ARE FULLY CLOSED. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Install the sling, SPL-2024 to the engine.

NOTE: The latches on the thrust reversers do not need to be in the closed position.

(a) Attach the sling assembly to a load cell with a minimum capacity of 12,000 lb (5443 kg).

(b) Attach the master link to the load cell.

(c) Attach the master link to an overhead hoist with a minimum capacity of 10,000 lb (4536 kg).

(d) Attach the cable assembly and the 3 ton lever hoist to the sling assembly.

(e) Put the sling assembly above the engine.

(f) Attach the cable assembly and the 3 ton lever hoist to the engine fittings at approximately NAC STA 195.

NOTE: The fittings are at approximately NAC STA 195, at the 10 o'clock and 2 o'clock positions.

EFFECTIVITY
SIA ALL

54-51-01

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- 1) If there are no engine fittings, install the handling brackets, SPL-17099 onto the engine.

NOTE: Follow the manufacturer's instructions to install the engine fan case handling brackets, SPL-17099.

- (g) Use the over head hoist and the 3 ton lever hoist to put the sling assembly in tension.

G. Remove the Load from the Strut Pin

SUBTASK 54-51-01-580-001



WARNING

DO NOT LIFT THE ENGINE WITH A FORCE WHICH IS MORE THAN NECESSARY TO PERMIT THE PIN TO TURN WHEN YOU APPLY 125 POUND-INCHES (14.1 NEWTON-METERS) MAXIMUM TORQUE. DO NOT APPLY A TOTAL LOAD OF MORE THAN 10,000 POUNDS (4,536 KILOGRAMS) (MORE THAN THE WEIGHT OF THE EQUIPMENT). LIFT THE ENGINE VERTICALLY ALONG THE CENTERLINE OF THE ENGINE AND THE STRUT. THIS CENTERLINE IS NOT A 90 DEGREE ANGLE FROM THE GROUND FLOOR. THERE IS A SIX DEGREE WING DIHEDRAL. IF YOU LIFT THE ENGINE WITH TOO MUCH FORCE, OR A FORE/AFT ANGLE OF MORE THAN FIVE DEGREES, DAMAGE TO THE ENGINE AND/OR STRUT AND INJURY TO PERSONNEL CAN OCCUR.

- (1) Do these steps to remove the load from the pin (that you will remove):
 - (a) Slowly increase the load until you can turn the pin (that you will remove) with a maximum torque of 125 in-lb (14.1 N·m).

NOTE: If the fuse pin does not turn before the maximum allowable load is applied, it may be necessary to decrease the load on the overhead hoist then increase the load on the 3 ton lever hoist to free the pin.
 - (b) Make sure that the load on the engine support sling is kept the same until you install the pin again.

————— **END OF TASK** —————

TASK 54-51-01-580-802

5. Remove Support from the Strut with the Engine Installed

A. General

- (1) This task has the steps to remove the support from the strut with the engine installed.

B. References

Reference	Title
71-11-04-400-801-G00	Fan Cowl Panels Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-2024	Sling - Equipment, Strut Fuse Pin Removal/Installation Part #: C54019-1 Supplier: 81205

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Reference	Description
SPL-14726	Engine Stand - LEAP-1B Part #: 956A8600G04 Supplier: 58828 Opt Part #: 956A8600G03 Supplier: 58828
SPL-17099	Handling Brackets - Engine Fan Case Part #: 956A8018G02 Supplier: 58828

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Remove the Support from the Engine

SUBTASK 54-51-01-210-001



DO NOT REMOVE THE LOAD ON THE ENGINE SUPPORT SLING UNTIL THE WORKSTANDS ARE CLEAR. IF YOU DO NOT REMOVE THE WORKSTANDS, DAMAGE TO THE STRUT, WING STRUCTURE, OR WORKSTANDS CAN OCCUR.

- (1) Make sure that the workstands are clear of the airplane.

SUBTASK 54-51-01-580-002

- (2) Slowly remove the load from the sling, SPL-2024.

SUBTASK 54-51-01-080-001

- (3) Remove the sling from the engine.

SUBTASK 54-51-01-080-007

- (4) If they are installed, remove the handling brackets, SPL-17099 from the engine.

NOTE: Follow the manufacturer's instructions to remove the engine fan case handling brackets, SPL-17099 and store them in the engine stand, SPL-14726.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-01-410-001

- (1) Install the fan cowl panels, do this task: Fan Cowl Panels Installation, TASK 71-11-04-400-801-G00.

SUBTASK 54-51-01-440-003

- (2) If all maintenance operations on the strut are complete, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

TASK 54-51-01-580-803

6. Support the Strut with the Engine Removed

A. General

- (1) This task has the steps to support the strut and remove the load on the strut attach pin that you will remove (without the engine).

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B. References

Reference	Title
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-8399	Sling - Strut Unload, Engine Removed Part #: C54021-1 Supplier: 81205

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Prepare to Support the Strut

SUBTASK 54-51-01-040-004

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-01-000-001

(2) Do this task: Power Plant - Removal, TASK 71-00-02-000-801-G00.

SUBTASK 54-51-01-480-005

(3) Install the unload strut sling, SPL-8399 on the strut.

- (a) Install the mount attach assembly on the strut located at NAC STA 194.
- (b) Install the lift beam assembly to the mount attach assembly.
- (c) Attach the hand chain hoist to the lift beam assembly.

NOTE: The hand chain hoist can be attached above or below the lift beam assembly to apply an up or down load on the strut.

- 1) If you are applying an up load on the strut, attach the unload strut sling, SPL-8399 to an overhead hoist.
 - a) Attach the sling beam assembly to a load cell with a minimum capacity of 3000 lb (1361 kg).
 - b) Attach the load cell to the master link.
 - c) Attach the master link to an overhead hoist with a minimum capacity of 2000 lb (907 kg).
- 2) If you are applying a down load on the strut, attach unload strut sling, SPL-8399 to the ground fitting.
 - a) Attach the hand chain hoist to a load cell with a minimum capacity of 3000 lb (1361 kg).
 - b) Attach the load cell to the bottom of the lift beam assembly.
 - c) Attach the hand chain hoist to the ground fitting.

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F. Remove the Load from the Strut Pin

SUBTASK 54-51-01-580-008



DO NOT APPLY MORE THAN 2,000 LB (907 KG) OF UP LOAD OR DOWN LOAD ON THE STRUT. APPLY THE LOAD VERTICALLY. IF YOU APPLY AN UP LOAD OR DOWN LOAD ON THE STRUT WITH TOO MUCH FORCE, OR AT AN INCORRECT ANGLE, DAMAGE TO THE AIRPLANE AND INJURY TO PERSONNEL CAN OCCUR.

- (1) Do these steps to remove the load from the pin (that you will remove):
 - (a) Slowly increase the load until you can turn the pin (that you will remove) with a maximum torque of 125 in-lb (14.1 N·m).
 - (b) Make sure that the load on the strut sling is kept the same until you install the pin again.

————— END OF TASK —————

TASK 54-51-01-580-804

7. Remove Support from the Strut with the Engine Removed

A. General

- (1) This task has the steps to remove the strut supports after you install the strut attach pin (without the engine).

B. References

Reference	Title
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-8399	Sling - Strut Unload, Engine Removed Part #: C54021-1 Supplier: 81205

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Remove the Support from the Strut

SUBTASK 54-51-01-210-002



DO NOT REMOVE THE LOAD ON THE STRUT SUPPORT SLING UNTIL THE WORKSTANDS ARE CLEAR. IF YOU DO NOT REMOVE THE WORKSTANDS, DAMAGE TO THE STRUT, WING STRUCTURE, OR WORKSTANDS CAN OCCUR.

- (1) Make sure the workstands are clear of the airplane.

SUBTASK 54-51-01-580-004

- (2) Slowly remove the load from the unload strut sling, SPL-8399.

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SUBTASK 54-51-01-080-006

- (3) Remove the unload strut sling, SPL-8399 from the strut.
 - (a) Disconnect the cable assembly and/or hand chain hoist from the lift beam assembly.
 - (b) Disconnect the cable assembly and/or hand chain hoist from the overhead hoist or ground support.
 - (c) Remove the lift beam assembly from the mount attach assembly.
 - (d) Remove the mount attach assembly from the strut.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-01-400-001

- (1) Do this task: Power Plant - Installation, TASK 71-00-02-400-801-G00.

SUBTASK 54-51-01-440-004

- (2) If all maintenance operations on the strut are complete, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

— END OF TASK —

TASK 54-51-01-580-805

8. Support the Strut

A. General

- (1) This task has the steps to install the tools to remove/install the strut.
 - (a) When you remove the strut, you must support the strut during the removal of the upper link and the aft upper spar fuse pins.
 - (b) When you install the strut, you must support the strut during the installation of the aft upper spar fuse pins and the upper link.

B. References

Reference	Title
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-6248	Tool - Removal/Installation, Engine Strut Part #: C54016-1 Supplier: 81205

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Procedure

SUBTASK 54-51-01-020-001

- (1) If necessary, do this task: Power Plant - Removal, TASK 71-00-02-000-801-G00.

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SUBTASK 54-51-01-480-003

- (2) Install the tool, SPL-6248 on the strut.
 - (a) Install the fwd assembly to the fwd bootstrap GSE interfaces located at around NAC STA 193.
 - (b) Install the aft beam assembly to the aft bootstrap GSE interfaces located at NAC STA 255.
 - (c) Attach the spreader bar assembly to a load cell with a minimum capacity of 1500 lb (680 kg).
 - (d) Attach the load cell to the master link.
 - (e) Attach the master link to an overhead hoist with a minimum capacity of 1300 lb (590 kg).
 - (f) On the inboard side of the strut, attach the wire rope assembly to the aft beam assembly and the spreader bar assembly.
 - (g) On the outboard side of the strut, attach a lever hoist to the aft beam assembly and the spreader bar assembly.
 - (h) Attach a lever hoist to the spreader bar assembly and the fwd assembly.

SUBTASK 54-51-01-580-005

- (3) Make sure that the tool, SPL-6248 supports the weight of the strut.

————— **END OF TASK** —————

TASK 54-51-01-580-806

9. Remove Support from the Strut

A. General

- (1) This task has the steps to remove the tools to remove/install the strut.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-6248	Tool - Removal/Installation, Engine Strut Part #: C54016-1 Supplier: 81205

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Procedure

SUBTASK 54-51-01-080-003



DO NOT REMOVE THE LOAD ON THE STRUT SUPPORT SLING UNTIL THE WORKSTANDS ARE CLEAR. IF YOU DO NOT REMOVE THE WORKSTANDS, DAMAGE TO THE STRUT, WING STRUCTURE, OR WORKSTANDS CAN OCCUR.

- (1) Make sure the work stands are clear of the airplane.

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SUBTASK 54-51-01-580-006

- (2) Slowly remove the load from the tool, SPL-6248.

SUBTASK 54-51-01-080-004

- (3) Remove the tool, SPL-6248 from the strut.
- (a) Disconnect the lever hoist from the fwd assembly and the spreader bar assembly.
 - (b) Disconnect the lever hoist and the wire rope assembly from the aft beam assembly and the spreader bar assembly.
 - (c) Disconnect the spreader bar assembly from the overhead hoist.
 - (d) Remove the aft beam assembly from the aft bootstrap GSE interfaces.
 - (e) Remove the fwd assembly from the fwd bootstrap GSE interfaces.

———— **END OF TASK** ————

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NACELLE STRUT - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) Nacelle Strut Removal
- (2) Nacelle Strut Installation.

TASK 54-51-01-000-801

2. Nacelle Strut Removal

(Figure 401, Figure 402, Figure 403, Figure 404, and Figure 405)

A. General

- (1) This task gives the instructions to remove the nacelle strut.

B. References

Reference	Title
24-22-00-860-802	Remove Electrical Power (P/B 201)
29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)
36-13-01-000-804	Wing Leading Edge Pneumatic Duct Removal (P/B 401)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805	Support the Strut (P/B 201)
54-51-02-000-801	Aft Upper Spar Fuse Pin Removal (P/B 401)
54-51-03-000-802	Upper Link Pin Removal (P/B 401)
54-51-04-000-801	Diagonal Brace Removal (P/B 401)
54-51-05-000-802	Lower Pin Removal (P/B 401)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)
54-52-04-000-801	Aft Fairing Removal (Engine Removed) (P/B 401)
54-52-09-000-801	Leading Edge Gap Covers Removal (P/B 401)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)
78-31-01-000-801-G00	Thrust Reverser Removal (P/B 401)

C. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1

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Number	Name/Location
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

F. Prepare for the Removal

SUBTASK 54-51-01-040-005

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-01-010-003

- (2) Open these access panels:
(TASK 54-52-03-000-801)

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-01-010-004

- (3) Open these access panels:
(TASK 54-52-09-000-801)

Number	Name/Location
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

SUBTASK 54-51-01-010-005

- (4) Do this task: Thrust Reverser Removal, TASK 78-31-01-000-801-G00.

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SUBTASK 54-51-01-020-002

- (5) Do this task: Power Plant - Removal, TASK 71-00-02-000-801-G00.

G. Strut Systems Disconnection

SUBTASK 54-51-01-040-006

- (1) Do this task to make sure that the pneumatic system is depressurized: Remove Pressure from the Pneumatic System, TASK 36-00-00-860-806.

SUBTASK 54-51-01-000-002

- (2) To remove the ECS duct [1] between the wing and the left strut, do the steps that follow (TASK 36-13-01-000-804):
- (a) Remove the clamp [5] and coupling [6] (Figure 401).
 - (b) Carefully remove the ECS duct [1] and seal [7].

SUBTASK 54-51-01-020-003

- (3) To remove the ECS duct [2] between the wing and the right strut, do the steps that follow (TASK 36-13-01-000-804):
- (a) Remove the clamp [5] and coupling [6] (Figure 402).
 - (b) Carefully remove the ECS duct [2] and seal [7].

SUBTASK 54-51-01-000-003

- (4) To remove the WTAI duct [3] between the wing and the left strut, do the steps that follow (Figure 401):
- (a) Remove the nut [17], washers [15], bushing [16] and bolt [14] from the link.
 - (b) Remove the screw [12] and washer [13] from the clamp [11].
 - (c) Remove the coupling [8] and coupling [9].
 - (d) Carefully remove the WTAI duct [3] and seals [10].

SUBTASK 54-51-01-020-004

- (5) To remove the WTAI duct [4] between the wing and the right strut, do the steps that follow (Figure 402):
- (a) Remove the screw [12] and washer [13] from the clamp [11].
 - (b) Remove the coupling [8] and coupling [9].
 - (c) Carefully remove the WTAI duct [4] and seals [10].

SUBTASK 54-51-01-040-007

- (6) Make sure that electrical power is removed (TASK 24-22-00-860-802).

NOTE: The removal of electrical power is necessary to disconnect the electrical connectors.

SUBTASK 54-51-01-020-005



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.

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(CAUTION PRECEDES)



CAUTION

BE CAREFUL WITH THE POWER FEEDER CABLES. DO NOT BEND OR PUT THE CABLES INTO COILS TOO TIGHTLY. IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE CABLES.

- (7) Disconnect the IDG power feeder cable [45] and the strut wire bundles at the wing forward spar disconnect panel (Figure 403) (TASK 70-00-01-910-803-G00):
- (a) Put a tag on the wire bundles at the Disconnect Panel AW0258L (left strut) or AW0258R (right strut) to identify their positions for installation.

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- (b) Remove the screw [46], nut [47], and washers [48] that attach the bonding jumper [49] to the IDG power feeder cable [45] clip.

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- (c) Disconnect the IDG power feeder cable [45] and wire bundles at the wing forward spar disconnect panel.
- (d) Install the dust caps, STD-7394, on the connectors and the receptacles.
- (e) Attach the IDG power feeder cable [45] and the wire bundle ends to the top of the strut for temporary storage.

SUBTASK 54-51-01-040-008

- (8) Prepare the hydraulic system for strut removal:
- (a) For removal of the left strut (Engine 1), depressurize the system A and B hydraulic reservoirs (TASK 29-09-00-860-802).
 - (b) For removal of the right strut (Engine 2), depressurize the system B hydraulic reservoir (TASK 29-09-00-860-802).

SUBTASK 54-51-01-020-006

- (9) Remove the thrust reverser hydraulic tubes that are on the strut (Figure 404, View A):
- (a) Disconnect the two thrust reverser hydraulic tubes at the "Disconnect Panel".
 - 1) On the left strut, disconnect the TRAS deploy tube [18] and TRAS stow tube [19].
 - 2) On the right strut, disconnect the TRAS deploy tube [35] and TRAS stow tube [36].
 - (b) For the left strut, remove the support clamps attached to the middle of the hydraulic tubes:
 - 1) Remove the screws [21], washers [22], washers [23], clamps [20] and clamp [24] that hold the thrust reverser hydraulic tubes.
 - (c) Disconnect the thrust reverser hydraulic tubes at the forward end.
 - (d) Remove the thrust reverser hydraulic tubes:
 - 1) On the left strut, remove the TRAS deploy tube [18] and TRAS stow tube [19].
 - 2) On the right strut, remove the TRAS deploy tube [35] and TRAS stow tube [36].
 - (e) Keep the thrust reverser hydraulic tubes in storage until installation.

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SUBTASK 54-51-01-680-001



WARNING

BE CAREFUL WHEN YOU DISCONNECT THE FUEL LINE. A SMALL AMOUNT OF FUEL CAN COLLECT IN THE FUEL LINE. MOVE TO A POSITION WHERE FUEL CANNOT GET ON YOU. IF FUEL GETS ON YOU, INJURY CAN OCCUR.

- (10) Disconnect the aft end of the fuel hose from the wing (Figure 404, View B):
- Remove the screws [29], washers [22], washers [23] and clamp [28] that holds the fuel hose to the strut.
 - Disconnect the aft end of the fuel hose that goes into the wing.
 - Temporarily attach the loose end of the fuel hose to the strut.

SUBTASK 54-51-01-000-004

- (11) Remove the screw [25], washers [26] and nut [27] that attach the bonding jumper to the wing.
- NOTE: Keep the end of the bonding jumper clean.

SUBTASK 54-51-01-010-006

- (12) Do this task: Aft Fairing Removal (Engine Removed), TASK 54-52-04-000-801.

SUBTASK 54-51-01-010-007

- (13) Remove the fire extinguishing tube and three hydraulic tubes that go aft through the vapor barrier of the strut (Figure 404 and Figure 405):
- Disconnect the three hydraulic tube connections on the forward side of the vapor barrier as shown (Figure 404).
 - On the left strut, disconnect the forward end of the hydraulic pressure tube [31], hydraulic supply tube [33] and hydraulic case drain tube [34].
 - On the right strut, disconnect the forward end of the hydraulic pressure tube [37], hydraulic supply tube [38] and hydraulic case drain tube [39].
 - Remove the clamp block [30] and clamp block [32] on the forward side of the vapor barrier (Figure 404).
 - At the aft end of the strut, disconnect the four tubes at the connections (Figure 405).

NOTE: These connections are forward of the clamp block that holds all four of the tubes.
 - Disassemble the top half of the clamp block [42], clamp [43], and washer [44] that is adjacent to the side links (Figure 405).

NOTE: This lets you remove the hydraulic supply tube and the hydraulic case drain tube.
 - Remove the hydraulic tubes:
 - On the left strut, remove the hydraulic pressure tube [31], hydraulic supply tube [33] and hydraulic case drain tube [34].
 - On the right strut, remove the hydraulic pressure tube [37], hydraulic supply tube [38] and hydraulic case drain tube [39].
 - Disconnect the fire extinguishing tube [40] or fire extinguishing tube [41].
 - Keep the three hydraulic tubes and the fire extinguishing tube in storage until the installation of the strut.
 - Reassemble the clamp block that is between the lower bolts of the side links.

NOTE: Do this for support of the strut drain tubing and to keep parts.

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H. Nacelle Strut Removal

SUBTASK 54-51-01-000-005

- (1) Do this task: Diagonal Brace Removal, TASK 54-51-04-000-801.

SUBTASK 54-51-01-000-006

- (2) To remove the lower bolt from the two side link assemblies, do this task: Lower Pin Removal, TASK 54-51-05-000-802.

NOTE: It is not necessary to remove the side links from the under wing fitting.

- (a) Use tape to temporarily attach the lower end of the side links to the bottom of the wing.

SUBTASK 54-51-01-480-004

- (3) Do this task: Support the Strut, TASK 54-51-01-580-805.

SUBTASK 54-51-01-000-007

- (4) To remove the aft upper link pin, do this task: Upper Link Pin Removal, TASK 54-51-03-000-802.

- (a) Temporarily tie the upper link to the strut.

SUBTASK 54-51-01-000-008

- (5) To remove the two aft upper spar fuse pins, do this task: Aft Upper Spar Fuse Pin Removal, TASK 54-51-02-000-801.

SUBTASK 54-51-01-580-007

- (6) Carefully lower the strut with the strut removal sling.

— END OF TASK —

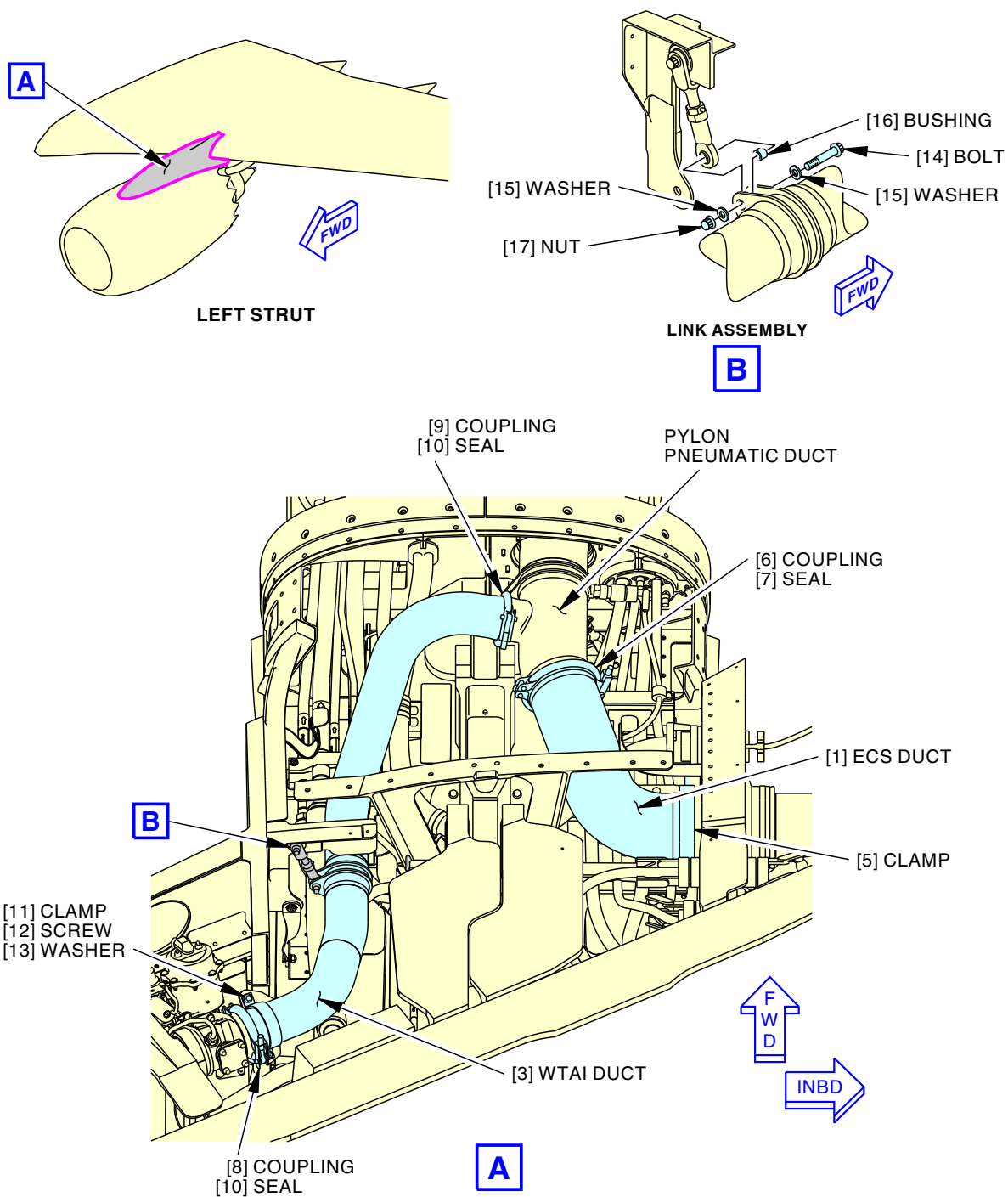
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2416230 S00061540088_V1

Left Strut Duct Installation
Figure 401/54-51-01-990-801

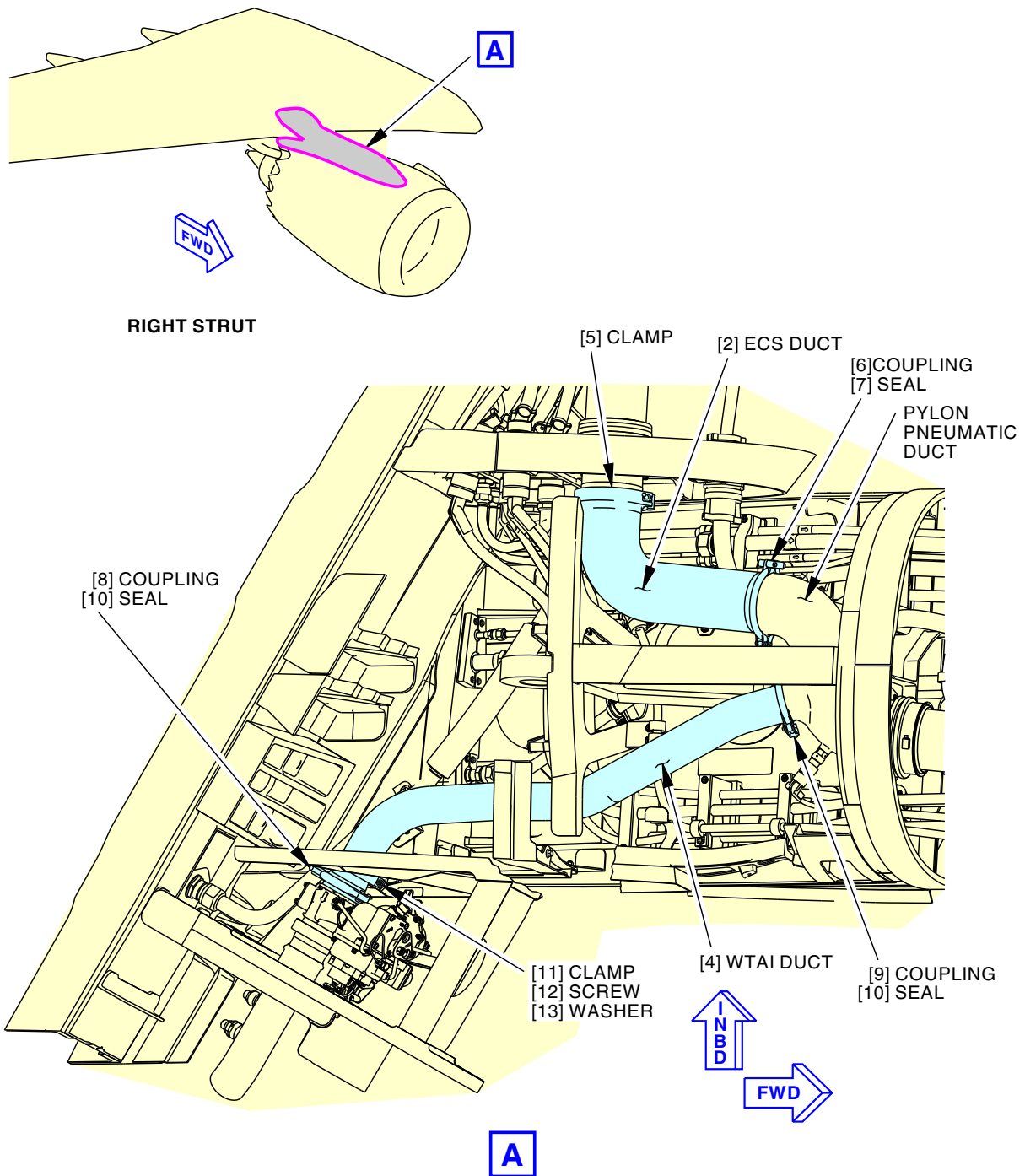
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2457977 S0000571929_V1

Right Strut Duct Installation
Figure 402/54-51-01-990-805

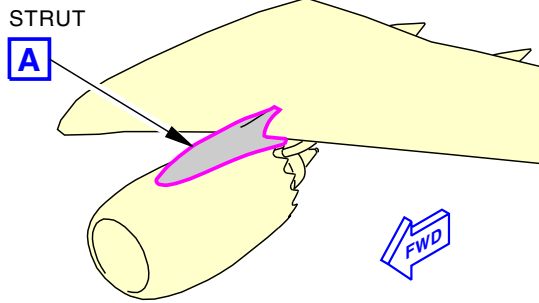
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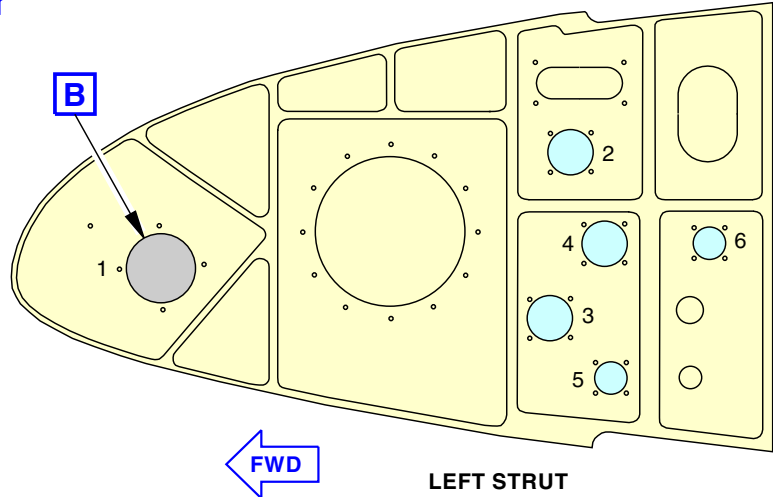
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POSITION	STRUT (LEFT)	
	DISC	W/B
1	D08094P	286A1162
2	D30042	286A1172
3	D30084	286A1168
4	D30016	286A1164
5	D30064	286A1166
6	D30052	286A1170

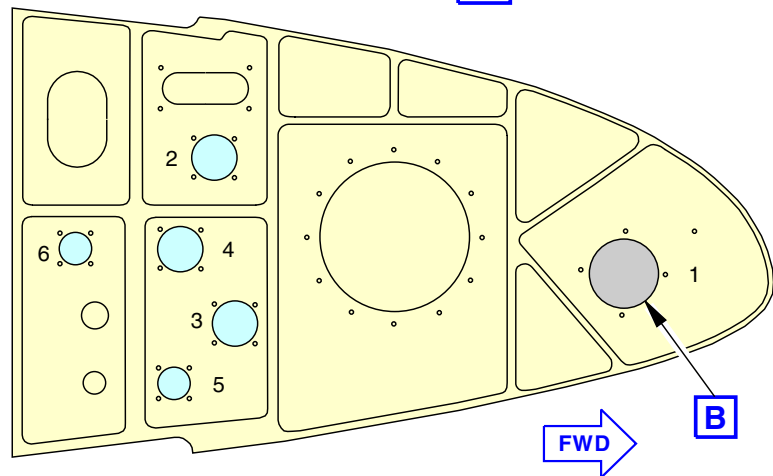
DISCONNECT PANEL AW0258L



LEFT STRUT

POSITION	STRUT (RIGHT)	
	DISC	W/B
1	D08194P	286A1262
2	D30142	286A1272
3	D30184	286A1268
4	D30116	286A1264
5	D30164	286A1266
6	D30152	286A1270

DISCONNECT PANEL AW0258R



RIGHT STRUT

2416231 S00061540089_V2

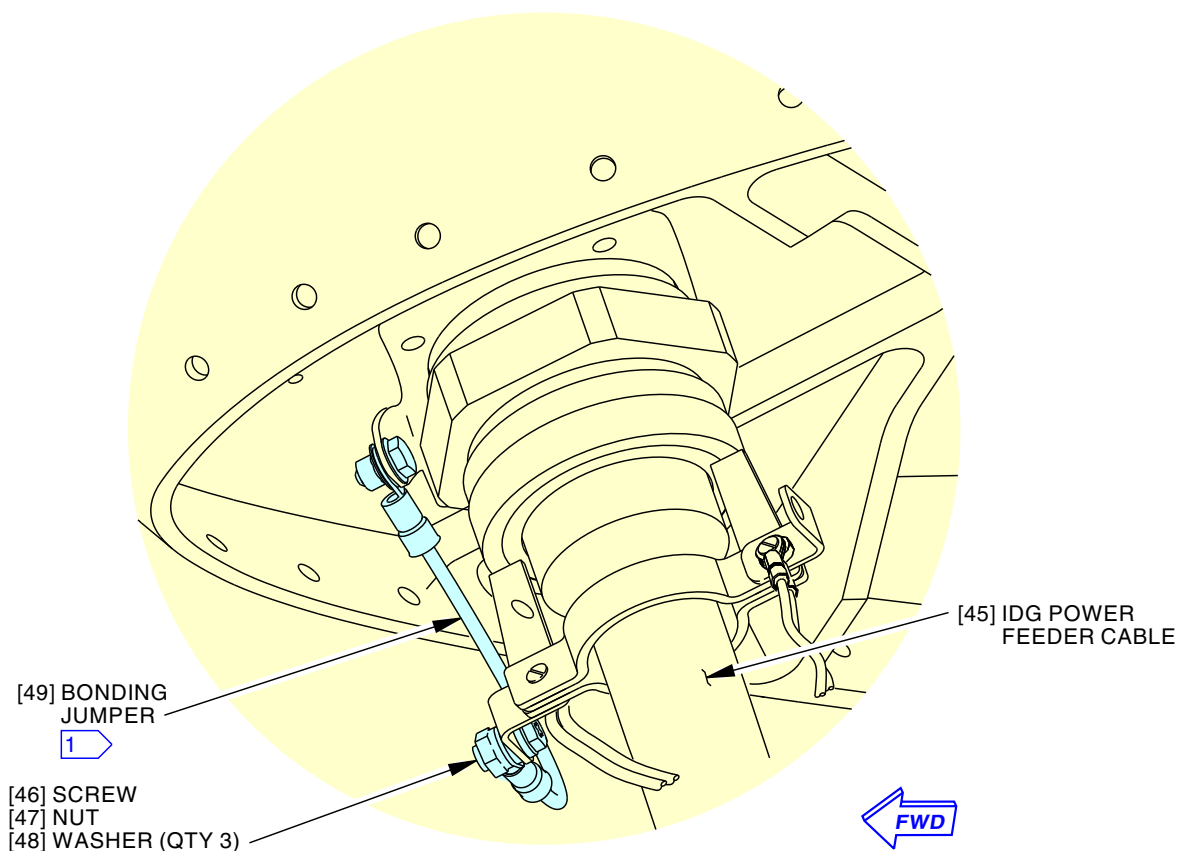
Strut Electrical Disconnects
Figure 403/54-51-01-990-802 (Sheet 1 of 2)

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(LEFT STRUT IS SHOWN, RIGHT STRUT IS EQUIVALENT)

B

1 IF INSTALLED

2909251 S0000697180_V1

Strut Electrical Disconnects
Figure 403/54-51-01-990-802 (Sheet 2 of 2)

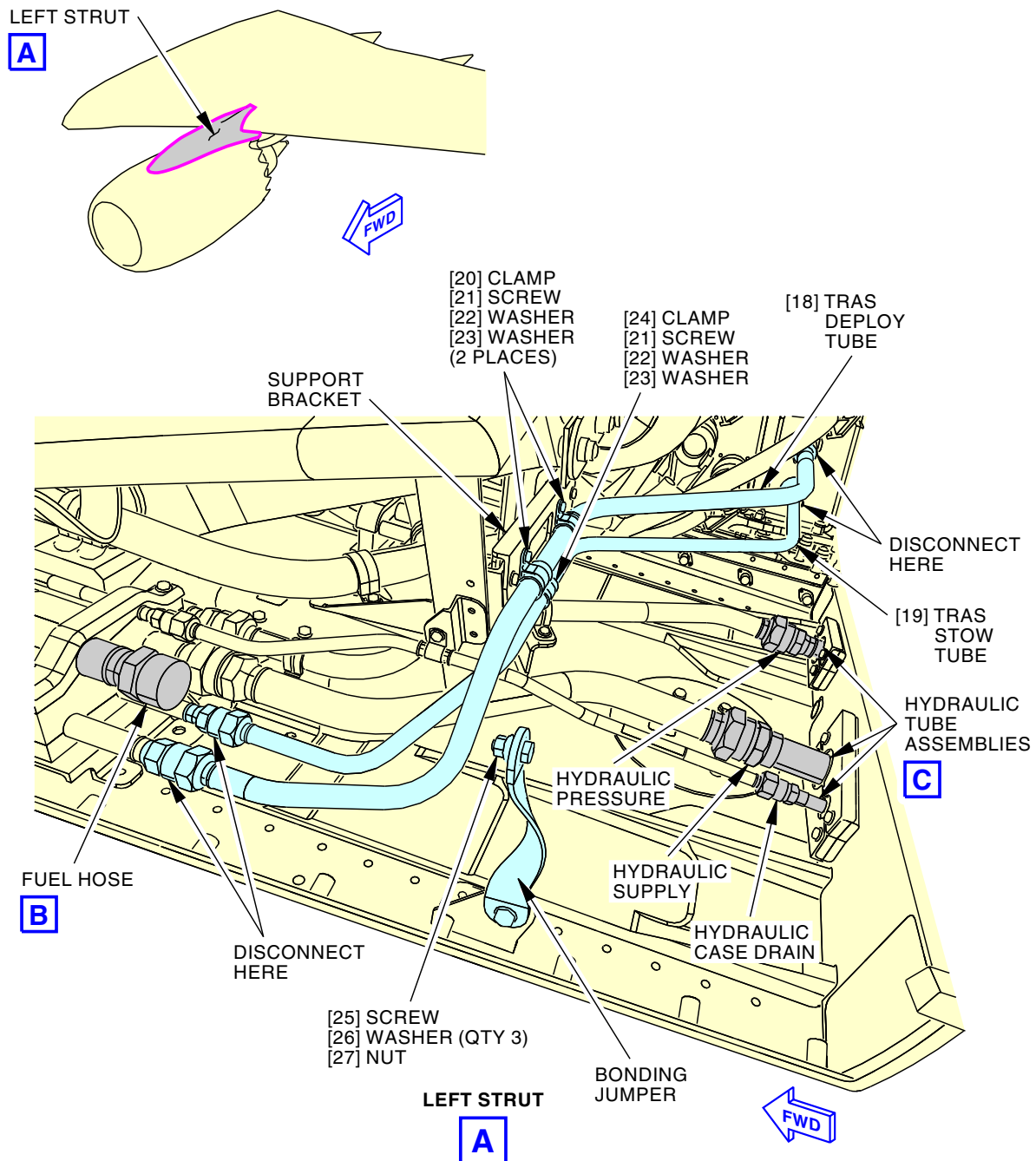
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2416232 S00061540090_V1

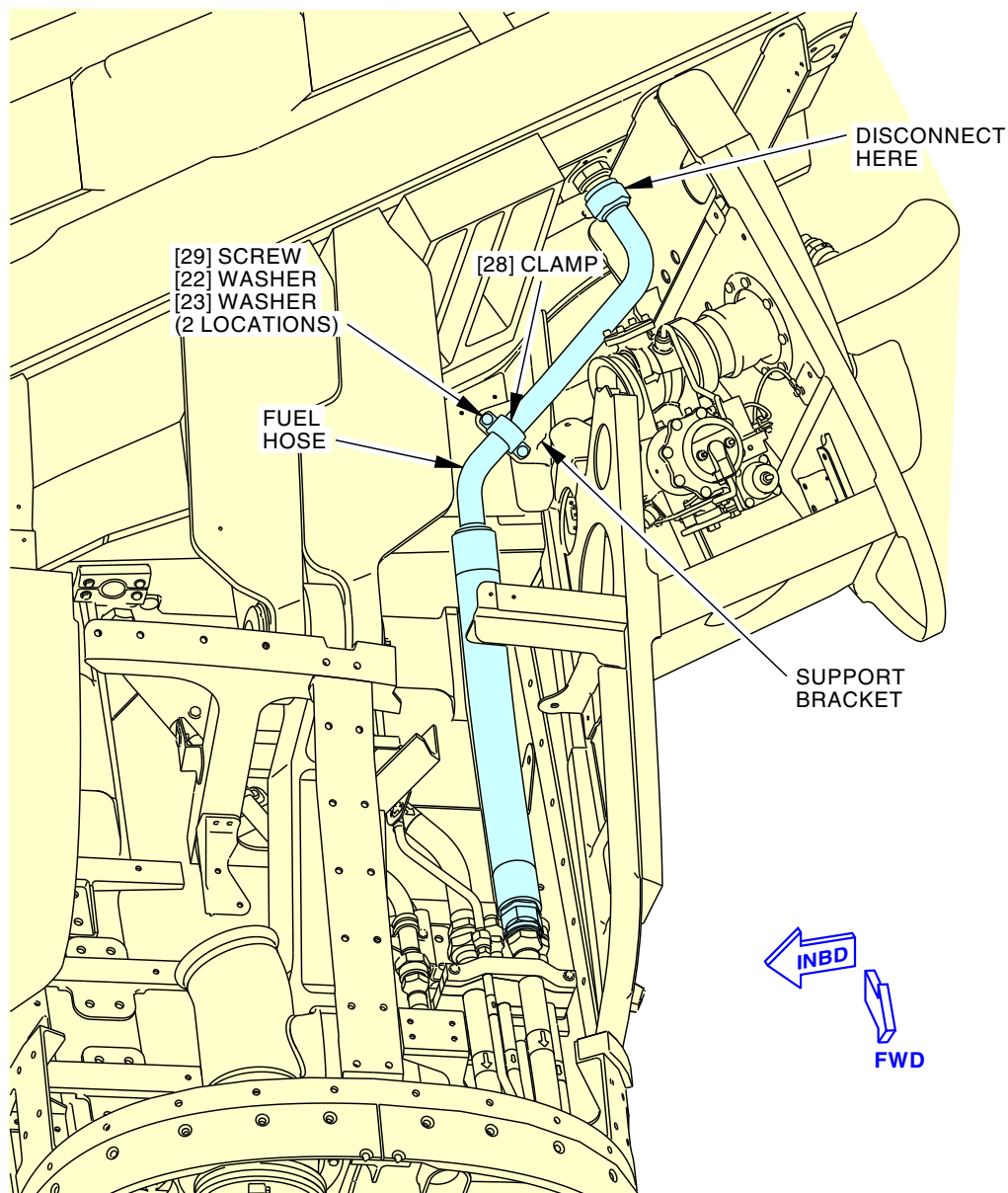
Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 1 of 6)

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FUEL HOSE
(LEFT STRUT)

B

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Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 2 of 6)

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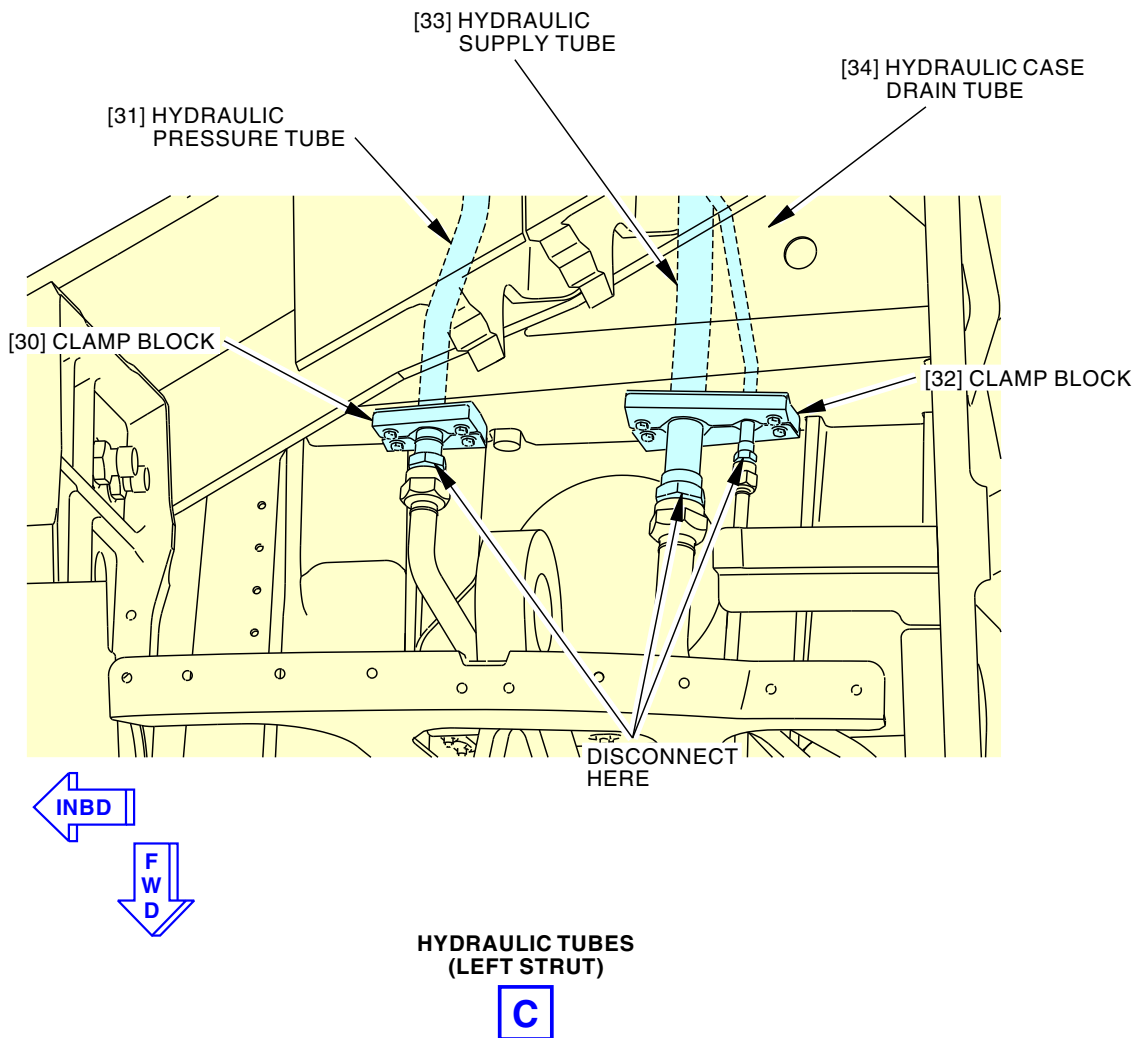
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2416234 S00061540092_V1

Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 3 of 6)

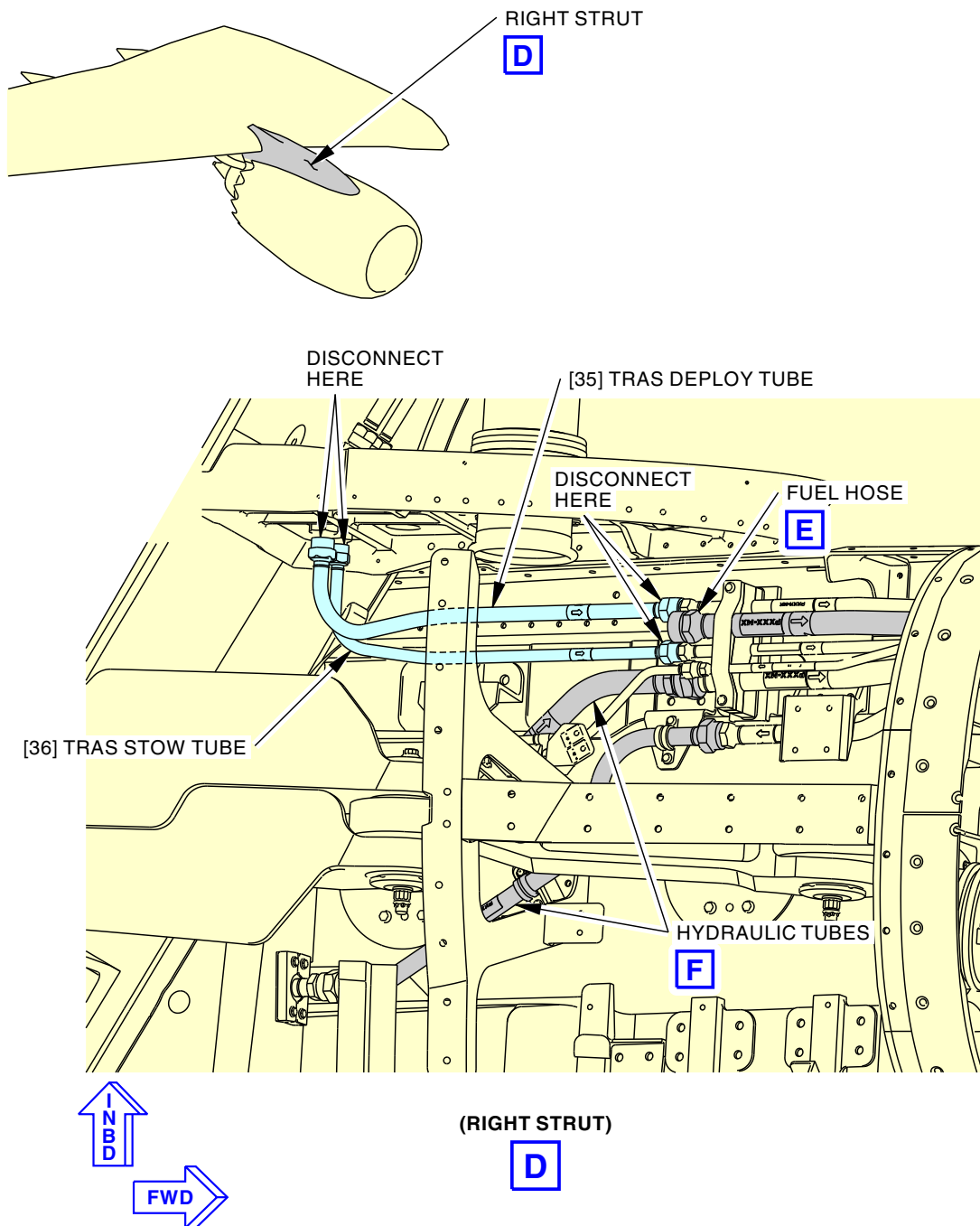
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2416235 S00061540093_V1

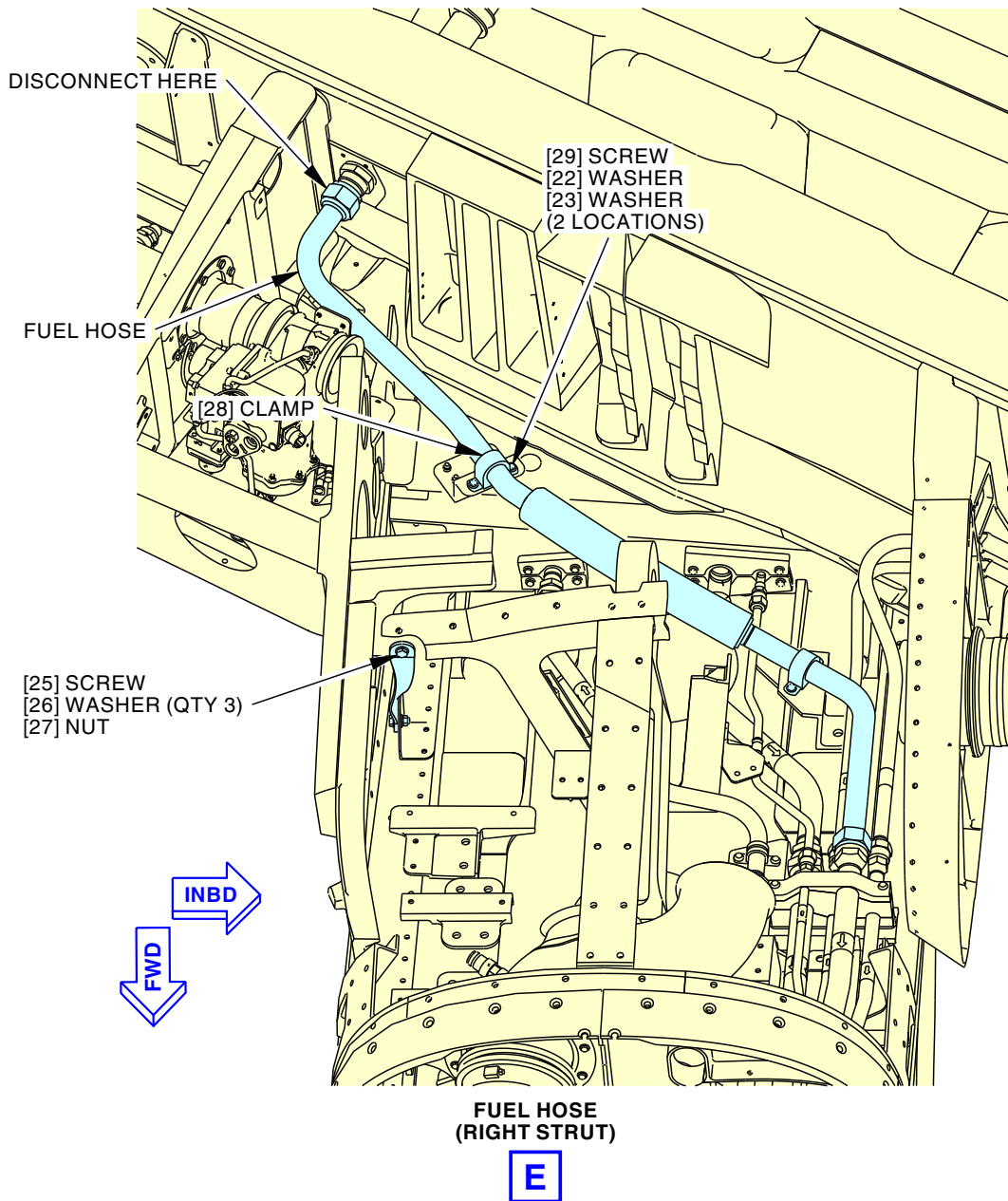
Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 4 of 6)

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2416236 S00061540094_V1

Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 5 of 6)

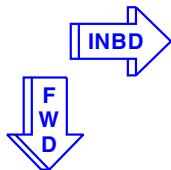
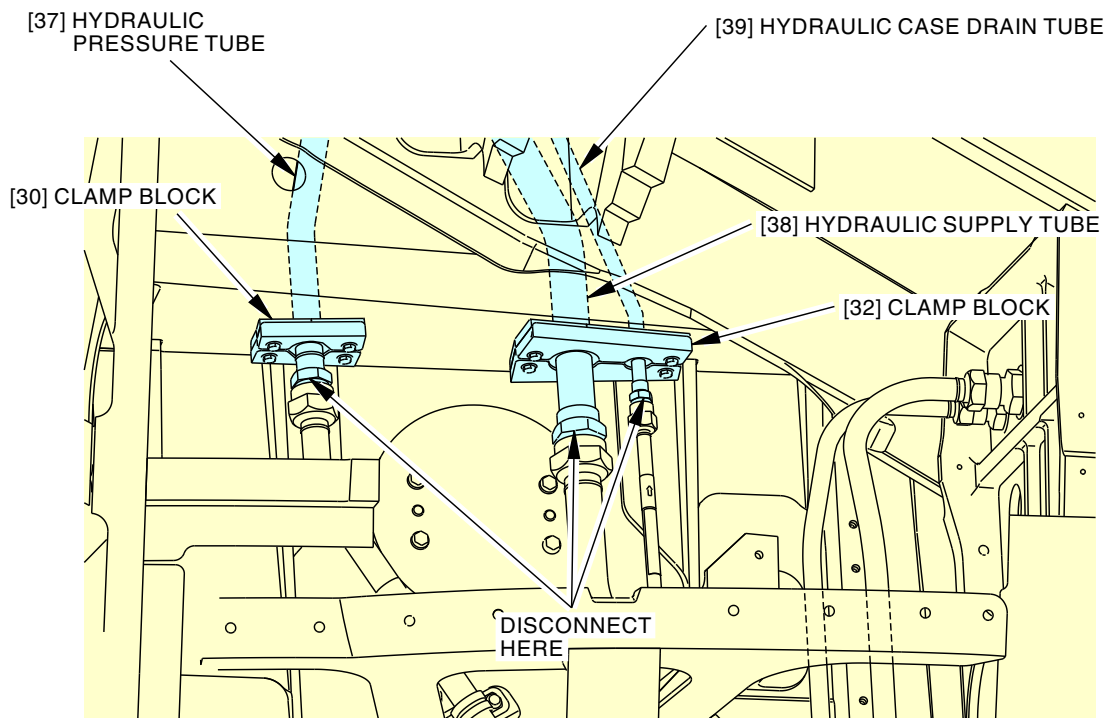
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HYDRAULIC TUBES
(RIGHT STRUT)

F

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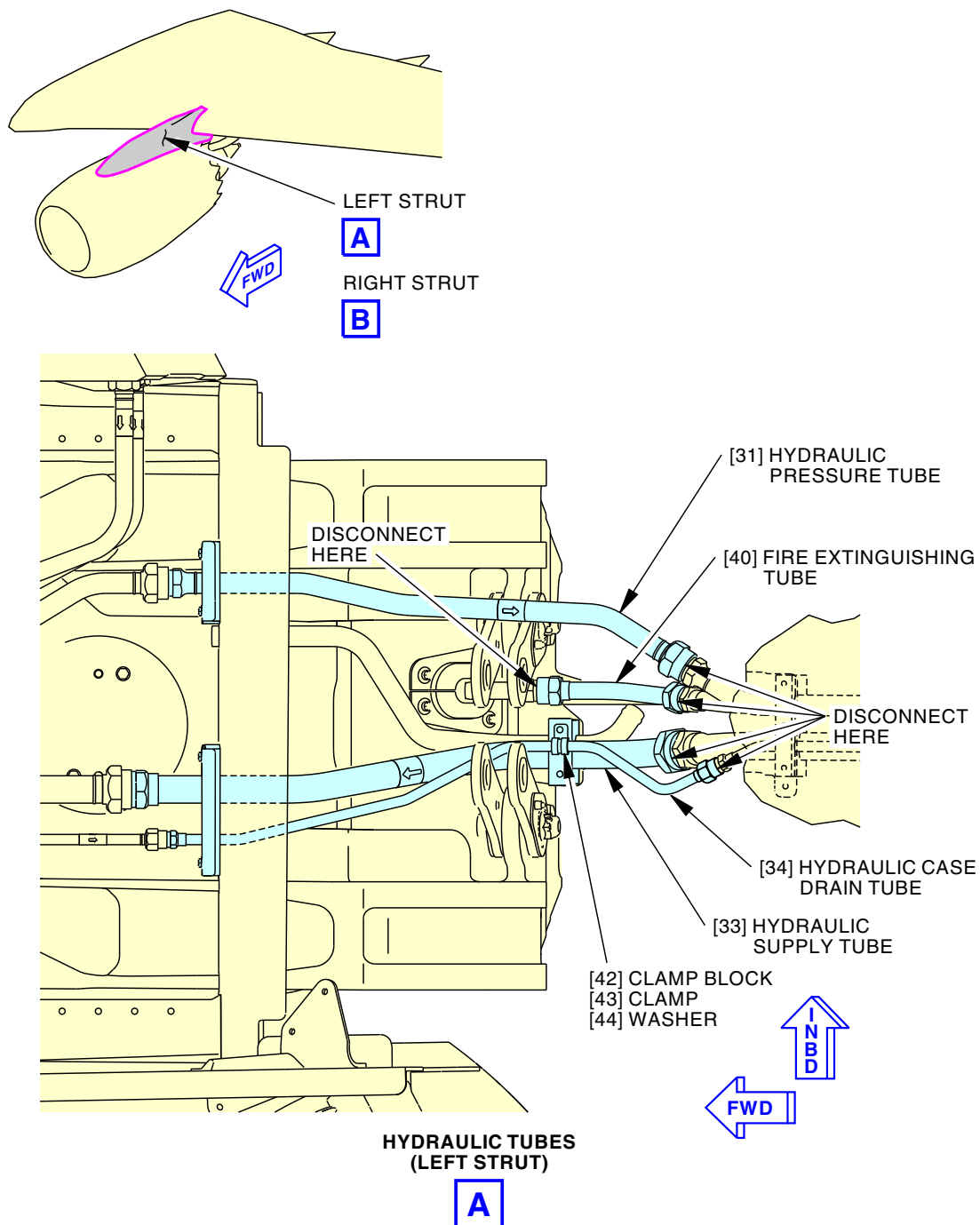
Strut Hydraulic and Fire Extinguishing Installation
Figure 404/54-51-01-990-803 (Sheet 6 of 6)

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2416238 S00061540096_V1

Aft Fairing Hydraulic and Fire Extinguishing Installation
Figure 405/54-51-01-990-804 (Sheet 1 of 2)

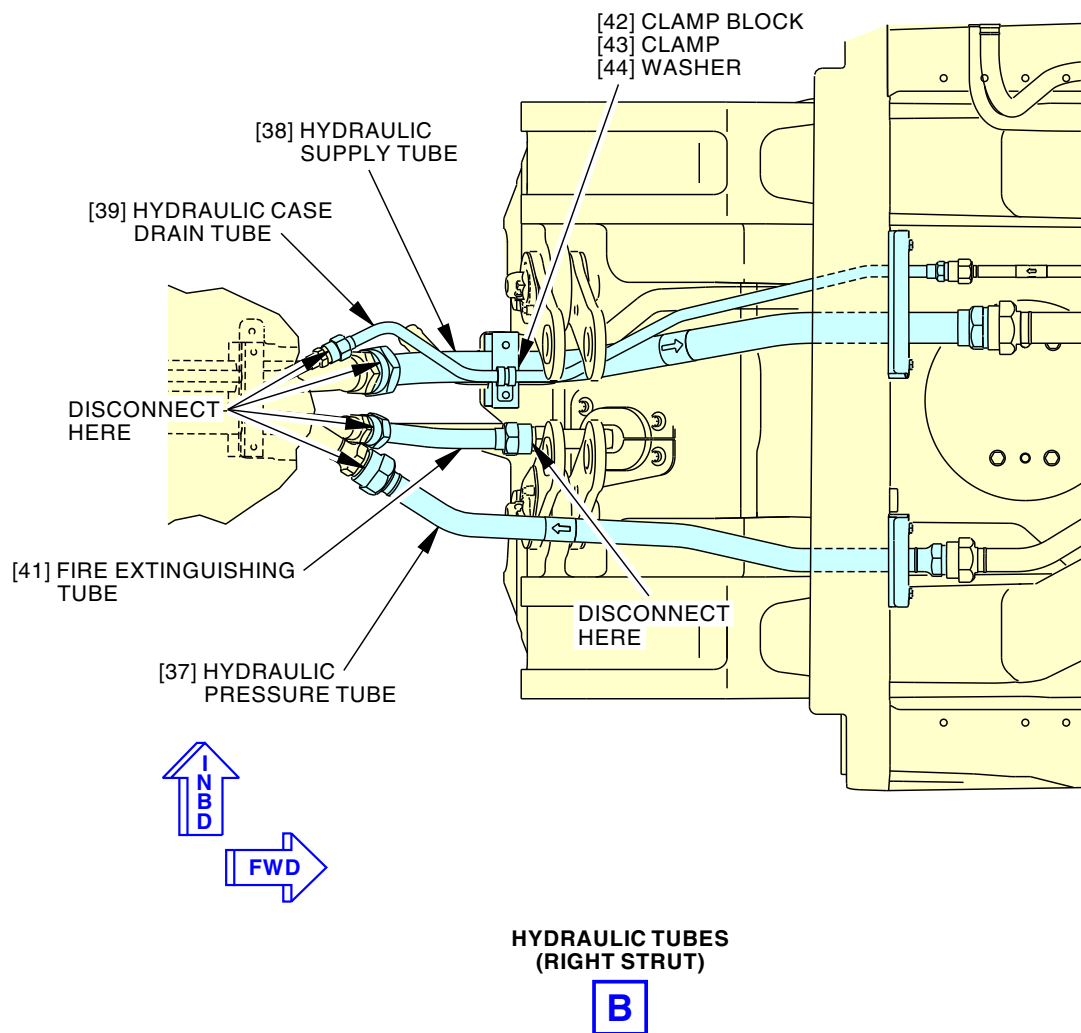
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2416239 S00061540097_V1

Aft Fairing Hydraulic and Fire Extinguishing Installation
Figure 405/54-51-01-990-804 (Sheet 2 of 2)

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TASK 54-51-01-400-801

3. Nacelle Strut Installation

(Figure 401, Figure 402, Figure 403, Figure 404, and Figure 405)

A. General

- (1) This task gives the instructions to install the nacelle strut.

B. References

Reference	Title
20-10-51-400-802	Flareless Fittings in Pressurized Areas Installation (P/B 401)
20-40-11-760-802	Airplane Electrical Resistance to Ground Measurement (P/B 201)
24-11-00-700-803	Number 1 IDG Operational Test (P/B 501)
24-11-00-700-804	Number 2 IDG Operational Test (P/B 501)
24-22-00-860-802	Remove Electrical Power (P/B 201)
26-11-00-730-802	Engine Fire Detection Circuit - System Test (P/B 501)
26-21-00-720-801	Engine Fire Extinguishing Discharge Line Flow Test (P/B 501)
26-21-00-730-803	Engine Fire Extinguishing Discharge Line Pressure Test (P/B 501)
29-11-00-700-801	Operational Test of the Hydraulic Systems A and B (P/B 501)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
30-21-00-710-801	Engine Anti-Ice System Operational Test (P/B 501)
36-13-01-400-802	Wing Leading Edge Pneumatic Duct Installation (P/B 401)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-01-580-805	Support the Strut (P/B 201)
54-51-01-580-806	Remove Support from the Strut (P/B 201)
54-51-02-400-801	Aft Upper Spar Fuse Pin Installation (P/B 401)
54-51-03-400-802	Upper Link Pin Installation (P/B 401)
54-51-04-400-801	Diagonal Brace Installation (P/B 401)
54-51-05-400-803	Lower Pin Installation (P/B 401)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)
54-52-04-400-801	Aft Fairing Installation (Engine Removed) (P/B 401)
54-52-09-000-801	Leading Edge Gap Covers Removal (P/B 401)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
71-00-00-710-806-G00	Test No. 17 - Electronic Engine Control (EEC) System Test (P/B 501)
71-00-00-790-804-G00	Test No. 4 - Idle Leak Test (P/B 501)
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)
71-11-04-400-801-G00	Fan Cowl Panels Installation (P/B 401)
78-31-01-400-801-G00	Thrust Reverser Installation (P/B 401)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES
SWPM 20-60-01	CLEANING OF ELECTRICAL CONNECTORS
SWPM 20-60-06	INSTALLATION OF ELECTRICAL CIRCULAR CONNECTORS

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C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
SPL-6248	Tool - Removal/Installation, Engine Strut Part #: C54016-1 Supplier: 81205
STD-7394	Cap - Dust, Electrical Connector

D. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A50396	Sealant - Dapco 2200 Primerless Silicone Firewall Sealant	BMS5-63 Type II Class B-1/2
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00862	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
G50262	Wiper - Cleaning	BMS15-5
G50398	Pad - Abrasive, Scotch-Brite Type S, Abrasive Pad	
G50492	Pad - 3M Scotch Brite 7448 Ultra Fine Pad	MIL-A-9962A Type III Grade AAA

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
7	Seal	36-13-01-10-030	SIA ALL
		36-13-01-11-030	SIA ALL
10	Seal	36-13-01-10-130	SIA ALL
		36-13-01-11-070	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1

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Number	Name/Location
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

H. Nacelle Strut Installation

SUBTASK 54-51-01-210-003

- (1) Make sure that the upper link is installed:
 - (a) Make sure that the upper link forward fuse pin is installed.
 - (b) Make sure that the upper link is temporarily tied to the strut.

SUBTASK 54-51-01-210-004

- (2) If the side links are installed, make sure that they are temporarily attached to the bottom of the wing with tape.

SUBTASK 54-51-01-500-001

- (3) Carefully, lift the strut to the wing with the strut installation sling, tool, SPL-6248 (TASK 54-51-01-580-805).

SUBTASK 54-51-01-400-002

- (4) Do this task: Aft Upper Spar Fuse Pin Installation, TASK 54-51-02-400-801.

SUBTASK 54-51-01-400-003

- (5) Do this task: Upper Link Pin Installation, TASK 54-51-03-400-802.

SUBTASK 54-51-01-080-005

- (6) Remove the strut installation sling, tool, SPL-6248 (TASK 54-51-01-580-806).

SUBTASK 54-51-01-400-004

- (7) To install the side link lower pins, do this task: Lower Pin Installation, TASK 54-51-05-400-803.

SUBTASK 54-51-01-400-005

- (8) Do this task: Diagonal Brace Installation, TASK 54-51-04-400-801.

I. Strut Systems Connection

SUBTASK 54-51-01-360-001

- (1) Make sure that all hydraulic connections are secure and there are no leaks.
 - (a) If leaks are found, do this task: Flareless Fittings in Pressurized Areas Installation, TASK 20-10-51-400-802.

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SUBTASK 54-51-01-400-006

- (2) Install the strut bonding jumper to the wing (SWPM 20-20-00).
 - (a) Do these steps to prepare the wing stub fitting for installation:
 - 1) Clean the fasteners and fay seal surfaces of the wing stub fitting and the terminal (SWPM 20-20-00):
 - a) Use cleaning Procedure 1 to manual clean the wing stub fitting and the terminal.
 - b) Prepare approximately 0.6 in. (15.2 mm) diameter area of fay surface of the wing stub fitting and the jumper assembly.
 - c) Use a very fine Scotch-Brite Type S pad, G50398, or an ultra-fine Scotch-Brite 7448 pad, G50492.
 - d) Twist pad with circular movement while you push with your thumb.
 - e) Clean the wing stub fitting and terminal with solvent until there are no more signs of visible contamination.
 - (b) Apply Dapco 2200 firewall sealant, A50396, to the area of the bonding contact of the wing stub fitting, the terminal, threads of the screw [25], and the faces of the washers [26].
 - (c) Install the screw [25], washers [26], and nut [27] which attach the bonding jumper terminal to the wing stub fitting (Figure 404).
 - 1) Install the jumper in the orientation as shown.
 - 2) Make sure that the sealant is continuous around each component and fastener.
 - (d) Smooth out the extruded sealant with a clean wiper, G50262.
 - (e) Measure the resistance between the wing stub fitting and the jumper with an intrinsically safe approved bonding meter, COM-1550 (TASK 20-40-11-760-802).
 - 1) Make sure that the resistance is 0.0007 ohm (0.7 milliohm) or less.
 - (f) Refinish abraded surfaces that you can see.
 - 1) Apply Bonderite M-CR 600 Aero coating, C00862 (TASK 51-21-41-370-802).
 - 2) Apply one coat of primer, C00259.

SUBTASK 54-51-01-010-008

- (3) Install the fire extinguishing tube and the three hydraulic tubes that go aft through the vapor barrier of the strut (Figure 404 and Figure 405):
 - (a) Connect the fire extinguishing tube [40] or the fire extinguishing tube [41]:
 - 1) Tighten the connections to 360 $\pm$ 18 in-lb (41 $\pm$ 2 N·m).
 - (b) Disassemble the top half of the clamp block [42], clamp [43], and washer [44] that is between the lower bolts of the side links (Figure 405).

NOTE: This clamp block will be without the hydraulic supply tube and the hydraulic case drain tube.
 - (c) Assemble the clamp block [30], clamp block [32], clamp block [42], clamp [43], and washer [44] with the three hydraulic tubes.
 - 1) On the left strut, install the hydraulic pressure tube [31], hydraulic supply tube [33], and hydraulic case drain tube [34].
 - 2) On the right strut, install the hydraulic pressure tube [37], hydraulic supply tube [38], and hydraulic case drain tube [39].
 - 3) Tighten the bolts to 50 in-lb (6 N·m) - 75 in-lb (8 N·m).

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- (d) Connect the aft end of the hydraulic tubes on the underside of the wing:

NOTE: These connections are forward of the clamp block that holds all four of the tubes.

- 1) Connect the hydraulic supply tube [33] or hydraulic supply tube [38].
 - a) Tighten the 1 in. (25 mm) diameter connection to 750 $\pm$ 38 in-lb (85 $\pm$ 4 N·m).
- 2) Connect the hydraulic pressure tube [31] or hydraulic pressure tube [37].
 - a) Tighten the 0.75 in. (19.05 mm) diameter connection to 900 $\pm$ 45 in-lb (102 $\pm$ 5 N·m).
- 3) Connect the hydraulic case drain tube [34] or hydraulic case drain tube [39].
 - a) Tighten the 0.375 in. (9.525 mm) diameter connection to 170 $\pm$ 9 in-lb (19 $\pm$ 1 N·m).

- (e) Connect the three hydraulic tube connections on the forward side of the vapor barrier (Figure 404).

NOTE: These three connections are aft of where the thrust reverser stow/deploy hydraulic tubing are installed.

- 1) Connect the hydraulic supply tube [33] or hydraulic supply tube [38].
 - a) Tighten the 1 in. (25 mm) diameter connection to 750 $\pm$ 38 in-lb (85 $\pm$ 4 N·m).
 - b) Loosen the connection to release the torque.
 - c) Again, tighten the connection to 750 $\pm$ 38 in-lb (85 $\pm$ 4 N·m).
 - d) Apply a yellow torque stripe on the connection.
 - 2) Connect the hydraulic pressure tube [31] or hydraulic pressure tube [37].
 - a) Tighten the 0.75 in. (19.05 mm) diameter connection to 900 $\pm$ 45 in-lb (102 $\pm$ 5 N·m).
 - b) Loosen the connection to release the torque.
 - c) Again, tighten the connection to 900 $\pm$ 45 in-lb (102 $\pm$ 5 N·m).
 - d) Apply a yellow torque stripe on the connection.
 - 3) Connect the hydraulic case drain tube [34] or hydraulic case drain tube [39].
 - a) Tighten the 0.375 in. (9.525 mm) diameter connection to 170 $\pm$ 9 in-lb (19 $\pm$ 1 N·m).
 - b) Loosen the connection to release the torque.
 - c) Again, tighten the connection to 170 $\pm$ 9 in-lb (19 $\pm$ 1 N·m).
 - d) Apply a yellow torque stripe on the connection.
- (f) Install the clamp block [30] and clamp block [32] on the forward side of the vapor barrier.
- 1) Apply sealant, A00160, between the tube and the clamp block chamfer area.
 - 2) After inserting the tubes, tighten the bolts on the clamps.

SUBTASK 54-51-01-420-001

- (4) Do this task: Aft Fairing Installation (Engine Removed), TASK 54-52-04-400-801.

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SUBTASK 54-51-01-680-002



WARNING

BE CAREFUL WHEN YOU RECONNECT THE FUEL LINE. A SMALL AMOUNT OF FUEL CAN COLLECT IN THE FUEL LINE. MOVE TO A POSITION WHERE FUEL CANNOT GET ON YOU. IF FUEL GETS ON YOU, INJURY CAN OCCUR.

- (5) Do the steps that follow to reconnect the fuel hose (Figure 404):
- Put the fuel hose into position.
 - Loosely install the clamp [28], screws [29], washers [22], and washers [23] that hold the middle of the fuel hose to the support bracket.



CAUTION

MAKE SURE TO TIGHTEN THE AFT END OF THE FUEL LINE TO 750±38 IN-LB (85±4 NM). DAMAGE TO THE EQUIPMENT MAY OCCUR THROUGH A FUEL LEAK.

- Tighten the aft end connection of the fuel hose to 750 ±38 in-lb (85 ±4 N·m).
- Loosen the torque on the connection to relieve tension in the hose.
- Again, tighten the aft end connection of the fuel hose to 750 ±38 in-lb (85 ±4 N·m).
- Tighten the screw [29] on the clamp.

SUBTASK 54-51-01-420-002

- (6) Install the thrust reverser hydraulic tubing (Figure 404):
- Connect the TRAS stow tube [19] or TRAS stow tube [36] at the "Disconnect Panel".
 - Tighten the aft end connection of the thrust reverser hydraulic stow tube to 500 ±25 in-lb (56 ±3 N·m).
 - Loosen the connection to release the torque.
 - Again, tighten the connection to 500 ±25 in-lb (56 ±3 N·m).
 - Apply a yellow torque stripe on the connection.
 - Connect the TRAS deploy tube [18] or TRAS deploy tube [35] at the "Disconnect Panel".
 - Tighten the aft end connection of the thrust reverser hydraulic deploy tube to 700 ±35 in-lb (79 ±4 N·m).
 - Loosen the connection to release the torque.
 - Again, tighten the connection to 700 ±35 in-lb (79 ±4 N·m).
 - Apply a yellow torque stripe on the connection.
 - Connect the TRAS stow tube [19] or TRAS stow tube [36] at the other end of the thrust reverser stow tube near the forward upper link pin fitting on the strut.
 - Tighten the forward end connection of the thrust reverser hydraulic stow tube to 500 ±25 in-lb (56 ±3 N·m).
 - Loosen the connection to release the torque.
 - Again, tighten the connection to 500 ±25 in-lb (56 ±3 N·m).
 - Apply a yellow torque stripe on the connection.
 - Connect the TRAS deploy tube [18] or TRAS deploy tube [35] at the other end of the thrust reverser deploy tube near the forward upper link pin fitting on the strut.
 - Tighten the forward end connection of the thrust reverser hydraulic deploy tube to 700 ±35 in-lb (79 ±4 N·m).

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- 2) Loosen the connection to release the torque.
 - 3) Again, tighten the connection to 700 ±35 in-lb (79 ±4 N·m).
 - 4) Apply a yellow torque stripe on the connection.
- (e) On the left strut, install the clamps [20] that hold the TRAS deploy tube [18].
- 1) Put the clamps [20] over the TRAS deploy tube [18].
 - 2) Install the screws [21], washers [22], and washers [23].
- (f) On the left strut, install the clamp [24] that hold the TRAS stow tube [19].
- 1) Put the clamp [24] over the TRAS stow tube [19].
 - 2) Install the screw [21], washers [22], and washers [23].

SUBTASK 54-51-01-040-009

- (7) Make sure that electrical power is removed (TASK 24-22-00-860-802).

NOTE: The removal of electrical power is necessary to connect the electrical connectors.

SUBTASK 54-51-01-420-003



BE CAREFUL WITH THE POWER FEEDER CABLES. DO NOT BEND OR PUT THE CABLES INTO COILS TOO TIGHTLY. IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE CABLES.

- (8) Connect the IDG power feeder cable [45] and the strut wire bundles at the wing forward spar disconnect panel (Figure 403) (TASK 70-00-01-910-803-G00):
- (a) Remove the dust caps, STD-7394, from the electrical connectors.



MAKE SURE THAT THE ELECTRICAL CONNECTORS AND RECEPTACLES ARE CLEAN AND CLEAR OF UNWANTED MATERIALS BEFORE YOU DISCONNECT, OR CONNECT THEM. CONTAMINATION OF THE ELECTRICAL CONNECTORS AND RECEPTACLES CAN CAUSE DAMAGE TO EQUIPMENT.

- (b) Make sure that all of the electrical connectors are clean.
- 1) Clean the electrical connectors if it is necessary (SWPM 20-60-01).
- (c) Install the connectors in the AW0258L (left) or AW0258R (right) wing forward spar disconnect panel (SWPM 20-60-06).

SIA 011-999; SIA 001-010 POST SB 737-24-1233

- (d) Do these steps to connect the bonding jumper [49] to the IDG power feeder cable [45] clip:
- 1) Use the cleaning Procedure 1 to manually clean the bonding jumper [49] terminal and the IDG power feeder cable [45] clip (SWPM 20-20-00).
 - 2) Use the cleaning Procedure 5 to clean the fasteners (SWPM 20-20-00).
 - 3) Use the sealant, A00160 to apply a faying surface seal between the bonding jumper [49] terminal and the IDG power feeder cable [45] clip.
 - 4) Install the screw [46], washers [48], and nut [47] that attach the bonding jumper [49] to the IDG power feeder cable [45] clip.

NOTE: Use the clip that is near to the strut bracket.

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SIA 011-999; SIA 001-010 POST SB 737-24-1233 (Continued)

- 5) Use a intrinsically safe approved bonding meter, COM-1550 to make sure that the bonding resistance between the IDG power feeder cable [45] clip and the strut bracket is 0.0010 ohm or less.

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SUBTASK 54-51-01-400-007

- (9) To install the WTAI duct [3] between the left strut and the wing, do the steps that follow (Figure 401):
 - (a) Examine the gaskets and sealing surfaces of the duct.
 - 1) Make sure that the gaskets and sealing surfaces do not have scratches, cuts, pits, and foreign material.
 - (b) Examine the seals [10].
 - 1) Make sure that the seals [10] does not have cracks, dents, or other damage.
 - 2) Replace each seal [10] if it is damaged.
 - (c) Put the WTAI duct [3] with the seals [10] into position.
 - (d) Install the coupling [8] and coupling [9].
 - 1) Carefully align the coupling [8] and coupling [9] so that alignment pins fall in the gap between the two coupling halves.

NOTE: This is to align the duct correctly.
 - 2) Tighten the coupling [8] and coupling [9] to the torque range specified on the part.
 - 3) Lightly tap the outer periphery of the coupling [8] and coupling [9] with a rubber mallet.
 - 4) Tighten the coupling [8] and coupling [9] again to the torque range specified on the part.
 - (e) Install the WTAI duct [3] to the link assembly.
 - 1) Install the bolt [14], washers [15], bushing [16], and nut [17] to the duct and the link assembly.

SUBTASK 54-51-01-420-004

- (10) To install the WTAI duct [4] between the right strut and the wing, do the steps that follow (Figure 402):
 - (a) Examine the gaskets and sealing surfaces of the duct.
 - 1) Make sure that the gaskets and sealing surfaces do not have scratches, cuts, pits, and foreign material.
 - (b) Examine the seals [10].
 - 1) Make sure that the seals [10] does not have cracks, dents, or other damage.
 - 2) Replace each seal [10] if it is damaged.
 - (c) Put the WTAI duct [4] with the seals [10] into position.
 - (d) Install the coupling [8] and coupling [9].
 - 1) Carefully align the coupling [8] and coupling [9] so that alignment pins fall in the gap between the two coupling halves.

NOTE: This is to align the duct correctly.
 - 2) Tighten the coupling [8] and coupling [9] to the torque range specified on the part.

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- 3) Lightly tap the outer periphery of the coupling [8] and coupling [9] with a rubber mallet.
- 4) Tighten the coupling [8] and coupling [9] again to the torque range specified on the part.
- (e) Install the screw [12] and the washer [13] on the clamp [11].

SUBTASK 54-51-01-400-008

- (11) Install the ECS duct [1] between the left strut and the wing (TASK 36-13-01-400-802):
 - (a) Examine the gaskets and sealing surfaces of the duct.
 - 1) Make sure that the gaskets and sealing surfaces do not have scratches, cuts, pits, and foreign material.
 - (b) Examine the seal [7] (Figure 401).
 - 1) Make sure that the seal [7] does not have cracks, dents, or other damage.
 - 2) Replace the seal [7] if it is damaged.
 - (c) Put the ECS duct [1] with the seal [7] into position.
 - (d) Install the coupling [6].
 - 1) Tighten the coupling [6] to the torque range specified on the part.
 - 2) Lightly tap the outer periphery of the coupling [6] with a rubber mallet.
 - 3) Tighten the coupling [6] again to the torque range specified on the part.
 - (e) Tighten the trunnion nut of the clamp [5] to 50 in-lb (6 N·m).

NOTE: This coupling is near the "Disconnect Panel".
 - (f) Make sure that the clamp [5] is aligned so that a minimum clearance of 0.50 in. (12.7 mm) is maintained after installation of the bonding jumper for the overwing fairing.

SUBTASK 54-51-01-420-005

- (12) Install the ECS duct [2] between the right strut and the wing (TASK 36-13-01-400-802):
 - (a) Examine the gaskets and sealing surfaces of the duct.
 - 1) Make sure that the gaskets and sealing surfaces do not have scratches, cuts, pits, and foreign material.
 - (b) Examine the seal [7] (Figure 402).
 - 1) Make sure that the seal [7] does not have cracks, dents, or other damage.
 - 2) Replace the seal [7] if it is damaged.
 - (c) Put the ECS duct [2] with the seal [7] into position.
 - (d) Install the coupling [6].
 - 1) Tighten the coupling [6] to the torque range specified on the part.
 - 2) Lightly tap the outer periphery of the coupling [6] with a rubber mallet.
 - 3) Tighten the coupling [6] again to the torque range specified on the part.
 - (e) Tighten the trunnion nut of the clamp [5] to 50 in-lb (6 N·m).

NOTE: This coupling is near the "Disconnect Panel".
 - (f) Make sure that the clamp [5] is aligned so that a minimum clearance of 0.50 in. (12.7 mm) is maintained after installation of the bonding jumper for the overwing fairing.



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SUBTASK 54-51-01-400-009

- (13) To install the ECS duct [1] between the left strut and the wing, do the same steps as for ECS duct [2] installation (TASK 36-13-01-400-802) (Figure 401).

J. Power Plant Installation

SUBTASK 54-51-01-000-009

- (1) Do this task: Power Plant - Installation, TASK 71-00-02-400-801-G00.

SUBTASK 54-51-01-010-009

- (2) Do this task: Thrust Reverser Installation, TASK 78-31-01-400-801-G00.

SUBTASK 54-51-01-010-010

- (3) If you did not do a Fan Cowl Installation on the applicable engine, do this task: Fan Cowl Panels Installation, TASK 71-11-04-400-801-G00.

K. Strut Systems Operation Test

SUBTASK 54-51-01-200-001

- (1) If you did not pressurize the Main Hydraulic System when you installed the power plant, do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.
 - (a) Do this task: Operational Test of the Hydraulic Systems A and B, TASK 29-11-00-700-801.
 - (b) Examine the hydraulic system connections in the strut and aft fairing for leaks.
 - (c) If hydraulic fitting is found loose in this area or has persistent leaks, use this task to re-torque: Flareless Fittings in Pressurized Areas Installation, TASK 20-10-51-400-802.
 - (d) Examine the seals where the hydraulic tubes go through the strut aft vapor barrier for leaks.

SUBTASK 54-51-01-200-002

- (2) Do this task: Engine Fire Extinguishing Discharge Line Flow Test, TASK 26-21-00-720-801.

SUBTASK 54-51-01-200-003

- (3) Do this task: Engine Fire Extinguishing Discharge Line Pressure Test, TASK 26-21-00-730-803.

SUBTASK 54-51-01-200-004

- (4) Do this task: Engine Fire Detection Circuit - System Test, TASK 26-11-00-730-802.

SUBTASK 54-51-01-200-005

- (5) If you did not do an EEC System Test when you installed the power plant, do this task: Test No. 17 - Electronic Engine Control (EEC) System Test, TASK 71-00-00-710-806-G00.

SUBTASK 54-51-01-200-006

- (6) If you did not do an Idle-Power Leak Check when you installed the power plant, do this task: Test No. 4 - Idle Leak Test, TASK 71-00-00-790-804-G00.

NOTE: Thrust reversers must be closed for this test.

- (a) Do a check of the engine and strut drains for signs of leakage.
- (b) Examine the fuel line between the wing and the engine for leaks.
- (c) If you installed the left strut, do the Load Test for the left Integrated Drive Generator (IDG) (TASK 24-11-00-700-803).
- (d) If you installed the right strut, do the Load Test for the right IDG (TASK 24-11-00-700-804).

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SUBTASK 54-51-01-200-008

(7) Do this task: Engine Anti-Ice System Operational Test, TASK 30-21-00-710-801.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-01-410-002

(1) Do these steps to close access to the strut systems:

(a) Examine the applicable strut areas for leaks.



MAKE SURE THAT THE PNEUMATIC DUCT COUPLING AT THE "DISCONNECT PANEL" HAS A MINIMUM CLEARANCE OF 0.50 INCH (12.7 MM) WITH THE BONDING JUMPER ADJACENT TO IT. THE BONDING JUMPER IS CONNECTED TO THE INBOARD OVERWING FAIRING. IF THIS CLEARANCE IS NOT MAINTAINED, DAMAGE TO THE STRUT AND WING MAY OCCUR.

(b) Close these access panels:

(TASK 54-52-03-400-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-01-010-011

(2) Close these access panels:

(TASK 54-52-09-000-801)

<u>Number</u>	<u>Name/Location</u>
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

SUBTASK 54-51-01-040-010

(3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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NACELLE STRUT - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
- (1) Nacelle strut examination
 - (2) Strut bushing examination
 - (3) Corrosion prevention - nacelle strut.

TASK 54-51-01-200-801

2. Nacelle Strut Examination

A. General

- (1) This task examines the strut for worn areas or damage. Interference between the wing leading edge and the nacelle strut can cause damage to the wing and the strut. To prevent damage to the airplane structure in this area, examine the wing leading edge structure and the strut skin for interference damage.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)
SRM 54-50-70	ENGINE STRUT FAIRING SKIN

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Strut Examination

SUBTASK 54-51-01-040-011

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-01-200-009

- (2) Examine the wing leading edge and strut underwing fairings for worn areas or damage.
 - (a) If necessary, do this task to get access to the damaged area: Wing Junction Fairing Removal, TASK 54-52-03-000-801.
 - (b) Look for signs of damage caused by the interference between the strut and the wing during flight.
 - (c) If you find nicks, gouges, abrasion, or worn areas, repair as specified in this procedure: SRM SUBJECT 54-50-70.
 - (d) If you removed the underwing fairings, do this task: Wing Junction Fairing Installation, TASK 54-52-03-400-801.

SUBTASK 54-51-01-040-012

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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TASK 54-51-01-200-802

3. Strut Bushing Examination

A. General

- (1) This task examines the bushings in the strut fittings for worn areas. This task also examines the bushings in the wing forward spar and underwing attach fittings for worn areas.
- (2) You can only examine the bushings in one strut fitting at a time, unless you remove the strut.

B. References

Reference	Title
54-51-02-220-801	Aft Upper Spar Fuse Pin and Bushing Examination (P/B 601)
54-51-03-220-801	Upper Link Forward Fuse Pin and Bushing Examination (P/B 601)
54-51-03-220-802	Upper Link Aft Pin and Bushing Examination (P/B 601)
54-51-04-200-801	Diagonal Brace Aft Fuse Pin and Bushing Examination (P/B 601)
54-51-04-200-802	Diagonal Brace Forward Pin and Bushing Examination (P/B 601)
54-51-05-220-801	Strut Side Link Examination (P/B 601)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Strut Bushing Examination

SUBTASK 54-51-01-200-010

- (1) To examine the bushings in the strut upper spar fitting, do this task: Upper Link Forward Fuse Pin and Bushing Examination, TASK 54-51-03-220-801.

SUBTASK 54-51-01-200-011

- (2) To examine the bushings in the wing forward spar fitting, do this task: Upper Link Aft Pin and Bushing Examination, TASK 54-51-03-220-802.

SUBTASK 54-51-01-200-012

- (3) To examine the bushings in the strut lower spar fitting, do this task: Diagonal Brace Forward Pin and Bushing Examination, TASK 54-51-04-200-802.

SUBTASK 54-51-01-200-013

- (4) To examine the bushings in the aft underwing fitting, do this task: Diagonal Brace Aft Fuse Pin and Bushing Examination, TASK 54-51-04-200-801.

SUBTASK 54-51-01-200-014

- (5) To examine the fuse pin bushings in the aft upper spar fittings and the forward underwing fittings, do this task: Aft Upper Spar Fuse Pin and Bushing Examination, TASK 54-51-02-220-801.

SUBTASK 54-51-01-200-015

- (6) To examine the side link bearing races in the aft upper spar fittings and the center underwing fittings, do this task: Strut Side Link Examination, TASK 54-51-05-220-801.

— END OF TASK —

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TASK 54-51-01-200-803

4. Corrosion Prevention - Nacelle Strut

A. General

- (1) This task examines the strut for corrosion. Corrosion can occur on the engine nacelle support fitting. Make regular inspections to prevent or find the start of corrosion. Missing fasteners, white powdery deposits, or other corrosion deposits are signs of corrosion. Initiate the corrosion prevention practices to decrease the occurrence of corrosion.

B. References

Reference	Title
51-21-91 P/B 701	CORROSION INHIBITING COMPOUND - CLEANING/PAINTING

C. Consumable Materials

Reference	Description	Specification
G00009	Compound - Organic Corrosion Inhibiting	BMS3-23

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Corrosion Examination

SUBTASK 54-51-01-200-016

- (1) After you clean the suspected areas, do a visual inspection with a bright light and a mirror to find corrosion.

SUBTASK 54-51-01-200-017

- (2) If there is corrosion, it will cause noticeable bulges of the skin or white particles of corrosion material at fastener heads.

SUBTASK 54-51-01-200-018

- (3) For small quantities of corrosion, do the steps that follow:

NOTE: This will minimize the downtime of the airplane.

- (a) Clean the contaminated area.
- (b) Apply a corrosion inhibiting compound to the clean areas (CORROSION INHIBITING COMPOUND - CLEANING/PAINTING, PAGEBLOCK 51-21-91/701).
- (c) Repair the finish system at the first scheduled maintenance.

SUBTASK 54-51-01-200-019

- (4) Frequency of Application:

- (a) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.
- (b) Periodic application of corrosion inhibiting compound, G00009 is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

————— END OF TASK —————

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AFT UPPER SPAR FUSE PIN - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) Aft upper spar fuse pin removal
- (2) Aft upper spar fuse pin installation.

TASK 54-51-02-000-801

2. **Aft Upper Spar Fuse Pin Removal**

(Figure 401)

A. **General**

- (1) If you will remove an aft upper spar fuse pin, you must have the two upper link pins and the two diagonal brace pins installed (unless you will remove the strut).
- (2) You will remove only one aft upper spar fuse pin at a time (unless you will remove the strut).
- (3) You can remove the two upper link pins or the two diagonal brace pins at the same time, but you can only have one link free at a time (unless you will remove the strut).

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-801	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-803	Support the Strut with the Engine Removed (P/B 201)
54-51-01-580-805	Support the Strut (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205
STD-6213	Wrench - Torque, 300 lb-in

D. **Consumable Materials**

Reference	Description	Specification
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. **Access Panels**

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1

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(Continued)

Number	Name/Location
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434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Prepare for the Removal

SUBTASK 54-51-02-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-02-010-001

(2) To get access to the aft upper spar fuse pin, do this task: Aft Fairing Access Panel Removal, TASK 54-52-06-000-801:

(a) Remove the applicable strut access panels:

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Remove the Aft Upper Spar Fuse Pin

SUBTASK 54-51-02-000-001

(1) Remove these parts:

- (a) Remove the cotter pin [6], nut [5], nut [4], and end caps [2].
- (b) Remove the bolt [1] and end caps [2].

SUBTASK 54-51-02-000-002

(2) If the strut will stay installed, do these steps to remove the fuse pin [3]:

(a) Support the strut as follows:

- 1) If you will remove the fuse pin [3] with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-801.
- 2) If you will remove the fuse pin [3] with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.



CAUTION

MAKE SURE ALL THE UPPER LINK PINS, DIAGONAL BRACE PINS, AND THE OTHER AFT UPPER SPAR FUSE PIN ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

(b) Use the torque wrench, STD-6213, and the adapter kit, tool, SPL-2020, to make sure the fuse pin [3] turns easily.

- 1) When the load is correctly removed, the fuse pin [3] will turn with 125 in-lb (14 N·m) maximum torque.



CAUTION

MAKE SURE THAT YOU USE A BRASS SLUG TO PUSH OUT THE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS WILL NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(c) Use a brass slug from the pin removal kit, tool, SPL-2020, with grease, D00014, to push out the fuse pin [3].

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- 1) Make sure the clevis and the flange stay aligned.
- 2) Keep the support load on the strut until you install the fuse pin [3] at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

SUBTASK 54-51-02-000-003

- (3) If you will remove the strut, do these steps to remove the fuse pins [3]:
 - (a) Make sure that you support the strut (TASK 54-51-01-580-805).
 - (b) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure the fuse pin [3] turns easily.
 - 1) When the load is correctly removed, the fuse pin [3] will turn with 125 in-lb (14 N·m) maximum torque.
 - (c) Use the pin removal kit, tool, SPL-2020, to remove the fuse pins [3].

———— **END OF TASK** ————

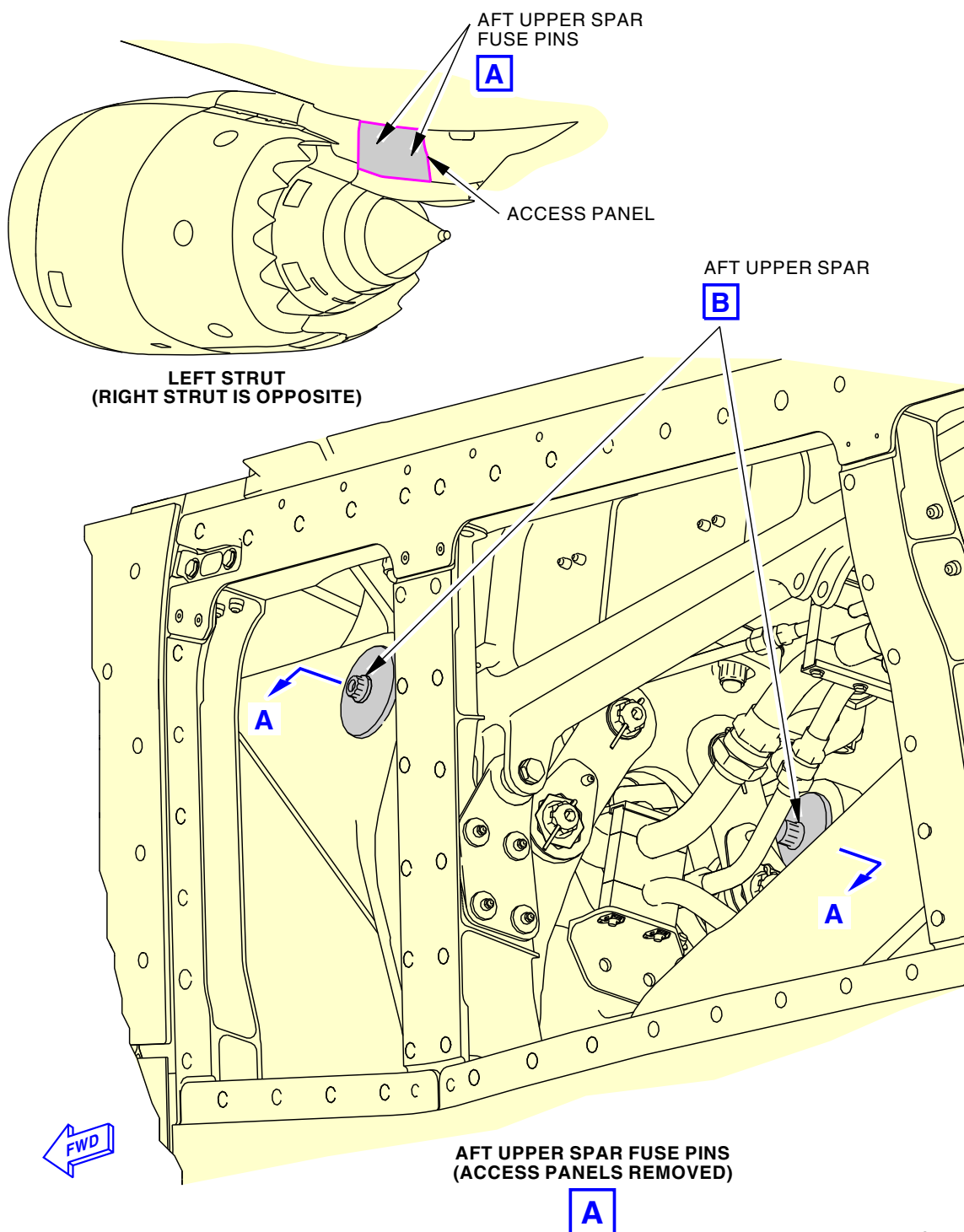
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Aft Upper Spar Fuse Pin Installation
Figure 401/54-51-02-990-803 (Sheet 1 of 2)

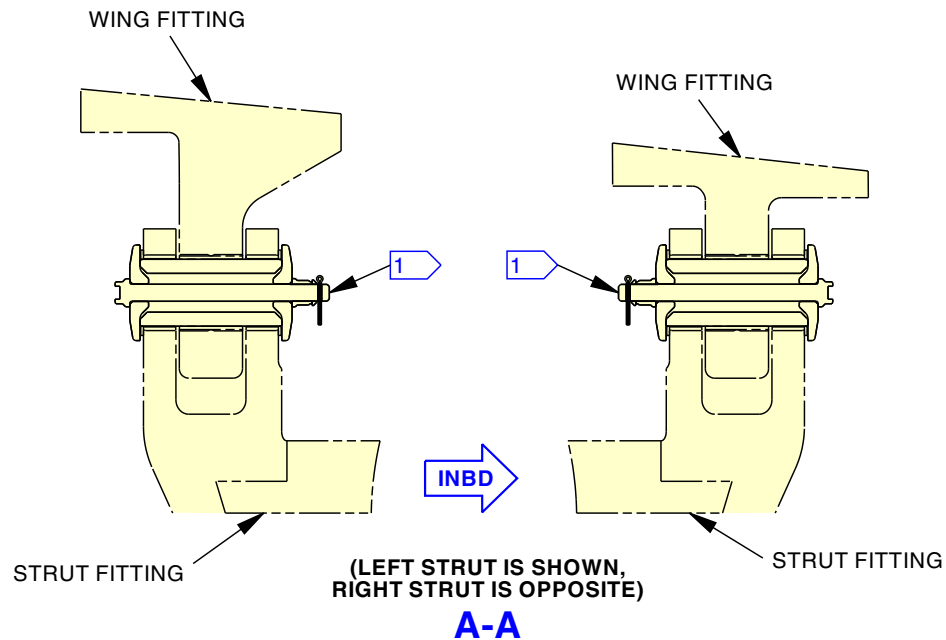
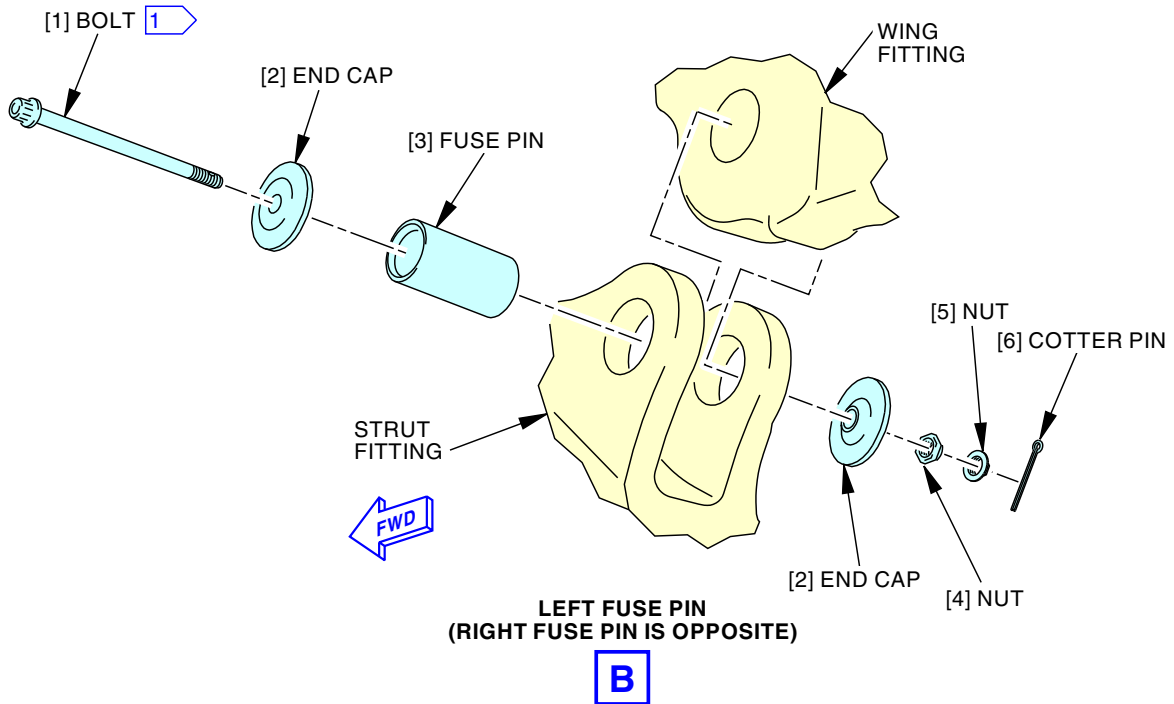
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1 BOLTS MUST BE INSTALLED IN DIRECTION SHOWN.

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Aft Upper Spar Fuse Pin Installation
Figure 401/54-51-02-990-803 (Sheet 2 of 2)

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TASK 54-51-02-400-801

3. **Aft Upper Spar Fuse Pin Installation**

(Figure 401)

A. General

(1) This task installs the aft upper spar fuse pins.

B. References

Reference	Title
12-21-32-600-801	Lubricate the Strut Attach Fittings (P/B 301)
51-00-53	CORROSION REMOVAL
51-22-00-390-806	Fillet Seal Application (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-01-580-802	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-804	Remove Support from the Strut with the Engine Removed (P/B 201)
54-51-02-220-801	Aft Upper Spar Fuse Pin and Bushing Examination (P/B 601)
54-51-03-400-801	Upper Link Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Fuse pin	54-51-02-01-035	SIA ALL
6	Cotter pin	54-51-02-01-010	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

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G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Install the Aft Upper Spar Fuse Pin

SUBTASK 54-51-02-200-001

- (1) Do this task: Aft Upper Spar Fuse Pin and Bushing Examination, TASK 54-51-02-220-801.

SUBTASK 54-51-02-210-001

- (2) Do a check that the fuse pin [3], end caps [2], nut [5], nut [4], bolt [1], and cotter pin [6] are free from corrosion.
- (a) Include the interior of the fuse pin [3].

SUBTASK 54-51-02-210-002

- (3) If you removed the strut, do a check that the interior of the bushings at the installation fittings are free from corrosion.

SUBTASK 54-51-02-300-001

- (4) Do these steps if you find corrosion:
- (a) To remove corrosion, refer to the CORROSION REMOVAL, SUBJECT 51-00-53.
- (b) To repair or replace the corroded part, contact Boeing for corrective action.

SUBTASK 54-51-02-390-001

- (5) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
- (a) Do this task to apply sealant to the bushings: Fillet Seal Application, TASK 51-22-00-390-806.
- (b) Apply a fillet seal to the flanged end of all bushings.

SUBTASK 54-51-02-400-001

- (6) If you did not remove the strut, install the fuse pins [3] as follows:
- (a) Make sure that the brass slug is unloaded.
- (b) Apply a thin layer of grease, D00014, to the outer diameter of the fuse pin [3] that you will install.
- (c) Use the pin installation kit, tool, SPL-2020, to push out the brass slug with the fuse pin [3].

SUBTASK 54-51-02-400-002

- (7) If you removed the strut, install the fuse pins [3] as follows:
- (a) Apply a thin layer of grease, D00014, to the outer diameter of the fuse pin [3] to be installed.
- (b) Use the pin installation kit, tool, SPL-2020, to install the fuse pin [3].

SUBTASK 54-51-02-420-001

- (8) Install the following parts:
- (a) Install the end cap [2] to the bolt [1].
- (b) Install the bolt [1] and end cap [2] to the fuse pin [3].
- 1) For the inboard aft upper spar bolt [1], put the head of the bolt [1] on the inboard side of the aft upper spar fitting.

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- 2) For the outboard aft upper spar bolt [1], put the head of the bolt [1] on the outboard side of the aft upper spar fitting.
- (c) Install the end cap [2].
- (d) Install the nut [4].
 - 1) Apply a layer of Never-Seez NSBT compound, D00006, to the threads of the nut [4] and bolt [1].
 - 2) Do a check of the run-on torque.
 - a) If the run-on torque is not 18 in-lb (2 N·m) - 150 in-lb (17 N·m), replace the nut [4] and do the check again.
 - 3) Tighten the nut [4] to 558 in-lb (63 N·m) - 592 in-lb (67 N·m).
- (e) Install the nut [5].
 - 1) Apply Never-Seez NSBT compound, D00006, to the threads of the nut [5].
 - 2) Do a check of the run-on torque.
 - a) If the run-on torque is less than 18 in-lb (2 N·m), replace the nut [5] and do the check again.
 - 3) Tighten the nut [5] to a target of 150 in-lb (17 N·m).
 - 4) Tighten the nut [5] to align nut castellation with the cotter pin hole in bolt [1], up to a maximum of 300 in-lb (34 N·m).
 - a) If the new cotter pin [6] cannot be installed, then back off the nut minimum amount to align nut castellation with the bolt cotter pin hole.
- (f) Install the new cotter pin [6].

SUBTASK 54-51-02-200-002

- (9) Make sure that all parts are firmly seated.

SUBTASK 54-51-02-640-001

- (10) Do this task to inject grease, D00014, into the aft upper spar grease fittings: Lubricate the Strut Attach Fittings, TASK 12-21-32-600-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-001

- (1) If you installed the aft upper spar fuse pins [3] with the strut installed, remove the support from the strut as follows:
 - (a) If you installed the fuse pin [3] with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-802.
 - (b) If you installed the fuse pin [3] with the strut installed and the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-804.

SUBTASK 54-51-02-580-002

- (2) If you installed the aft upper spar fuse pins [3] for strut installation, do not remove the strut support until you install the upper link (Upper Link Installation, TASK 54-51-03-400-801).

SUBTASK 54-51-02-410-001

- (3) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1

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(Continued)

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-02-440-001

- (4) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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AFT UPPER SPAR FUSE PIN - INSPECTION/CHECK

1. **General**

A. This procedure has this task:

- (1) Aft upper spar fuse pin and bushing examination.

TASK 54-51-02-220-801

2. **Aft Upper Spar Fuse Pin and Bushing Examination**

(Figure 601)

A. **General**

- (1) This task examines the aft upper spar fuse pin for worn areas. This task also examines the bushings in the strut aft upper spar attach fittings for worn areas.
- (2) This task has these steps to examine the aft upper spar fuse pin and bushings.
- (3) You can examine only one aft upper spar fuse pin at a time. Both diagonal brace pins, and both upper link pins, and one aft upper spar fuse pin must stay installed, unless you remove the strut.

B. **References**

Reference	Title
54-51-02-000-801	Aft Upper Spar Fuse Pin Removal (P/B 401)
54-51-02-400-801	Aft Upper Spar Fuse Pin Installation (P/B 401)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Examination**

SUBTASK 54-51-02-000-004

- (1) Do this task: Aft Upper Spar Fuse Pin Removal, TASK 54-51-02-000-801.

E. **Fuse Pin and Bushing Examination**

SUBTASK 54-51-02-220-001

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the aft upper spar fuse pin.
 - (b) Measure the inside diameter of the bushings in the forward underwing fitting.
 - (c) Measure the inside diameter of the bushings in the strut aft upper spar fitting.

SUBTASK 54-51-02-300-002

- (2) Make sure that the dimensions are in the tolerances as specified in Table 601.

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Table 601/54-51-02-993-801 Aft Upper Spar Fuse Pin Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED WEAR DIMENSIONS	MAX CLEARANCE
1	BUSHING (WING FITTING)	I.D.	1.9630 in. (49.860 mm)	1.9650 in. (49.911 mm)	1.9686 in. (50.002 mm)	0.0072 in. (0.183 mm)
	FUSE PIN	O.D.	1.9614 in. (49.820 mm)	1.9620 in. (49.835 mm)	1.9578 in. (49.728 mm)	
2	BUSHING (STRUT FITTING)	I.D.	1.9630 in. (49.860 mm)	1.9650 in. (49.911 mm)	1.9686 in. (50.002 mm)	0.0072 in. (0.183 mm)
	FUSE PIN	O.D.	1.9614 in. (49.820 mm)	1.9620 in. (49.835 mm)	1.9578 in. (49.728 mm)	

- (a) If the fuse pin dimensions are not in the tolerances, replace the fuse pin.
- (b) If the bushing dimensions in the forward underwing fitting are not in the tolerances, replace the bushings.
- (c) If the bushing dimensions in the strut aft upper spar fitting are not in the tolerances, replace the bushings.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-02-400-003

- (1) Do this task: Aft Upper Spar Fuse Pin Installation, TASK 54-51-02-400-801.

————— END OF TASK —————

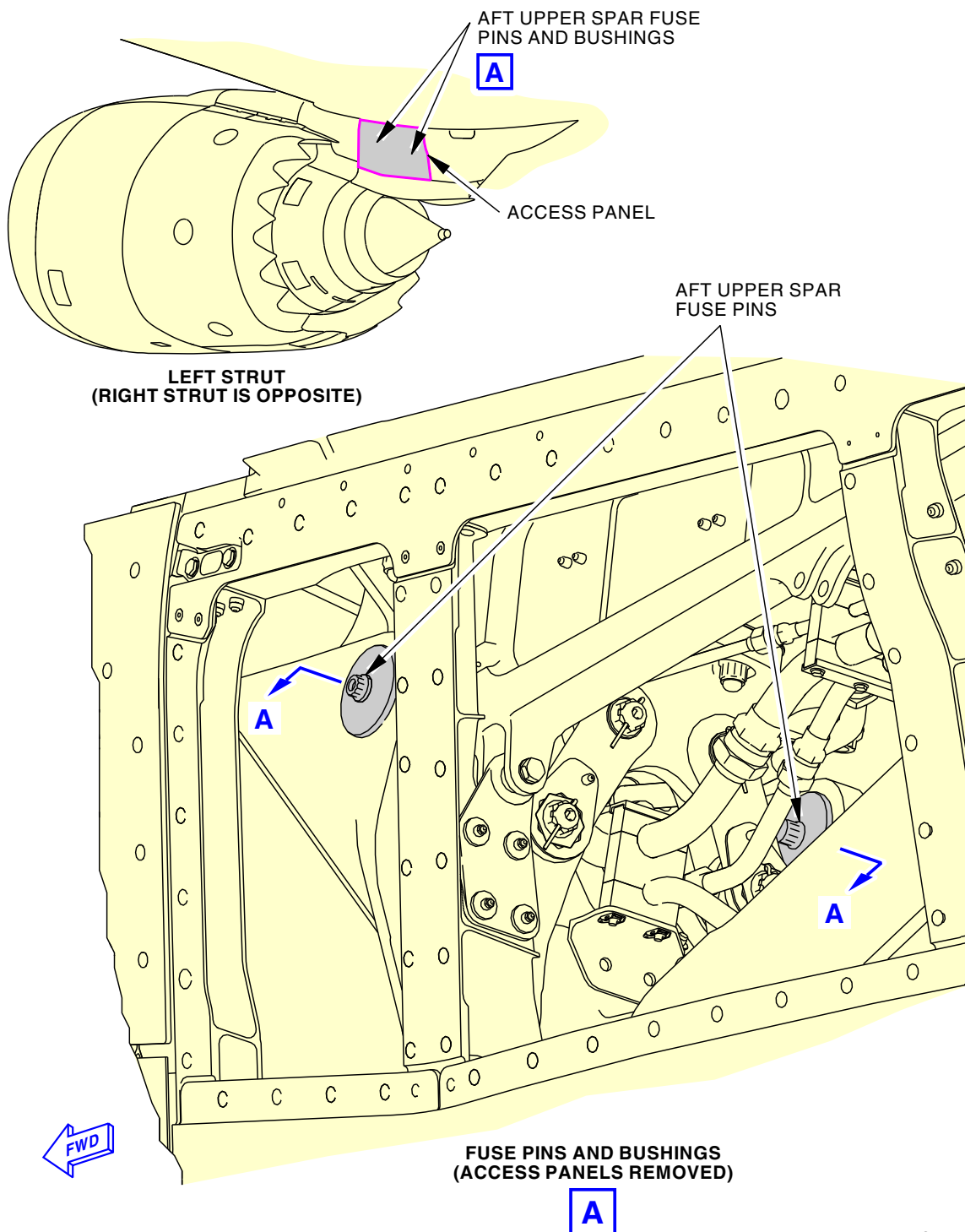
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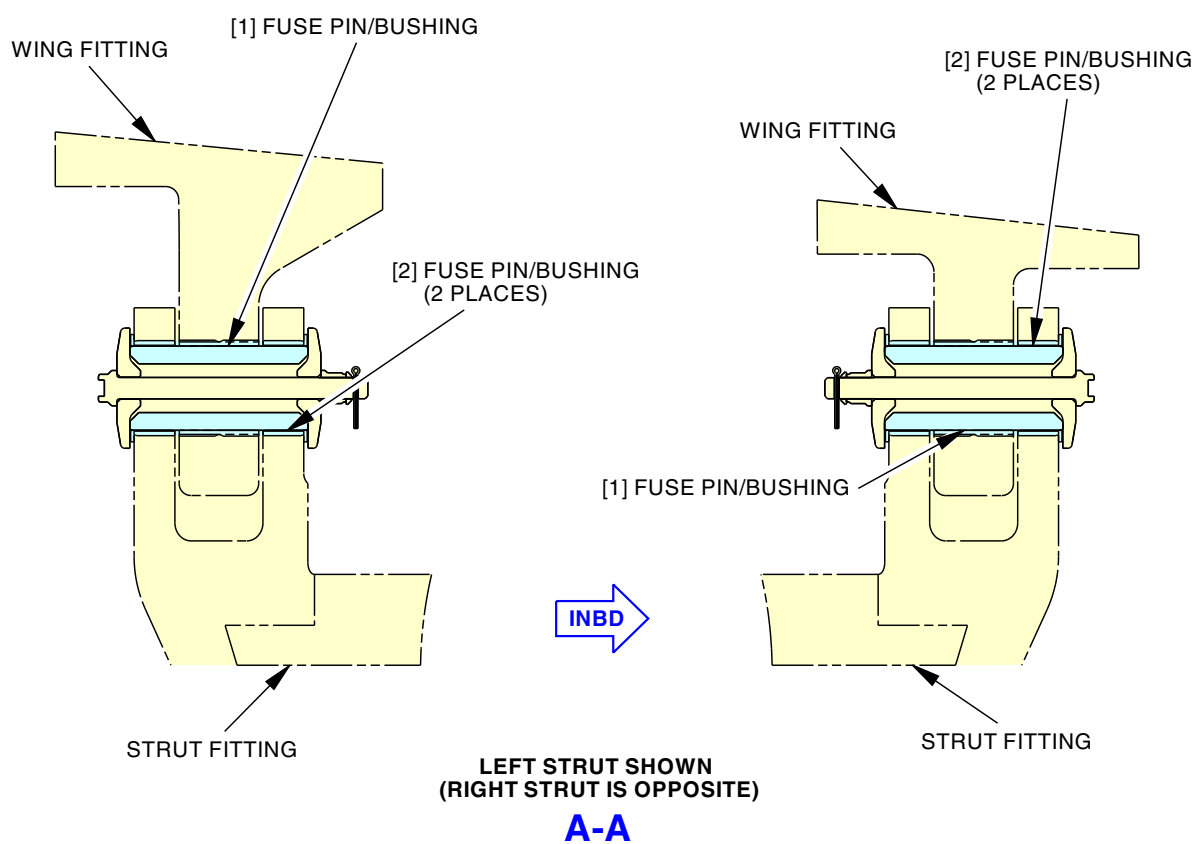
Aft Upper Spar Examination
Figure 601/54-51-02-990-802 (Sheet 1 of 2)

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Aft Upper Spar Examination
Figure 601/54-51-02-990-802 (Sheet 2 of 2)

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UPPER LINK - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) Upper link removal
- (2) Upper link installation
- (3) Upper link pin removal
- (4) Upper link pin installation.

TASK 54-51-03-000-801

2. Upper Link Removal

(Figure 401)

A. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-801	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-803	Support the Strut with the Engine Removed (P/B 201)
54-51-01-580-805	Support the Strut (P/B 201)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)

B. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

C. **Access Panels**

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

D. **Prepare for the Removal**

SUBTASK 54-51-03-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-03-010-001

- (2) To get access to the upper link pins, do this task: Wing Junction Fairing Removal, TASK 54-52-03-000-801.

Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

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SUBTASK 54-51-03-980-001

- (3) If the strut will stay installed, do one of the procedures that follow:
- (a) Do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-801.
 - (b) Do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.

SUBTASK 54-51-03-480-001

- (4) If you will remove the strut, do this task: Support the Strut, TASK 54-51-01-580-805.

E. Upper Link Removal

SUBTASK 54-51-03-020-001

- (1) Do this task: Upper Link Pin Removal, TASK 54-51-03-000-802.

SUBTASK 54-51-03-020-002

- (2) Carefully remove the upper link [1] from the strut.

———— **END OF TASK** ————

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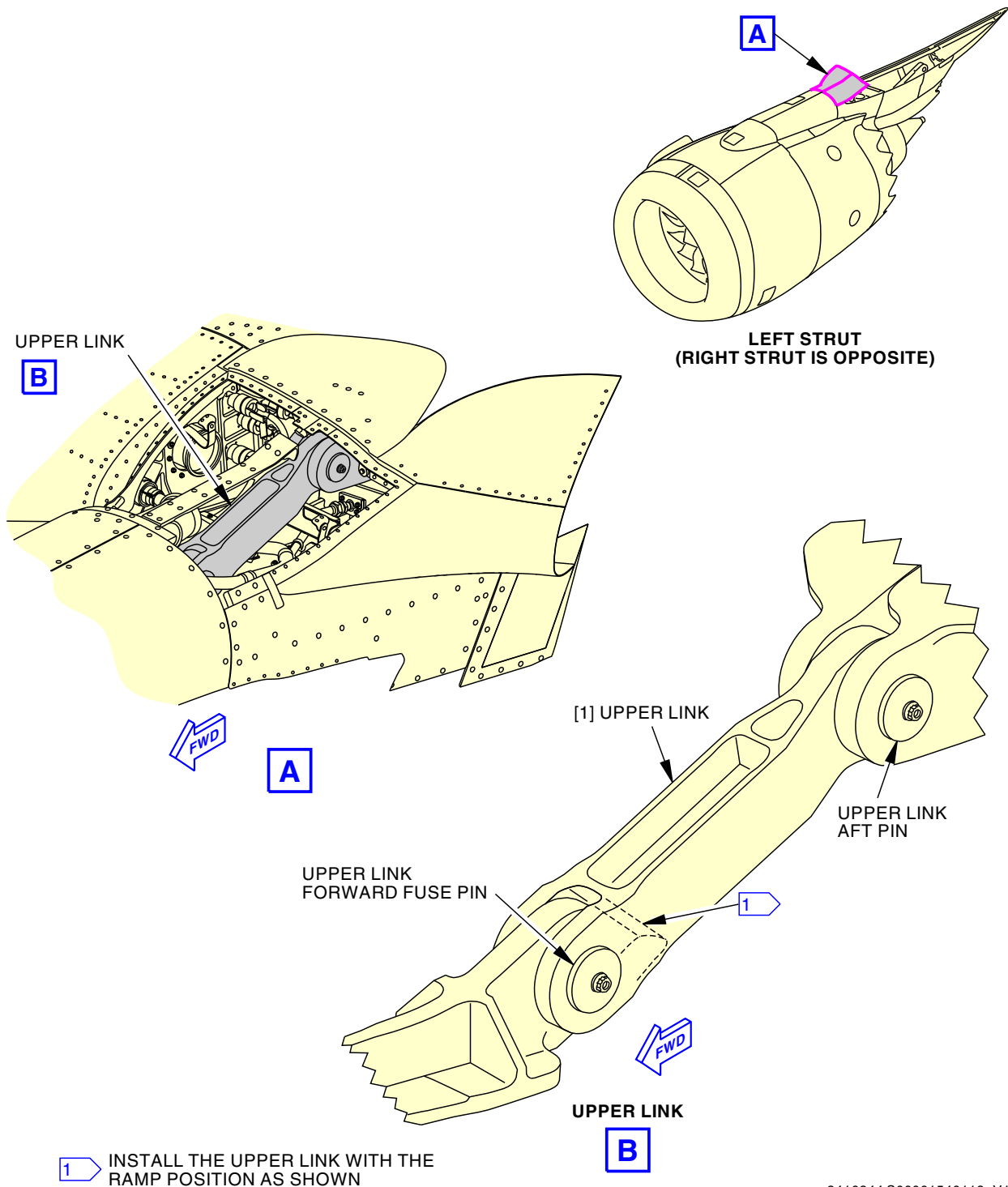
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Upper Link Installation
Figure 401/54-51-03-990-805

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TASK 54-51-03-400-801

3. Upper Link Installation

(Figure 401)

A. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-01-580-802	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-804	Remove Support from the Strut with the Engine Removed (P/B 201)
54-51-01-580-806	Remove Support from the Strut (P/B 201)
54-51-03-220-801	Upper Link Forward Fuse Pin and Bushing Examination (P/B 601)
54-51-03-220-802	Upper Link Aft Pin and Bushing Examination (P/B 601)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Upper link	54-51-03-01-070	SIA ALL

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

E. Upper Link Installation

SUBTASK 54-51-03-200-001

- (1) Do the steps that follow to examine the upper link pins and bushings:
 - (a) Do this task: Upper Link Forward Fuse Pin and Bushing Examination, TASK 54-51-03-220-801.
 - (b) Do this task: Upper Link Aft Pin and Bushing Examination, TASK 54-51-03-220-802.

SUBTASK 54-51-03-020-003



CAUTION

MAKE SURE THAT THE UPPER LINK IS IN THE CORRECT POSITION. DAMAGE TO THE STRUT CAN OCCUR IF IT IS NOT IN THE CORRECT POSITION.

- (2) To install the forward fuse pin and aft pin on the upper link [1], do this task: Upper Link Pin Installation, TASK 54-51-03-400-802.
 - (a) Make sure that the upper link ramp is in the position as shown in Figure 401.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-03-980-002

- (1) If you installed the upper link without removing the strut, do one of these applicable procedures:
 - (a) Do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-802.
 - (b) Do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-804.

SUBTASK 54-51-03-080-001

- (2) If you installed the upper link to install the strut, do this task: Remove Support from the Strut, TASK 54-51-01-580-806

SUBTASK 54-51-03-010-002

- (3) Close these access panels:
(TASK 54-52-03-400-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-51-03-440-001

- (4) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

TASK 54-51-03-000-802

4. Upper Link Pin Removal

(Figure 402, Figure 403)

A. General

- (1) This task has the steps to remove the forward fuse pin and aft pin from the upper link.
- (2) When you remove one or both upper link pins, you cannot remove the other strut attach pins while the upper link pins are not installed. Only one link can be free at a time (unless you will remove the strut).

B. References

<u>Reference</u>	<u>Title</u>
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-801	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-803	Support the Strut with the Engine Removed (P/B 201)
54-51-01-580-805	Support the Strut (P/B 201)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

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Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205
STD-6213	Wrench - Torque, 300 lb-in

D. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

G. Prepare for the Removal

SUBTASK 54-51-03-040-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-03-010-003

- (2) To get access to the upper link forward fuse pin and aft pin, do this task: Wing Junction Fairing Removal, TASK 54-52-03-000-801.

Open these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

H. Upper Link Pin Removal

SUBTASK 54-51-03-020-004

- (1) To remove the forward fuse pin assembly, do the steps that follow:
- (a) Remove the cotter pin [7], nut [6], nut [5], and end cap [4].
 - (b) Remove the bolt [2] and end cap [4].

SUBTASK 54-51-03-020-005

- (2) To remove the aft pin assembly, do the steps that follow:
- (a) Remove the cotter pin [13], nut [12], nut [11], and end cap [10].
 - (b) Remove the bolt [8] and end cap [10].

SUBTASK 54-51-03-000-001

- (3) If the strut will stay installed, do these steps to remove the fuse pin [3] or pin [9]:

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- (a) Install the support on the strut as follows:
- 1) If you will remove the pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-801.
 - 2) If you will remove the pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.



CAUTION

MAKE SURE ALL THE DIAGONAL BRACE PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- (b) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure the fuse pin [3] or pin [9] turns easily.
- 1) When the load on the pin is correctly removed, the pin will turn with 125 in-lb (14 N·m) maximum torque.



CAUTION

MAKE SURE THAT YOU USE A BRASS SLUG TO PUSH OUT THE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS WILL NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

- (c) Use a brass slug from the pin removal kit, tool, SPL-2020, with grease, D00633, to push out the fuse pin [3] or pin [9].
- 1) Make sure the clevis and the flange stay aligned.
 - 2) Keep the support load on the strut until you install a pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

SUBTASK 54-51-03-000-002

- (4) If you will remove the strut, do these steps to remove the fuse pin [3] and pin [9]:
- (a) Do this task: Support the Strut, TASK 54-51-01-580-805.
 - (b) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure that the pin turns easily.
 - 1) When the load is correctly removed, the pin will turn with 125 in-lb (14 N·m) maximum torque.
 - (c) Use the pin removal kit, tool, SPL-2020, to remove the fuse pin [3] or pin [9].

———— **END OF TASK** ————

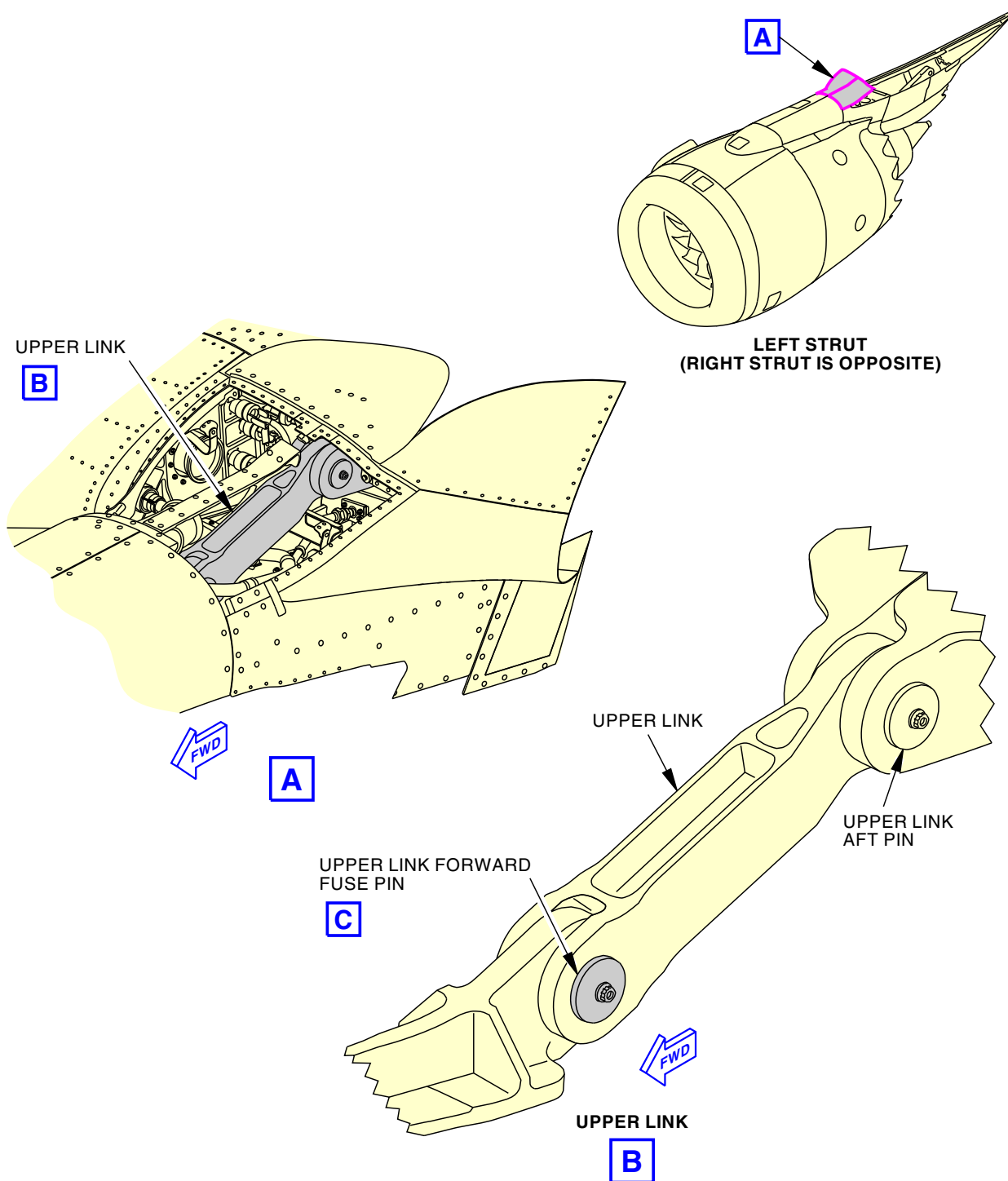
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Upper Link Forward Fuse Pin Installation
Figure 402/54-51-03-990-806 (Sheet 1 of 2)

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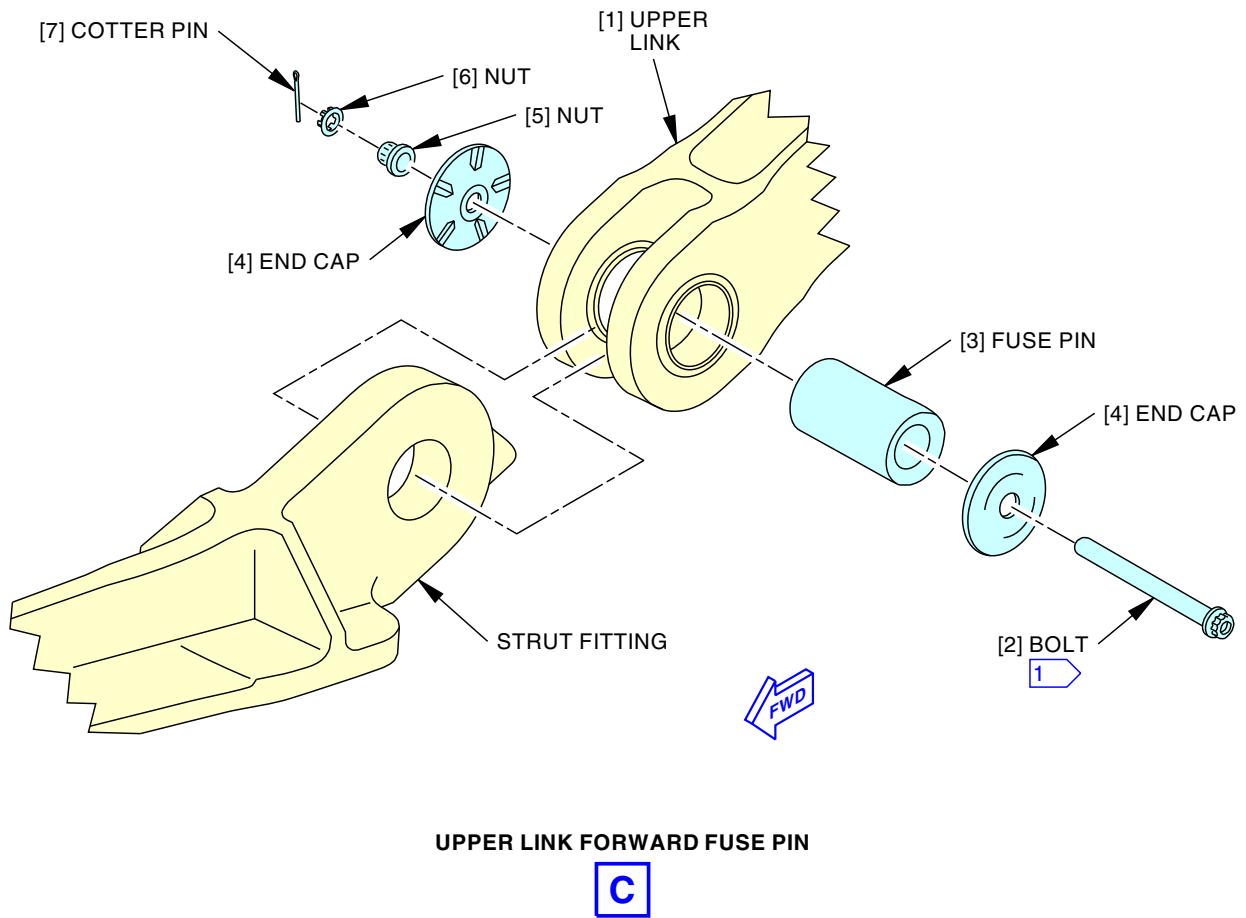
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BOEING
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1 BOLT MAY BE INSTALLED IN EITHER DIRECTION

2416247 S00061540121_V2

Upper Link Forward Fuse Pin Installation
Figure 402/54-51-03-990-806 (Sheet 2 of 2)

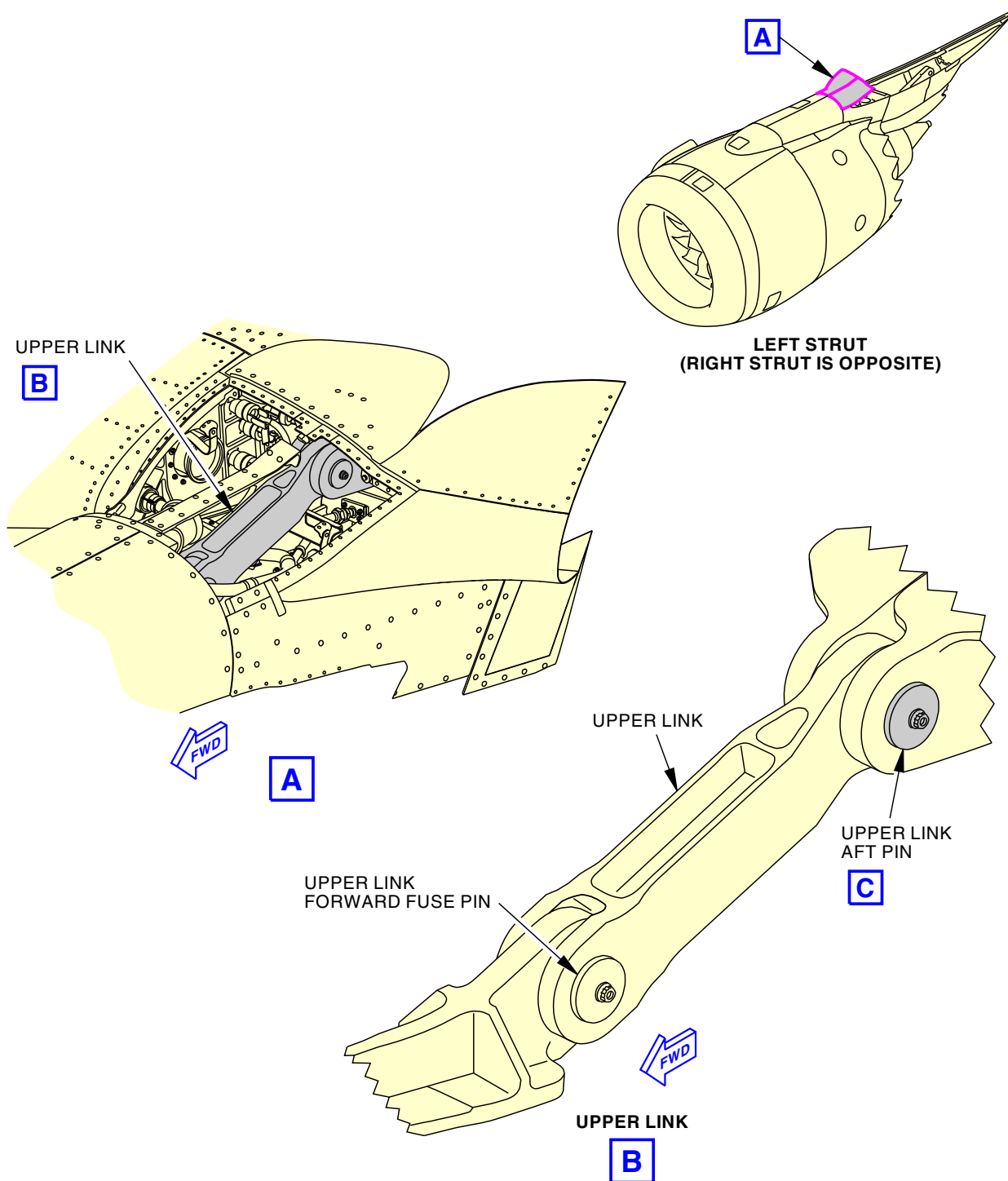
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2416248 S00061540122_V1

Upper Link Aft Pin Installation
Figure 403/54-51-03-990-807 (Sheet 1 of 2)

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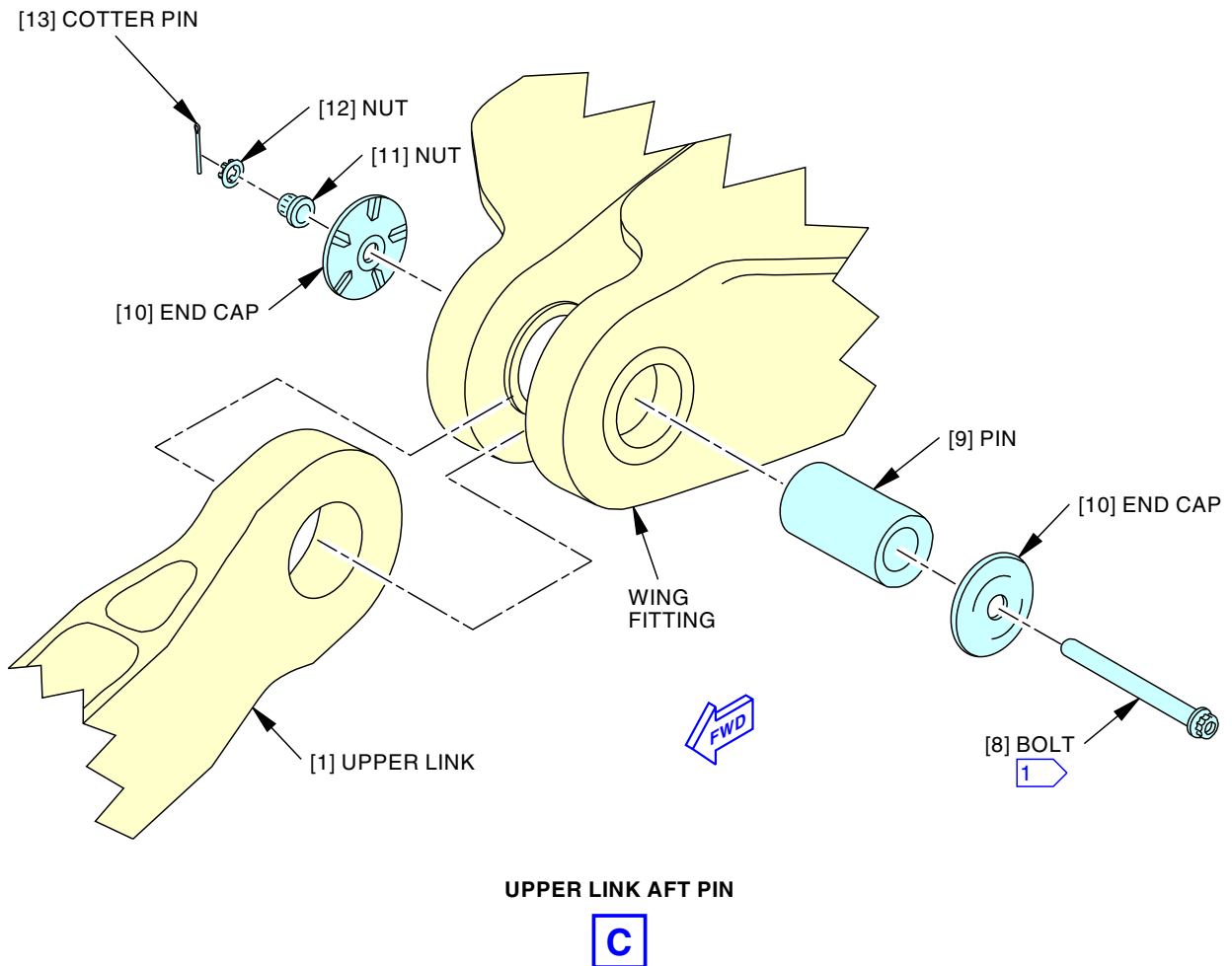
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1 BOLT MAY BE INSTALLED IN EITHER DIRECTION

2416249 S00061540123_V2

Upper Link Aft Pin Installation
Figure 403/54-51-03-990-807 (Sheet 2 of 2)

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TASK 54-51-03-400-802

5. **Upper Link Pin Installation**

(Figure 402, Figure 403)

A. General

(1) This task installs the forward fuse pin and aft pin to the upper link.

B. References

Reference	Title
51-00-53	CORROSION REMOVAL
51-22-00-390-806	Fillet Seal Application (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-01-580-802	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-804	Remove Support from the Strut with the Engine Removed (P/B 201)
54-51-01-580-806	Remove Support from the Strut (P/B 201)
54-51-03-220-801	Upper Link Forward Fuse Pin and Bushing Examination (P/B 601)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Fuse pin	54-51-03-01-045	SIA ALL
7	Cotter pin	54-51-03-01-010	SIA ALL
9	Pin	54-51-03-01-040	SIA ALL
13	Cotter pin	54-51-03-01-010	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

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G. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

H. Upper Link Pin Installation

SUBTASK 54-51-03-210-001

- (1) Do this task: Upper Link Forward Fuse Pin and Bushing Examination, TASK 54-51-03-220-801.
 - (a) Do a check that the fuse pin [3], nut [5], end caps [4], bolt [2], and nut [6] are free from corrosion.
 - (b) Do a check that the pin [9], nut [11], end caps [10], bolt [8], and nut [12] are free from corrosion.
 - (c) Do a check on the interior of the pin.

SUBTASK 54-51-03-210-002

- (2) If you removed the upper link, make sure that the interior of the bushings at the installation fittings are free from corrosion.

SUBTASK 54-51-03-300-001

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the CORROSION REMOVAL, SUBJECT 51-00-53.
 - (b) To repair or replace the corroded part, contact Boeing for corrective action.

SUBTASK 54-51-03-390-001

- (4) Make sure that all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) Do this task to apply sealant to the bushings: Fillet Seal Application, TASK 51-22-00-390-806.
 - (b) Apply a fillet seal to the flanged end of all bushings.

SUBTASK 54-51-03-400-001

- (5) If you did not remove the strut, install the fuse pin [3] or pin [9] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014, to the outer diameter of the pin to be installed.
 - (c) Use the pin installation kit, tool, SPL-2020, to push out the brass slug with the fuse pin [3] or pin [9].

SUBTASK 54-51-03-400-002

- (6) If you removed the strut, install the fuse pin [3] or pin [9] as follows:
 - (a) Apply a thin layer of grease, D00014, to the outer diameter of the pin to be installed.
 - (b) Use the pin installation kit, tool, SPL-2020, to install the fuse pin [3] or pin [9].

SUBTASK 54-51-03-420-001

- (7) Install these parts on the forward fitting.
 - (a) Install the end cap [4] and bolt [2] to the fuse pin [3].

NOTE: The bolt may be installed in either direction.
 - (b) Install the end cap [4].

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- (c) Install the nut [5].
 - 1) Apply Never-Seez NSBT compound, D00006 to the threads of the nut [5] and bolt [2].
 - 2) Do a check of the run-on torque of the nut [5].
 - a) If the run-on torque is not 18 in-lb (2 N·m) - 150 in-lb (17 N·m), replace the nut [5] and do the check again.
 - 3) Tighten the nut [5] to 558 in-lb (63 N·m) - 592 in-lb (67 N·m).
- (d) Install the nut [6].
 - 1) Apply Never-Seez NSBT compound, D00006 to the threads of the nut [6] and bolt [2].
 - 2) Do a check of the run-on torque of the nut [6].
 - a) If the run-on torque is less than 18 in-lb (2 N·m), replace the nut [6] and do the check again.
 - 3) Tighten the nut [6] to a target of 150 in-lb (17 N·m).
 - 4) Tighten the nut [6] to align nut castellation with cotter pin hole in bolt, up to a maximum of 300 in-lb (34 N·m).
 - a) If the cotter pin cannot be installed, then loosen the nut minimum amount to align nut castellation with the bolt cotter pin hole.
- (e) Install the new cotter pin [7].

SUBTASK 54-51-03-420-002

- (8) Install these parts on the aft fitting.
 - (a) Install the end cap [10] and bolt [8] on the pin [9].

NOTE: The bolt may be installed in either direction.
 - (b) Install the end cap [10].
 - (c) Install the nut [11].
 - 1) Apply Never-Seez NSBT compound, D00006 to the threads of the nut [11] and bolt [8].
 - 2) Do a check of the run-on torque of the nut [11].
 - a) If the run-on torque is not 18 in-lb (2 N·m) - 150 in-lb (17 N·m), replace the nut and do the check again.
 - 3) Tighten the nut [11] to 558 in-lb (63 N·m) - 592 in-lb (67 N·m).
 - (d) Install the nut [12].
 - 1) Apply Never-Seez NSBT compound, D00006 to the threads of the nut [12] and bolt [8].
 - 2) Do a check of the run-on torque of the nut [12].
 - a) If the run-on torque is less than 18 in-lb (2 N·m), replace the nut and do the check again.
 - 3) Tighten the nut [12] to a target of 150 in-lb (17 N·m).
 - 4) Tighten the nut [12] to align nut castellation with cotter pin hole in bolt, up to a maximum of 300 in-lb (34 N·m).
 - a) If the cotter pin cannot be installed, then loosen the nut [12] minimum amount to align the nut castellation with the bolt cotter pin hole.

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- (e) Install the new cotter pin [13].

SUBTASK 54-51-03-200-002

- (9) Make sure that all parts are firmly seated.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-03-580-001

- (1) If you installed the pin without removing the strut, remove the strut support as follows:
- (a) If you installed the pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-802.
 - (b) If you installed the pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-804.

SUBTASK 54-51-03-080-002

- (2) If you installed the upper link for strut installation, do this task: Remove Support from the Strut, TASK 54-51-01-580-806.

SUBTASK 54-51-03-010-004

- (3) Close these access panels:
(Wing Junction Fairing Installation, TASK 54-52-03-400-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-51-03-440-002

- (4) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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UPPER LINK - INSPECTION/CHECK

1. General

A. This procedure has these tasks:

- (1) Upper link forward fuse pin and bushing examination
- (2) Upper link aft pin and bushing examination.

TASK 54-51-03-220-801

2. Upper Link Forward Fuse Pin and Bushing Examination

(Figure 601)

A. **General**

- (1) This task examines the forward fuse pin in the upper link for worn areas. This task also examines the bushings in the upper link and the strut attach fitting for worn areas.
- (2) When you examine one or both upper link pin, both aft upper spar fuse pins and both diagonal brace pins must stay installed (unless you remove the strut).

B. **References**

Reference	Title
54-51-03-000-801	Upper Link Removal (P/B 401)
54-51-03-000-802	Upper Link Pin Removal (P/B 401)
54-51-03-400-802	Upper Link Pin Installation (P/B 401)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Examination**

SUBTASK 54-51-03-000-003

- (1) Do this task: Upper Link Pin Removal, TASK 54-51-03-000-802.

E. **Fuse Pin and Bushing Examination**

SUBTASK 54-51-03-220-001

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the fuse pin for the upper link.
 - (b) Measure the inside diameter of the bushings [2] in the strut forward upper spar fitting.
 - (c) Measure the inside diameter of the bushings [1] in the forward end of the upper link.

SUBTASK 54-51-03-300-002

- (2) Make sure the dimensions are in the tolerances as specified in Table 601.

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Table 601/54-51-03-993-801 Upper Link Forward Fuse Pin Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			MINIMUM inches(mm)	MAXIMUM inches(mm)	PERMITTED WEAR DIMENSIONS inches(mm)	MAX CLEARANCE inches(mm)
1	BUSHING (UPPER LINK)	I.D.	2.0580 in. (52.273 mm)	2.0604 in. (52.334 mm)	2.0644 in. (52.436 mm)	0.0080 in. (0.203 mm)
	FUSE PIN	O.D.	2.0564 in. (52.233 mm)	2.0570 in. (52.248 mm)	2.0524 in. (52.131 mm)	
2	BUSHING (STRUT FITTING)	I.D.	2.0580 in. (52.273 mm)	2.0604 in. (52.334 mm)	2.0644 in. (52.436 mm)	0.0080 in. (0.203 mm)
	FUSE PIN	O.D.	2.0564 in. (52.233 mm)	2.0570 in. (52.248 mm)	2.0524 in. (52.131 mm)	

- (a) If the fuse pin dimensions are not in the tolerances, replace the fuse pin.
- (b) If the bushing [2] dimensions in the strut forward upper spar fitting are not in the tolerances, replace the bushings [2].
- (c) If the bushing [1] dimensions in the upper link are not in the tolerances, replace the upper link (Upper Link Removal, TASK 54-51-03-000-801).

NOTE: This LRU is repairable.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-03-400-003

- (1) Do this task: Upper Link Pin Installation, TASK 54-51-03-400-802.

————— **END OF TASK** —————

TASK 54-51-03-220-802

3. Upper Link Aft Pin and Bushing Examination

(Figure 601)

A. General

- (1) This task examines the aft pin in the upper link for worn areas. This task also examines the bushings in the upper link and the wing forward spar fittings for worn areas.
- (2) When you examine one or both upper link pin, both aft upper spar fuse pins and both diagonal brace pins must stay installed (unless you remove the strut).

B. References

Reference	Title
54-51-03 P/B 401	UPPER LINK - REMOVAL/INSTALLATION
54-51-03-000-802	Upper Link Pin Removal (P/B 401)
54-51-03-400-802	Upper Link Pin Installation (P/B 401)

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C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-03-000-004

- (1) Do this task: Upper Link Pin Removal, TASK 54-51-03-000-802.

E. Pin and Bushing Examination

SUBTASK 54-51-03-220-002

- (1) Measure these dimensions:
- (a) Measure the outside diameter of the pin for the upper link.
 - (b) Measure the inside diameter of the bushings [4] in the wing forward spar fittings.
 - (c) Measure the inside diameter of the bushings [3] in the aft end of the upper link.

SUBTASK 54-51-03-300-003

- (2) Make sure the dimensions are in the tolerances as specified in Table 602.

Table 602/54-51-03-993-802 Upper Link Aft Pin Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			MINIMUM inches/mm	MAXIMUM inches/mm	PERMITTED WEAR DIMENSIONS	MAX CLEARANCE
3	BUSHING (UPPER LINK)	I.D.	2.0080 in. (51.003 mm)	2.0104 in. (51.064 mm)	2.0144 in. (51.166 mm)	0.0080 in. (0.203 mm)
	PIN	O.D.	2.0064 in. (50.963 mm)	2.0070 in. (50.978 mm)	2.0024 in. (50.861 mm)	
4	BUSHING (WING FITTING)	I.D.	2.0080 in. (51.003 mm)	2.0104 in. (51.064 mm)	2.0144 in. (51.166 mm)	0.0080 in. (0.203 mm)
	PIN	O.D.	2.0064 in. (50.963 mm)	2.0070 in. (50.978 mm)	2.0024 in. (50.861 mm)	

- (a) If the pin dimensions are not in the tolerances, replace the pin.
- (b) If the bushings [4] dimensions in the wing forward spar fittings are not in the tolerances, replace the bushings [4].
- (c) If the bushing [3] dimensions in the upper link are not in the tolerances, replace the upper link (PAGEBLOCK 54-51-03/401).

NOTE: This LRU is repairable.

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F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-03-400-004

(1) Do this task: Upper Link Pin Installation, TASK 54-51-03-400-802.

———— **END OF TASK** ————

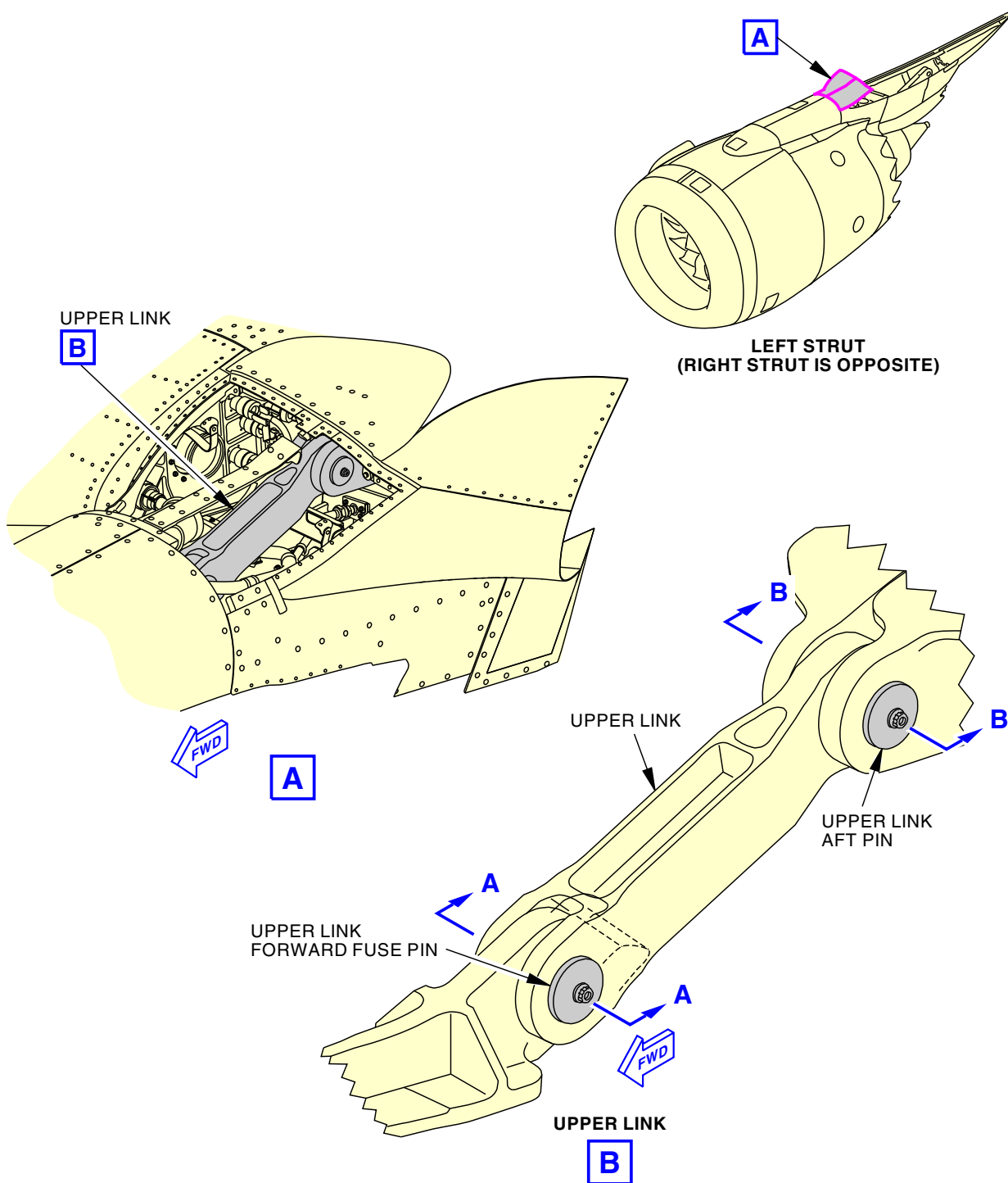
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Upper Link Examination
Figure 601/54-51-03-990-804 (Sheet 1 of 2)

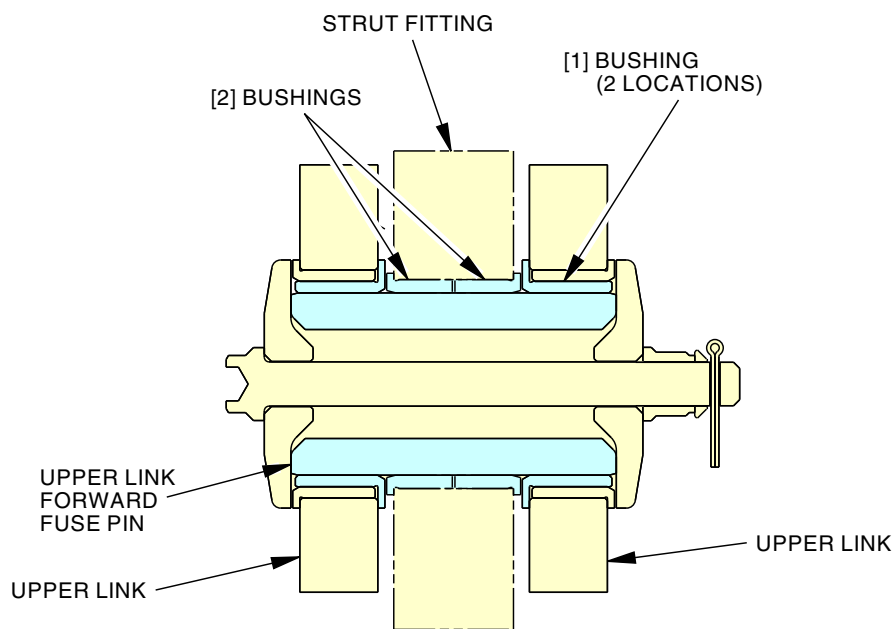
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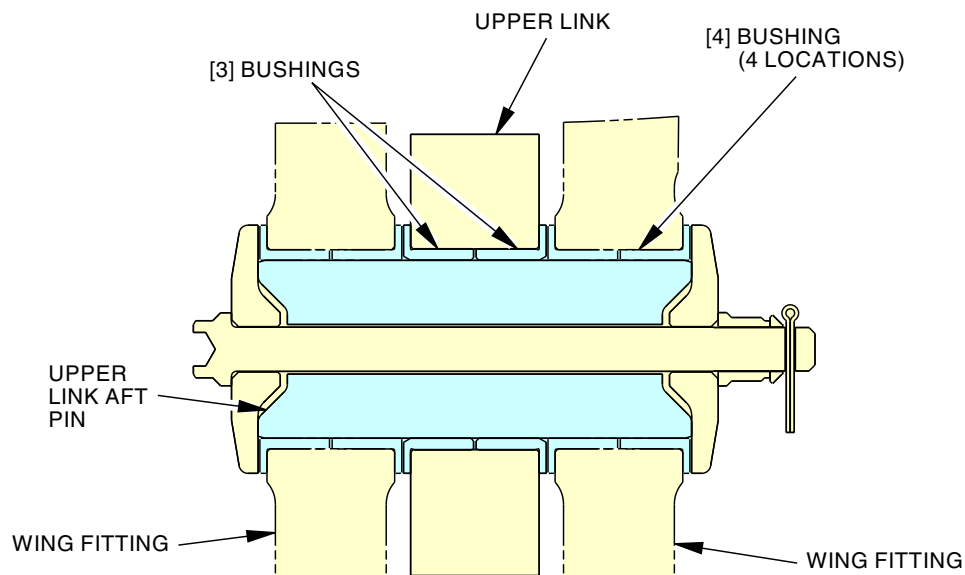
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UPPER LINK - STRUT

A-A



UPPER LINK - WING

B-B

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Upper Link Examination
Figure 601/54-51-03-990-804 (Sheet 2 of 2)

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DIAGONAL BRACE - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) Diagonal brace removal
 - (2) Diagonal brace installation
 - (3) Diagonal brace pin removal
 - (4) Diagonal brace pin installation.

TASK 54-51-04-000-801

2. **Diagonal Brace Removal**

(Figure 401, Figure 402, Figure 403)

A. General

- (1) This task removes the diagonal brace.
- (2) You can remove the diagonal brace if the other strut attach pins are installed. Only one link can be free at a time on a strut (unless you will remove the strut).

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-04-000-801	Aft Fairing Removal (Engine Removed) (P/B 401)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-51-04-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-04-000-001

- (2) Do this task: Aft Fairing Removal (Engine Removed), TASK 54-52-04-000-801.

E. Remove the Diagonal Brace

SUBTASK 54-51-04-580-001

- (1) Hold the diagonal brace [1] before you remove the pins.

SUBTASK 54-51-04-040-002

- (2) Do this task: Diagonal Brace Pin Removal, TASK 54-51-04-000-802.

SUBTASK 54-51-04-580-002

- (3) Carefully lower the aft end of diagonal brace [1] and raise forward end.

SUBTASK 54-51-04-020-001

- (4) Position aft end of diagonal brace [1] inboard of the aft end fitting.

SUBTASK 54-51-04-020-002

- (5) Slide brace aft as far as possible.

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SUBTASK 54-51-04-020-003

- (6) Move forward end of diagonal brace [1] outboard and remove from strut assembly.

———— **END OF TASK** ————

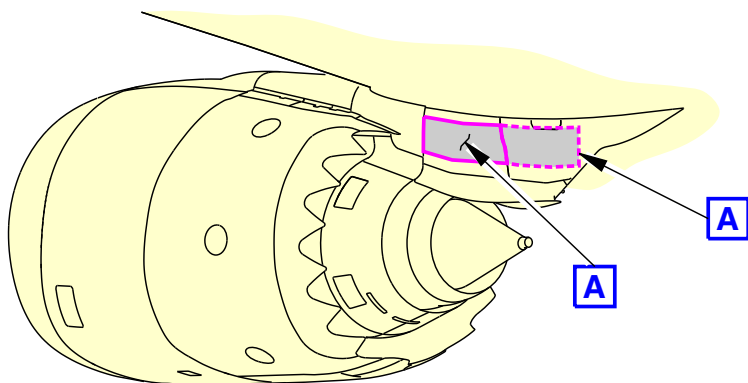
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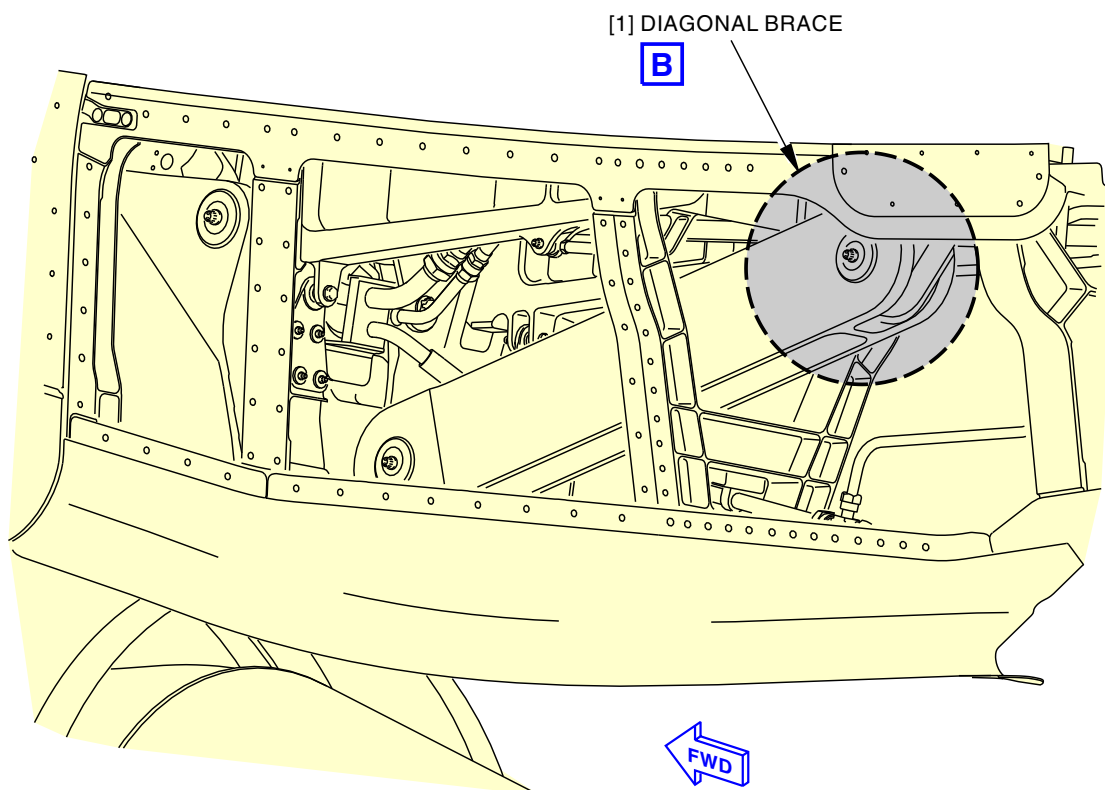
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**LEFT STRUT
(RIGHT STRUT IS OPPOSITE)**



(FIXED PANEL NOT SHOWN FOR CLARITY)

A

2416252 S00061540135_V2

**Diagonal Brace Installation
Figure 401/54-51-04-990-805 (Sheet 1 of 2)**

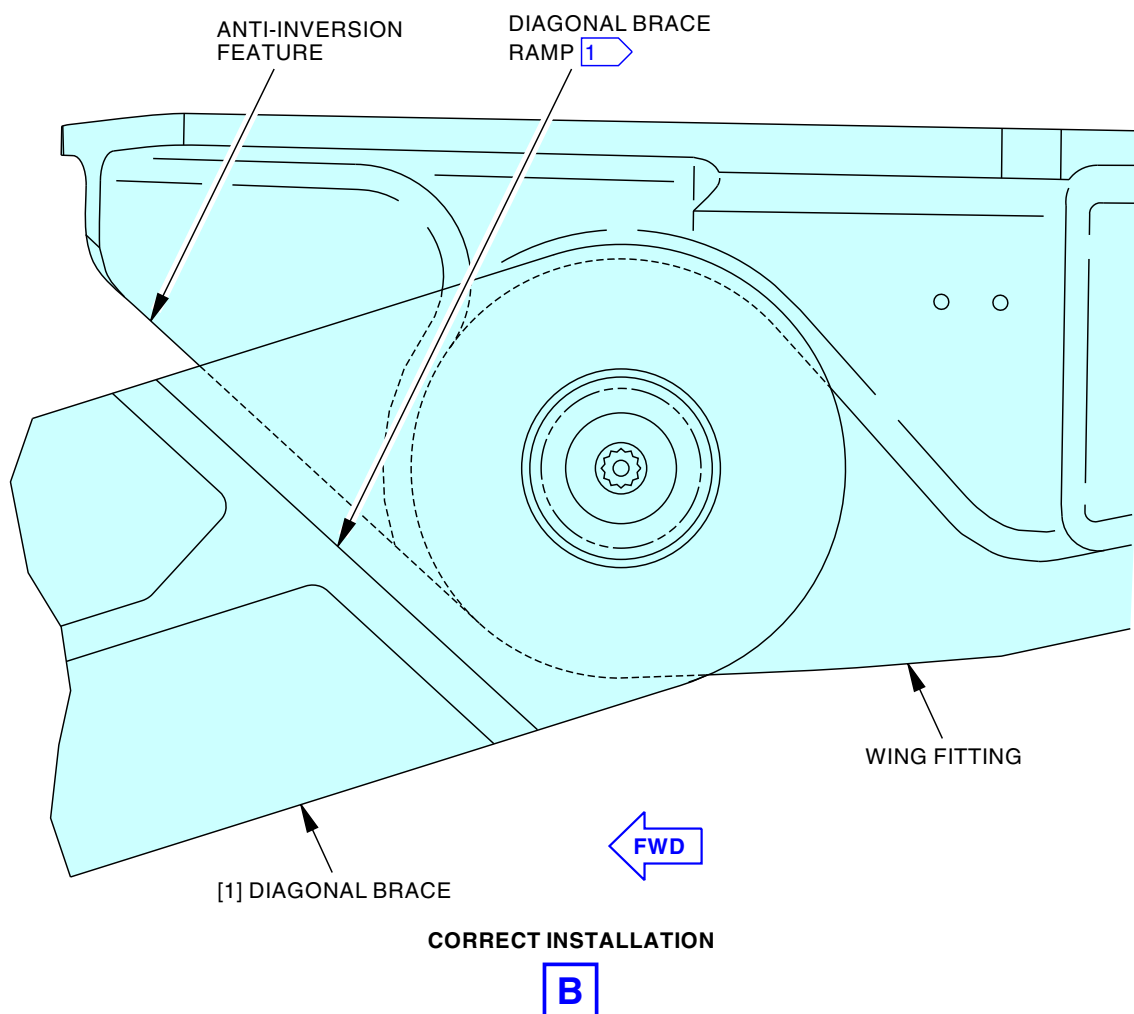
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1 MAKE SURE DIAGONAL BRACE RAMP IS ORIENTED AS SHOWN

2444306 S0000566510_V1

Diagonal Brace Installation
Figure 401/54-51-04-990-805 (Sheet 2 of 2)

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TASK 54-51-04-400-801

3. Diagonal Brace Installation

(Figure 401, Figure 402, Figure 403)

A. General

- (1) This task installs the diagonal brace.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-04-400-801	Aft Fairing Installation (Engine Removed) (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Diagonal brace	54-51-04-01-050	SIA ALL

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Install the Diagonal Brace

SUBTASK 54-51-04-580-003

- (1) Carefully raise the diagonal brace [1] under the wing.

SUBTASK 54-51-04-420-001

- (2) Do this task: Diagonal Brace Pin Installation, TASK 54-51-04-400-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-04-410-001

- (1) Do this task: Aft Fairing Installation (Engine Removed), TASK 54-52-04-400-801.

SUBTASK 54-51-04-440-001

- (2) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

TASK 54-51-04-000-802

4. Diagonal Brace Pin Removal

(Figure 402, Figure 403)

A. General

- (1) This task removes the forward pin and aft fuse pin from the diagonal brace.
- (2) When you remove one or both diagonal brace pins, you may not remove any additional strut attach pins. Only one link can be free at a time on a strut (unless you will remove the strut).

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-801	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-803	Support the Strut with the Engine Removed (P/B 201)

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(Continued)

Reference	Title
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205
STD-6213	Wrench - Torque, 300 lb-in

D. Consumable Materials

Reference	Description	Specification
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Prepare for the Removal

SUBTASK 54-51-04-040-003

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-04-010-001

- (2) Open these access panels:

(TASK 54-52-06-000-801)

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Remove the Diagonal Brace Pin

SUBTASK 54-51-04-020-004

- (1) To remove the diagonal brace aft fuse pin at the wing fitting, do the steps that follow:
- (a) Remove the cotter pin [13], nut [12], nut [11], and end cap [10].
 - (b) Remove the bolt [8] and end cap [10].

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(c) If the strut will stay installed, do the steps that follow to remove the fuse pin [9]:

- 1) Support the strut.
 - a) If you will remove the fuse pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-801.
 - b) If you will remove the fuse pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.
- 2) Make sure that all of the upper link pins and the aft upper spar fuse pins are installed.
- 3) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure that the fuse pin turns easily.

NOTE: When the load is correctly removed, the fuse pin will turn with 125 in-lb (14 N·m) maximum torque.

- 4) Use a brass slug from the pin removal kit, tool, SPL-2020 with grease, D00014 to push out the fuse pin [9].
 - a) Make sure that the clevis and the flange stay aligned.
- 5) Make sure that you keep the support load on the strut until you install a fuse pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

(d) If you will remove the strut, do these steps to remove the fuse pin [9]:

- 1) Do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.
- 2) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure the fuse pin turns easily.

NOTE: When the load is correctly removed, the fuse pin will turn with 125 in-lb (14 N·m) maximum torque.

- 3) Use the pin removal kit, tool, SPL-2020 to remove the fuse pin [9].

SUBTASK 54-51-04-020-005

(2) To remove the diagonal brace forward pin from the strut fitting, do the steps that follow:

- (a) Remove the cotter pin [7], nut [6], nut [5], end cap [4].
- (b) Remove the end cap [4] and bolt [2].
- (c) If the strut will stay installed, do the steps that follow to remove the pin [3]:

- 1) Support the strut.
 - a) If you will remove the pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-801.
 - b) If you will remove the pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.
- 2) Make sure that all of the upper link pins and the aft upper spar fuse pins are installed.
- 3) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure that the pin turns easily.

NOTE: When the load is correctly removed, the pin will turn with 125 in-lb (14 N·m) maximum torque.

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- 4) Use a brass slug from the pin removal kit, tool, SPL-2020 with grease, D00014 to push out the pin [3].

- a) Make sure that the clevis and the flange stay aligned.

- 5) Make sure that you keep the support load on the strut until you install a pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

- (d) If you will remove the strut, do these steps to remove the pin [3]:

- 1) Do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-803.

- 2) Use the torque wrench, STD-6213 and the adapter kit, tool, SPL-2020 to make sure the pin turns easily.

NOTE: When the load is correctly removed, the pin will turn with 125 in-lb (14 N·m) maximum torque.

- 3) Use the pin removal kit, tool, SPL-2020 to remove the pin [3].

———— **END OF TASK** ————

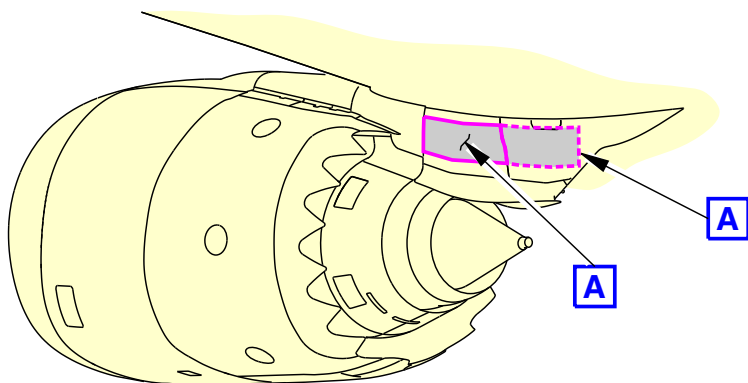
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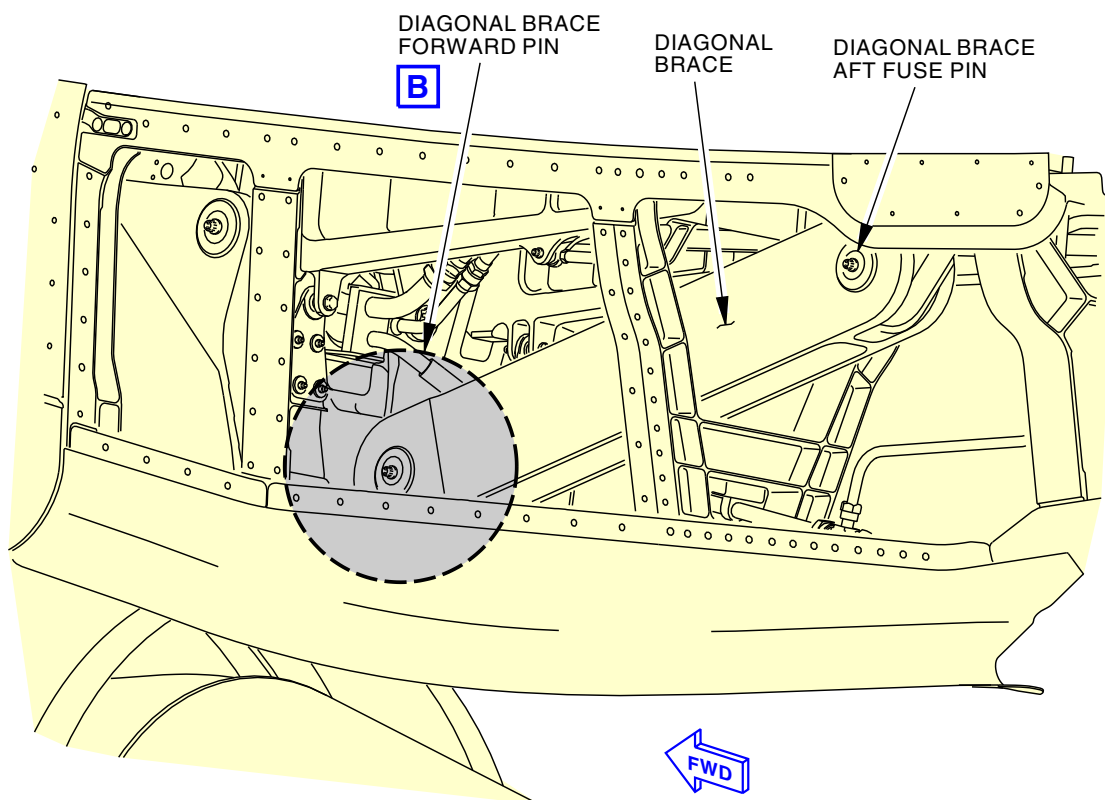
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**LEFT STRUT
(RIGHT STRUT IS OPPOSITE)**



(FIXED PANEL NOT SHOWN FOR CLARITY)

A

2416253 S00061540136_V2

**Diagonal Brace Forward Pin Installation
Figure 402/54-51-04-990-806 (Sheet 1 of 2)**

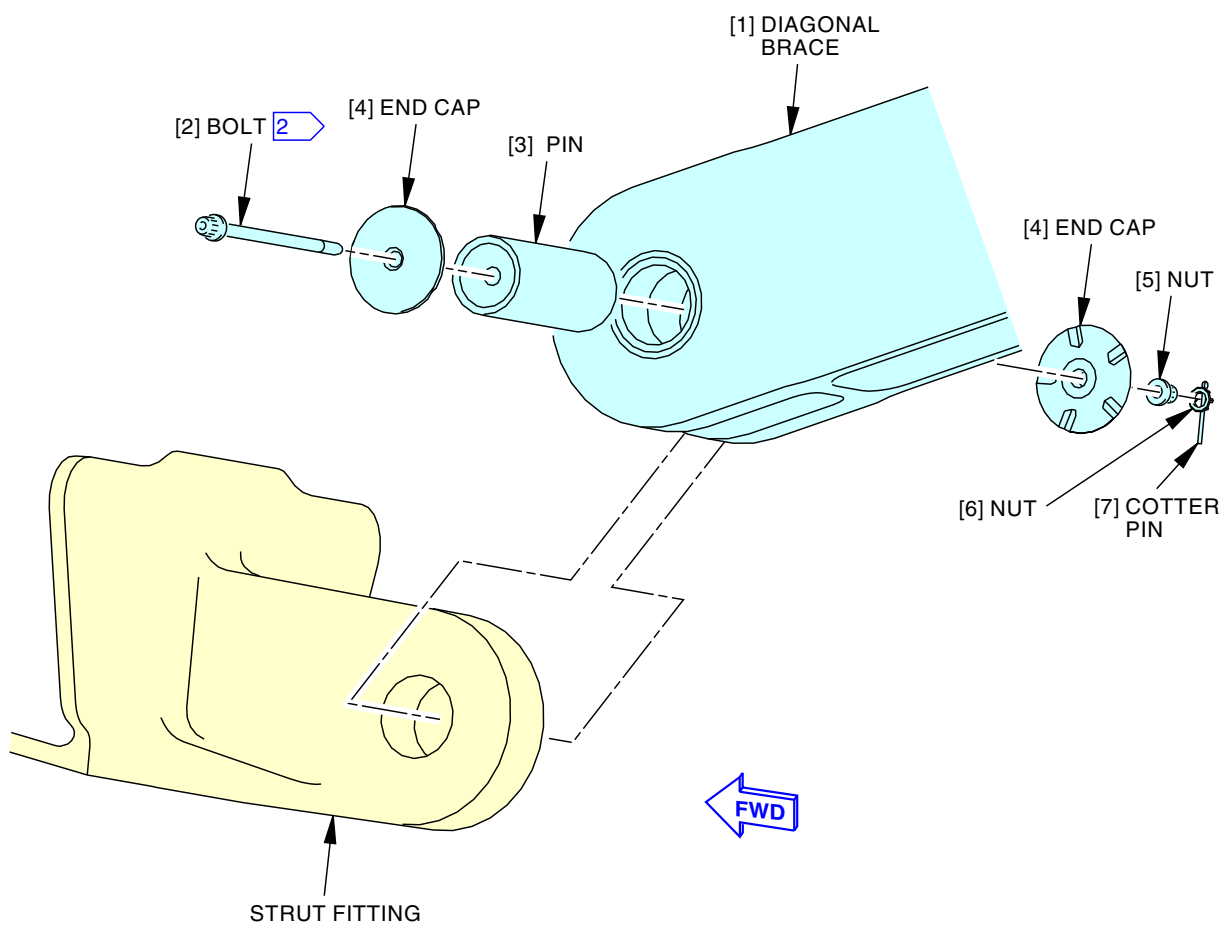
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DIAGONAL BRACE FORWARD PIN INSTALLATION

B

2 BOLT MAY BE INSTALLED IN EITHER DIRECTION.

2416254 S00061540137_V1

Diagonal Brace Forward Pin Installation
Figure 402/54-51-04-990-806 (Sheet 2 of 2)

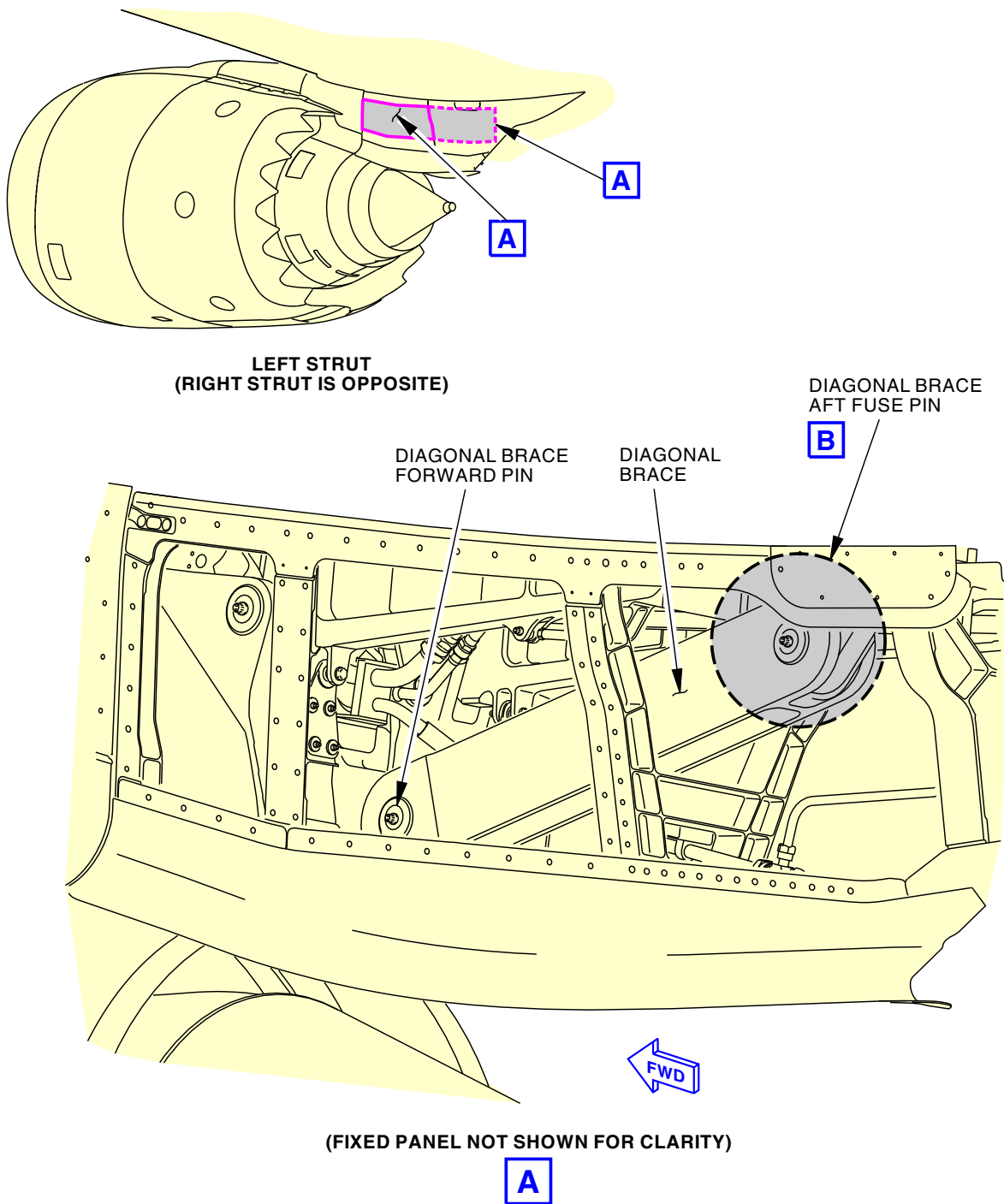
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2416255 S00061540138_V2

Diagonal Brace Aft Fuse Pin Installation
Figure 403/54-51-04-990-807 (Sheet 1 of 2)

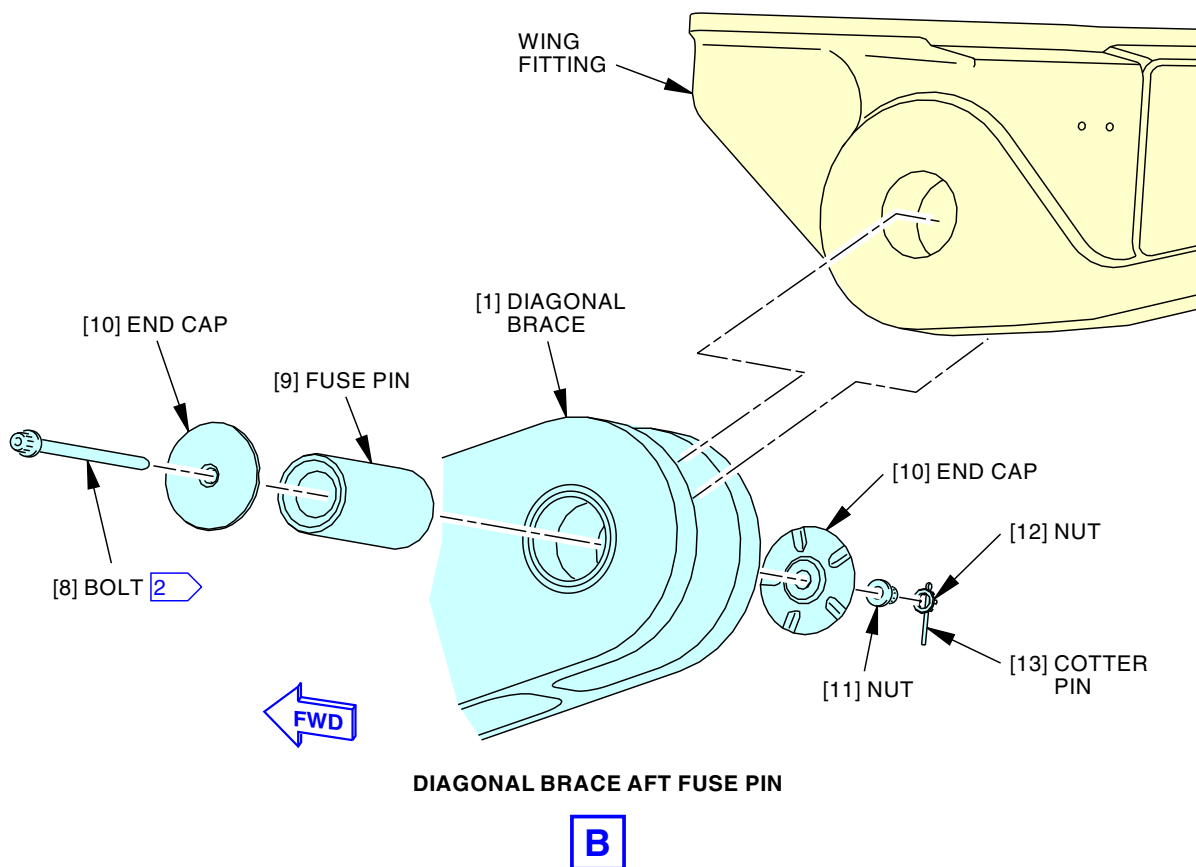
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2 BOLT MAY BE INSTALLED IN EITHER DIRECTION.

2416256 S00061540139_V1

Diagonal Brace Aft Fuse Pin Installation
Figure 403/54-51-04-990-807 (Sheet 2 of 2)

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TASK 54-51-04-400-802

5. Diagonal Brace Pin Installation

(Figure 402, Figure 403)

A. General

(1) This task installs the forward pin and aft fuse pin in the diagonal brace.

B. References

Reference	Title
51-00-53	CORROSION REMOVAL
51-22-00-390-806	Fillet Seal Application (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-01-580-802	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-804	Remove Support from the Strut with the Engine Removed (P/B 201)
54-51-04-200-801	Diagonal Brace Aft Fuse Pin and Bushing Examination (P/B 601)
54-51-04-200-802	Diagonal Brace Forward Pin and Bushing Examination (P/B 601)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Pin	54-51-04-01-040	SIA ALL
7	Cotter pin	54-51-04-01-010	SIA ALL
9	Fuse pin	54-51-04-01-045	SIA ALL
13	Cotter pin	54-51-04-01-010	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

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G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Install the Pin

SUBTASK 54-51-04-200-001

- (1) Do the tasks that follow to examine diagonal brace pins:
 - (a) Diagonal Brace Forward Pin and Bushing Examination, TASK 54-51-04-200-802.
 - (b) Diagonal Brace Aft Fuse Pin and Bushing Examination, TASK 54-51-04-200-801.

SUBTASK 54-51-04-210-001

- (2) Do a check that the pin [3], nut [5], end caps [4], bolt [2] and nut [6] are free from corrosion.
 - (a) Make sure that there is no corrosion internally on the pin.
- (3) Do a check that the fuse pin [9], nut [12], bolt [8], end caps [10] and nut [11] are free from corrosion.
 - (a) Make sure that there is no corrosion internally on the fuse pin.

SUBTASK 54-51-04-210-002

- (4) If you removed the diagonal brace, make sure that there is no corrosion internally on the bushings at the strut fitting.

SUBTASK 54-51-04-300-001

- (5) Do these steps if you find corrosion:
 - (a) Remove the corrosion (SUBJECT 51-00-53).
 - (b) To repair or replace a part with corrosion, contact Boeing for a corrective action.

SUBTASK 54-51-04-390-001

- (6) Make sure that all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply sealant to the bushings (TASK 51-22-00-390-806).
 - (b) Apply a fillet seal to the flanged end of all bushings.

SUBTASK 54-51-04-400-001

- (7) If you did not remove the strut, install the pin [3] or fuse pin [9] as follows:

NOTE: If you removed the diagonal brace, make sure that you install the forward pin at the strut fitting first.

 - (a) Make sure that the brass slug is not loaded.
 - (b) Apply a thin layer of grease, D00014 to the outer diameter of the pin [3] or fuse pin [9].
 - (c) Use the pin installation kit, tool, SPL-2020 to push out the brass slug with the pin [3] or fuse pin [9].

SUBTASK 54-51-04-400-002

- (8) If you removed the strut, install the pin [3] or fuse pin [9] as follows:

NOTE: If you removed the diagonal brace, make sure that you install the forward pin at the strut fitting first.

 - (a) Apply a thin layer of grease, D00014 to the outer diameter of the pin [3] or fuse pin [9].

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- (b) Use the pin installation kit, tool, SPL-2020 to install the pin [3] or fuse pin [9].

SUBTASK 54-51-04-420-002

- (9) Install these parts on the forward pin [3] at the strut fitting:

- (a) Install the end cap [4] to the bolt [2].

- (b) Install the bolt [2] and end cap [4] to the pin [3].

NOTE: The bolt may be installed in either direction.

- (c) Install the end cap [4].

- (d) Install the nut [5].

- 1) Apply a layer of Never-Seez NSBT compound, D00006 to the threads of the nut [5] and bolt [2].

- 2) Make sure that the run-on torque is 9.5 in-lb (1.1 N·m) - 80 in-lb (9 N·m).

- a) If the run-on torque is not 9.5 in-lb (1.1 N·m) - 80 in-lb (9 N·m), replace the nut.

- 3) Tighten the nut [5] to 291 in-lb (33 N·m) - 309 in-lb (35 N·m).

- (e) Install the nut [6].

- 1) Apply a layer of Never-Seez NSBT compound, D00006 to the threads of the nut [6].

- 2) Make sure that the run-on torque is more than 9.5 in-lb (1.1 N·m).

- a) If the run-on torque is not more than 9.5 in-lb (1.1 N·m), replace the nut [6].

- 3) Tighten the nut [6] to a target of 80 in-lb (9 N·m).

- 4) Tighten the nut [6] to align nut castellation with cotter pin hole in bolt, up to a maximum of 160 in-lb (18 N·m).

- a) If the cotter pin cannot be installed, then back off the nut minimum amount to align nut castellation with bolt cotter pin hole.

- (f) Install the new cotter pin [7].

SUBTASK 54-51-04-420-003

- (10) Install these parts on the aft fuse pin [9] at the wing fitting:

- (a) Install the end cap [10] to the bolt [8].

- (b) Install the bolt [8] and end cap [10] to the fuse pin [9].

NOTE: The bolt may be installed in either direction.

- (c) Install the end cap [10].

- (d) Install the nut [11].

- 1) Apply a thin layer of Never-Seez NSBT compound, D00006 to the threads of the nut [11] and bolt [8].

- 2) Make sure that the run-on torque is 9.5 in-lb (1.1 N·m) - 80 in-lb (9 N·m).

- a) If the run-on torque is not 9.5 in-lb (1.1 N·m) - 80 in-lb (9 N·m), replace the nut.

- 3) Tighten the nut [11] to 291 in-lb (33 N·m) - 309 in-lb (35 N·m).

- (e) Install the nut [12].

- 1) Apply a layer of Never-Seez NSBT compound, D00006 to the threads of the nut [12].

- 2) Make sure that the run-on torque is more than 9.5 in-lb (1.1 N·m).

- a) If the run-on torque is not more than 9.5 in-lb (1.1 N·m), replace the nut [12].

- 3) Tighten the nut [12] to a target of 80 in-lb (9 N·m).

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- 4) Tighten the nut [12] to align nut castellation with cotter pin hole in bolt, up to a maximum of 160 in-lb (18 N·m).
 - a) If the cotter pin cannot be installed, then back off the nut minimum amount to align nut castellation with bolt cotter pin hole.
- (f) Install the new cotter pin [13].

SUBTASK 54-51-04-200-002

- (11) Make sure that all parts are tightly seated.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-04-580-004

- (1) Remove the support from the strut as follows:
 - (a) If you installed the pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-802.
 - (b) If you installed the pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-804.

SUBTASK 54-51-04-410-002

- (2) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-04-440-002

- (3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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DIAGONAL BRACE - INSPECTION/CHECK

1. **General**

A. This procedure has these tasks:

- (1) Diagonal brace aft fuse pin and bushing examination
- (2) Diagonal brace forward pin and bushing examination.

TASK 54-51-04-200-801

2. **Diagonal Brace Aft Fuse Pin and Bushing Examination**

(Figure 601)

A. **General**

- (1) This task examines the aft fuse pin in the diagonal brace for worn areas. This task also examines the bushings in the diagonal brace and the underwing fitting for worn areas.
- (2) When you examine one or more diagonal brace pins at the same time, both aft upper spar fuse pins and both upper link pins must stay installed, unless you remove the strut.

B. **References**

Reference	Title
54-51-04-000-801	Diagonal Brace Removal (P/B 401)
54-51-04-000-802	Diagonal Brace Pin Removal (P/B 401)
54-51-04-400-802	Diagonal Brace Pin Installation (P/B 401)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Examination**

SUBTASK 54-51-04-000-002

- (1) Do this task: Diagonal Brace Pin Removal, TASK 54-51-04-000-802.

E. **Fuse Pin and Bushing Examination**

SUBTASK 54-51-04-220-001

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the fuse pin for the diagonal brace.
 - (b) Measure the inside diameter of the bushing in the underwing attach fitting.
 - (c) Measure the inside diameter of the bushings in the aft end of the diagonal brace.

SUBTASK 54-51-04-300-002

- (2) Make sure the dimensions are in the tolerances as specified in Table 601.

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Table 601/54-51-04-993-801 Diagonal Brace Aft Fuse Pin Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			MINIMUM	MAXIMUM	PERMITTED WEAR DIMENSIONS	MAX CLEARANCE
1	BUSHING (WING FITTING)	I.D.	1.8680 in. (47.447 mm)	1.8700 in. (47.498 mm)	1.8736 in. (47.589 mm)	0.0072 in. (0.183 mm)
	FUSE PIN	O.D.	1.8664 in. (47.407 mm)	1.8670 in. (47.422 mm)	1.8628 in. (47.315 mm)	
2	BUSHING (DIAGONAL BRACE)	I.D.	1.8680 in. (47.447 mm)	1.8700 in. (47.498 mm)	1.8736 in. (47.589 mm)	0.0072 in. (0.183 mm)
	FUSE PIN	O.D.	1.8664 in. (47.407 mm)	1.8670 in. (47.422 mm)	1.8628 in. (47.315 mm)	

- (a) If the fuse pin dimensions are not in the tolerances, replace the fuse pin.
- (b) If the bushing dimensions in the aft underwing fitting are not in the tolerances, replace the bushing.
- (c) If the bushing dimensions in the diagonal brace are not in the tolerances, replace the diagonal brace (Diagonal Brace Removal, TASK 54-51-04-000-801).

NOTE: This LRU is repairable. See applicable CMM.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-04-400-003

- (1) Do this task: Diagonal Brace Pin Installation, TASK 54-51-04-400-802.

————— **END OF TASK** —————

TASK 54-51-04-200-802

3. Diagonal Brace Forward Pin and Bushing Examination

(Figure 601)

A. General

- (1) This task examines the forward pin in the diagonal brace for worn areas. This task also examines the bushings in the diagonal brace and the strut attach fitting for worn areas.
- (2) When you examine one or more diagonal brace pins, both aft upper spar fuse pins and both upper link pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-04-000-801	Diagonal Brace Removal (P/B 401)
54-51-04-000-802	Diagonal Brace Pin Removal (P/B 401)
54-51-04-400-802	Diagonal Brace Pin Installation (P/B 401)

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C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-04-000-003

- (1) Do this task: Diagonal Brace Pin Removal, TASK 54-51-04-000-802.

E. Pin and Bushing Examination

SUBTASK 54-51-04-220-002

- (1) Measure these dimensions:
- (a) Measure the outside diameter of the pin for the diagonal brace.
 - (b) Measure the inside diameter of the bushings in the strut aft lower spar fitting.
 - (c) Measure the inside diameter of the bushings in the forward end of the diagonal brace.

SUBTASK 54-51-04-300-003

- (2) Make sure that the dimensions are in the tolerances as specified in Table 602.

Table 602/54-51-04-993-802 Diagonal Brace Forward Pin Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			MINIMUM	MAXIMUM	Permitted Wear Dimensions	MAX. Clearance
3	BUSHING (DIAGONAL BRACE)	I.D.	1.8580 in. (47.193 mm)	1.8600 in. (47.244 mm)	1.8636 in. (47.335 mm)	0.0072 in. (0.183 mm)
	PIN	O.D.	1.8564 in. (47.153 mm)	1.8570 in. (47.168 mm)	1.8528 in. (47.061 mm)	
4	BUSHING (STRUT)	I.D.	1.8580 in. (47.193 mm)	1.8600 in. (47.244 mm)	1.8636 in. (47.335 mm)	0.0072 in. (0.183 mm)
	PIN	O.D.	1.8564 in. (47.153 mm)	1.8570 in. (47.168 mm)	1.8528 in. (47.061 mm)	

- (a) If the pin dimensions are not in the tolerances, replace the pin.
- (b) If the bushing dimensions in the strut aft lower spar fitting are not in the tolerances, replace the bushings.
- (c) If the bushing dimensions in the diagonal brace are not in the tolerances, replace the diagonal brace (Diagonal Brace Removal, TASK 54-51-04-000-801).

NOTE: This LRU is repairable. See applicable CMM.

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F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-04-400-004

(1) Do this task: Diagonal Brace Pin Installation, TASK 54-51-04-400-802.

———— **END OF TASK** ————

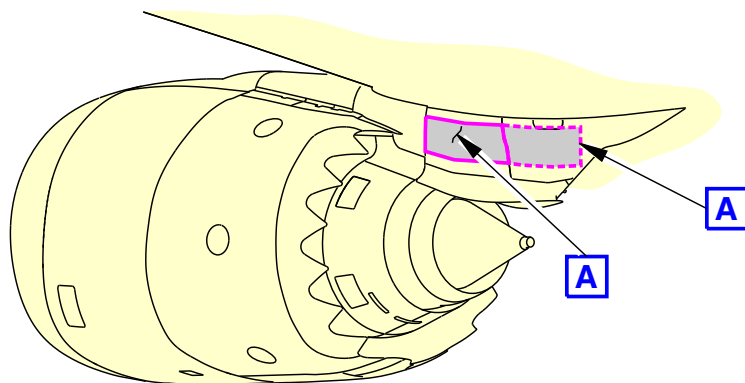
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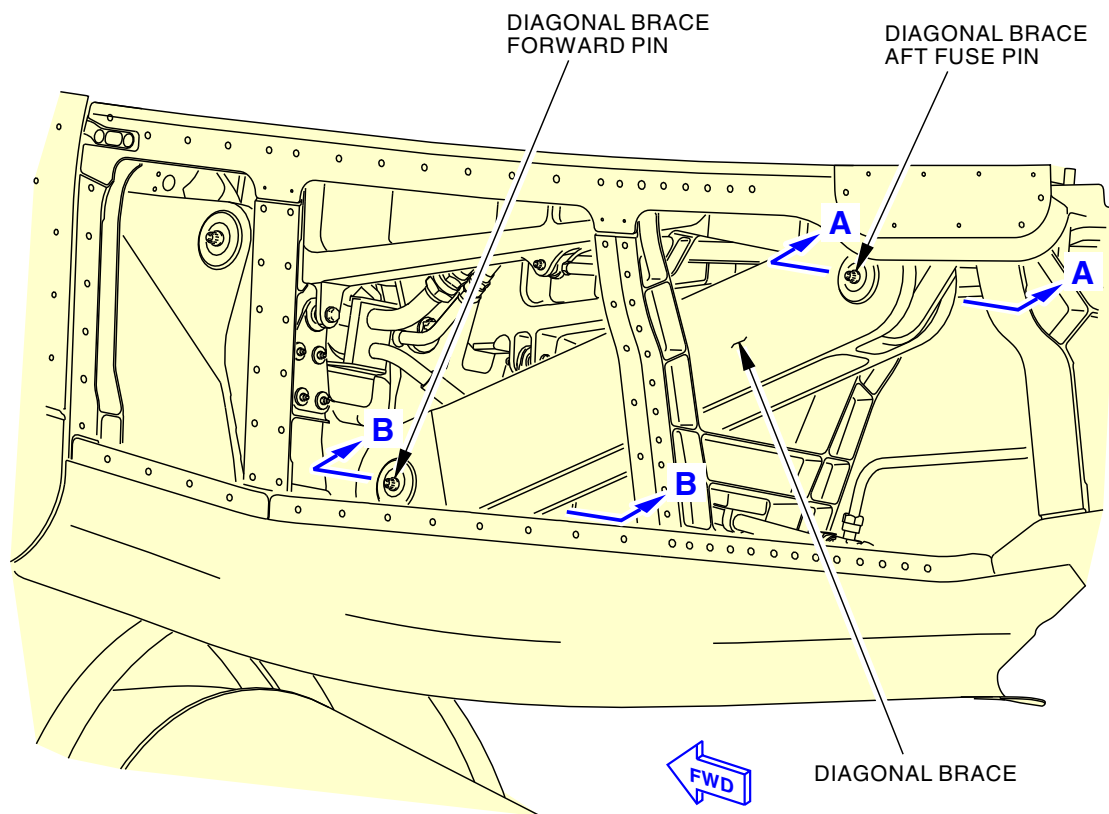
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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



(FIXED PANEL NOT SHOWN FOR CLARITY)

A

2416257 S00061540143_V2

Diagonal Brace Examination
Figure 601/54-51-04-990-804 (Sheet 1 of 2)

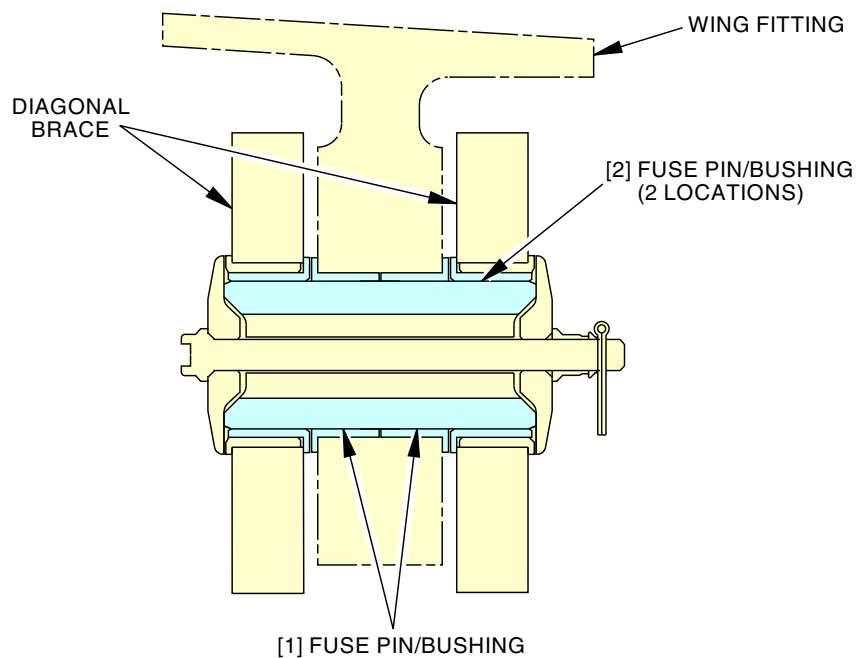
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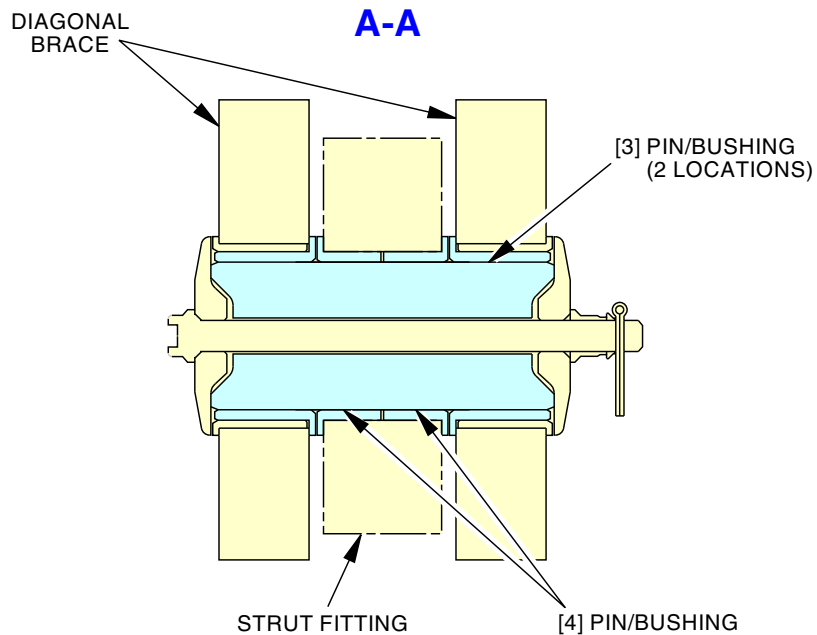
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DIAGONAL BRACE - WING

A-A



DIAGONAL BRACE - STRUT

B-B

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Diagonal Brace Examination
Figure 601/54-51-04-990-804 (Sheet 2 of 2)

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SIDE LINK - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) Side link removal
- (2) Original side link installation
- (3) New side link installation
- (4) Lower pin removal
- (5) Lower pin installation.

TASK 54-51-05-000-801

2. **Side Link Removal**

(Figure 401)

A. **General**

- (1) This task has the steps to remove the side links.
- (2) Only one pair of side links may be removed at a time. One pair of side link must remain installed during removal of the other pair of side links.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. **Access Panels**

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

F. **Prepare for the Removal**

SUBTASK 54-51-05-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

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SUBTASK 54-51-05-010-001

- (2) To get access to the side links, remove the applicable aft fairing forward access panel (TASK 54-52-06-000-801):

Open these access panels:

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Procedure

SUBTASK 54-51-05-930-001

- (1) Make a mark or put a tag on each pair of side links [7] that you will remove, which identifies the airplane and strut location where it was removed.

NOTE: If you will not install the side links on the same side of the same strut where you remove them, you must do the task to install a new pair of side links (TASK 54-51-05-400-802).

SUBTASK 54-51-05-020-001



REMOVE ONLY ONE PAIR OF SIDE LINKS AT A TIME. IF YOU REMOVE BOTH, THE STRUT CAN MOVE SUDDENLY AND INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR.

- (2) Use the open-ended wrench from the kit, tool, SPL-2020 to remove the cotter pin [11], nut [4], pin [2], and washers [8] from the strut fitting.

SUBTASK 54-51-05-020-002

- (3) Use the open-ended wrench from the kit, tool, SPL-2020 to remove the cotter pin [11], nut [4], washer [10], pin [2], washer [9], and side links [7] from the wing fitting.

————— **END OF TASK** —————

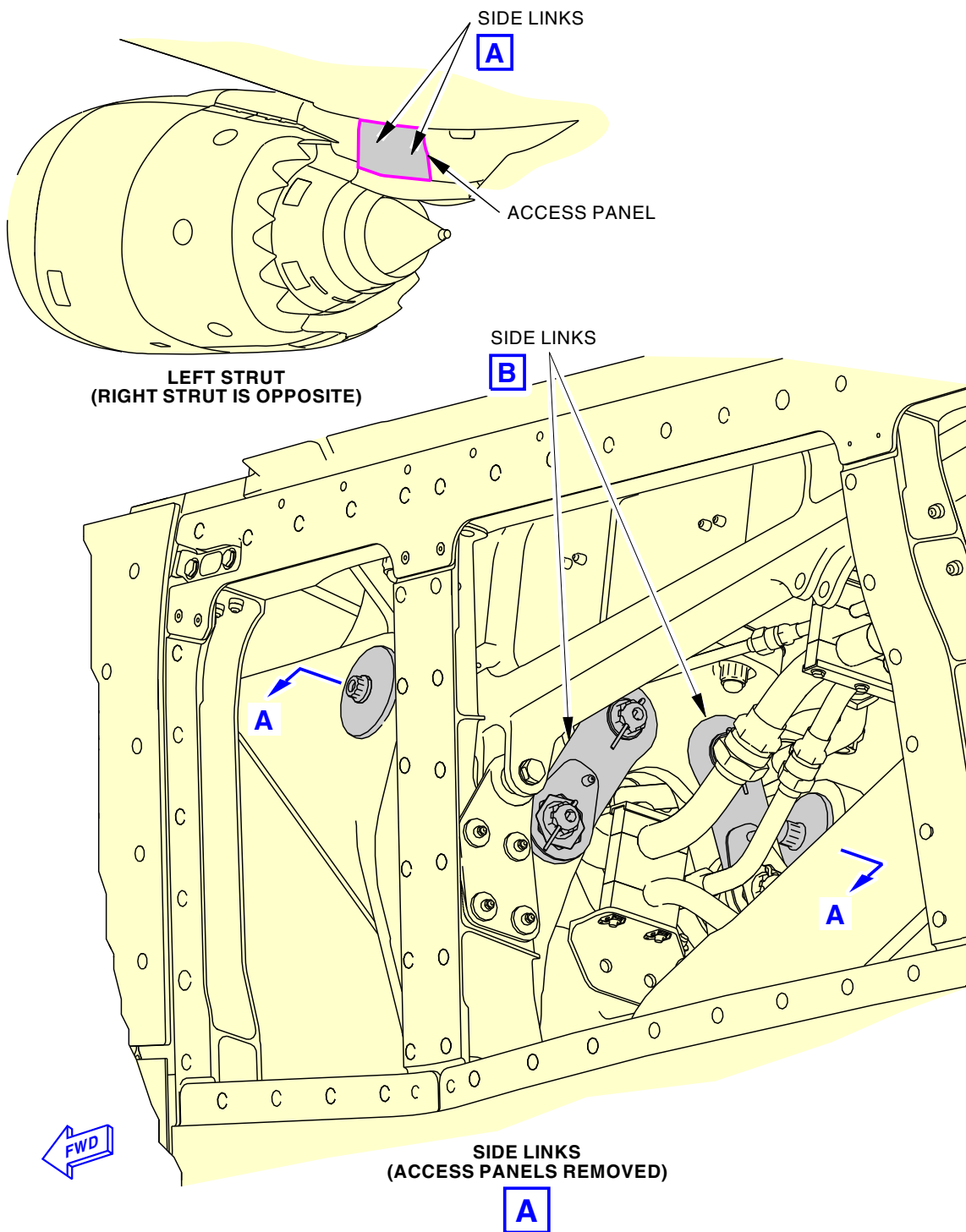
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Side Links Installation
Figure 401/54-51-05-990-803 (Sheet 1 of 2)

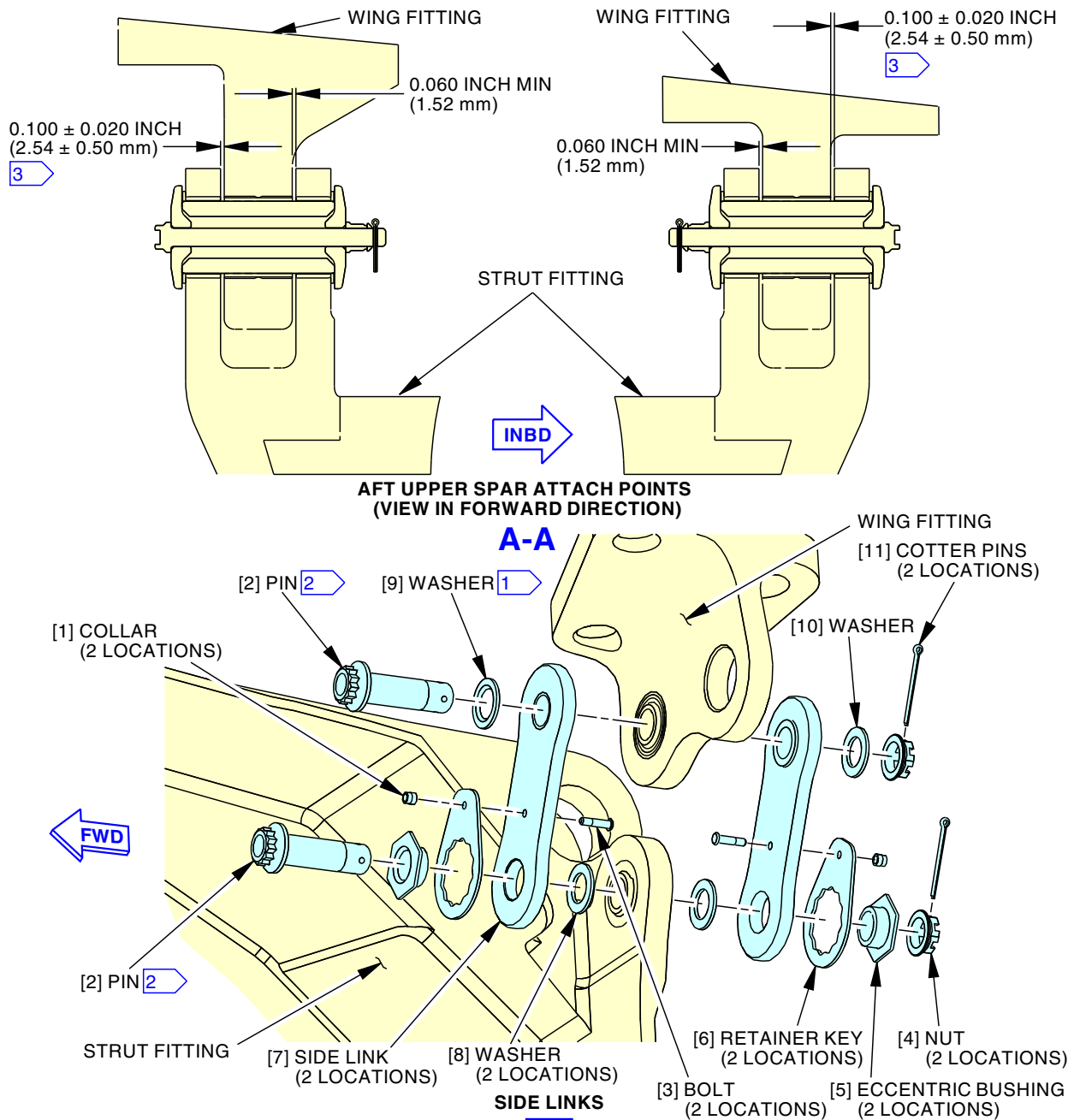
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- [1] COUNTERSINK SIDE OF WASHER ADJACENT TO BOLT HEAD
- [2] PINS MAY BE INSTALLED IN EITHER DIRECTION
- [3] EQUALIZE THE GAPS WITHIN 0.005 IN (0.127mm).

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Side Links Installation
Figure 401/54-51-05-990-803 (Sheet 2 of 2)

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TASK 54-51-05-400-801

3. Original Side Link Installation

(Figure 401)

A. General

- (1) This task has the steps to install the original side links that you removed in the removal task.
- (2) Make sure that you install each pair of side links in the same location on the same airplane where you removed them.
 - (a) If you will not install the side links on the same side of the same strut where you remove them, you must do the task to install a new pair of side links (New Side Link Installation, TASK 54-51-05-400-802).

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-05-220-801	Strut Side Link Examination (P/B 601)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
7	Side link	54-51-05-01-065	SIA ALL
11	Cotter pin	54-51-05-01-020	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

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(Continued)

Number	Name/Location
--------	---------------

444AR	Aft Strut Fairing, Right Panel, Strut 2
-------	---

H. Original Side Link Installation

SUBTASK 54-51-05-200-001

- (1) Make sure that the components for the side links [7] are within the wear limits (Strut Side Link Examination, TASK 54-51-05-220-801).

SUBTASK 54-51-05-210-001

- (2) Make sure that the orientation of the eccentric bushings [5] and the retainer keys [6] have not turned.

SUBTASK 54-51-05-210-002

- (3) Make sure that you install each pair of side links [7] on the same side of the same strut where you removed them.

SUBTASK 54-51-05-420-001

- (4) Do the steps that follow to install the side links [7] on the strut fitting:
 - (a) Apply a thin film of grease, D00014 to the outer diameter of the pin [2] for the strut fitting.
 - (b) Install the washers [8], side links [7], and pin [2] on the strut fitting.

NOTE: The pin may be installed in either direction.
 - (c) Install the nut [4] at the strut fitting.
 - 1) Apply Never-Seez NSBT compound, D00006 to the base and threads of the nut [4].
 - 2) Measure the run-on torque of the nut [4].
 - a) If the run-on torque is not 50 in-lb (6 N·m) - 400 in-lb (45 N·m), replace the nut and do the check again.
 - 3) Use the open-ended wrench from the kit, tool, SPL-2020 to install the nut [4] to the pin [2].

SUBTASK 54-51-05-420-006

- (5) Do the steps that follow to install the side links [7] on the wing fitting:
 - (a) Apply a thin film of grease, D00014 to the outer diameter of the pin [2] for the wing fitting.
 - (b) Install the washer [9] to the pin [2] with the countersink side of washer adjacent to the pin head.
 - (c) Install the pin [2], washer [9], side links [7], and washer [10] to the wing fitting.

NOTE: The pin may be installed in either direction.
 - (d) Install the nut [4] at the wing fitting.
 - 1) Apply Never-Seez NSBT compound, D00006 to the base and threads of the nut [4].
 - 2) Measure the run-on torque of the nut [4].
 - a) If the run-on torque is not 50 in-lb (6 N·m) - 400 in-lb (45 N·m), replace the nut and do the check again.
 - 3) Use the open-ended wrench from the kit, tool, SPL-2020 to install the nut [4] to the pin [2].

SUBTASK 54-51-05-420-007

- (6) Tighten the nuts [4] to a minimum torque of 50 in-lb (6 N·m) above the measured run-on torque.

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SUBTASK 54-51-05-420-008

- (7) Tighten the nuts [4] or pins [2] to align nut castellation with cotter pin hole in pin, up to a maximum torque of 1500 in-lb (169 N·m).

SUBTASK 54-51-05-420-009

- (8) Install the new cotter pins [11].

SUBTASK 54-51-05-210-003

- (9) Make sure that all the parts are seated firmly.

SUBTASK 54-51-05-420-002

- (10) If the other pair of side links [7] need to be replaced, do this task: Side Link Removal, TASK 54-51-05-000-801.

I. Side Link Installation Test

SUBTASK 54-51-05-220-004

- (1) Make sure that the clearances between the wing fitting and the strut fitting are in tolerance (Figure 401).

J. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-001

- (1) Close these access panels:
(Aft Fairing Access Panel Installation, TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-05-440-001

- (2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

TASK 54-51-05-400-802

4. New Side Link Installation

(Figure 401)

A. General

- (1) This task has the steps to install the new side links.

B. References

<u>Reference</u>	<u>Title</u>
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-05-220-801	Strut Side Link Examination (P/B 601)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

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Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205
SPL-11578	Alignment Equipment - Eccentric Bushing, Engine Strut Side Links Part #: C54018-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Collar	54-51-05-01-015	SIA ALL
7	Side link	54-51-05-01-065	SIA ALL
11	Cotter pin	54-51-05-01-020	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. New Side Link Installation

SUBTASK 54-51-05-200-002

- (1) Make sure that the components for the side links [7] are within wear limits, do this task: Strut Side Link Examination, TASK 54-51-05-220-801.

SUBTASK 54-51-05-820-001

- (2) Install a temporary shim to set the distance between the wing fitting and the strut fitting at the aft upper spar location (Figure 401).

SUBTASK 54-51-05-820-002

- (3) Do these steps to set the length of the side links [7]:
 - (a) Install the strut side links eccentric bushing aligner, SPL-11578, between the wing fitting and strut fitting in the location of one pair of side links [7].
 - 1) Lock the position of the side link locating jig for one side of one strut.
 - 2) Remove the side link locating jig.
 - (b) Do the steps that follow to set the length for both side links [7] on the same side of the same strut:

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- 1) Put one side link [7] in the side link locating jig.
 - a) Apply a thin film of grease, D00014 to the outer diameter of an eccentric bushing [5].
 - b) Turn the eccentric bushing [5] until you get the correct length.
 - c) Install the eccentric bushing [5].
 - d) Carefully remove the side link [7] from the side link locating jig.
 - e) Do these steps again for the other side link [7] on the same side of the same strut, using the opposite side of the tool base plate of the side link locating jig.
- 2) Put the retainer key [6] over the eccentric bushing [5].
 - a) Make sure that the drilled hole in the retainer key [6] will have a minimum edge margin of 0.38 in. (9.65 mm).
 - b) You can turn over the retainer key [6] if it is necessary.
 - c) Use a handle drill bushing and a drill to make a pilot hole through the retainer key [6] and the side link [7].

NOTE: The pilot hole should be less than 0.19 in. (4.83 mm) diameter.
- 3) Drill a 0.190 in. (4.826 mm) - 0.194 in. (4.928 mm) diameter hole through the existing pilot hole in the retainer key [6] and into the side link [7].
 - a) Remove burrs or sharp edges.
- 4) Install the bolt [3] and new collar [1] through the side link [7] and retainer key [6] (Figure 401).

NOTE: Make sure that the collar is on the same side of the side link as the retainer key. See illustration.

SUBTASK 54-51-05-420-003

- (4) Do the steps that follow to install the side links [7] on the strut fitting:
 - (a) Apply a thin film of grease, D00014 to the outer diameter of the lower pin [2] for the strut fitting.
 - (b) Install the washers [8], side links [7], and pin [2] to the strut fitting.

NOTE: The pin may be installed in either direction.
 - (c) Install the nut [4] at the strut fitting.
 - 1) Apply Never-Seez NSBT compound, D00006 to the base and threads of the nut [4].
 - 2) Measure the run-on torque of the nut [4].
 - a) If the run-on torque is not 50 in-lb (6 N·m) - 400 in-lb (45 N·m), replace the nut and do the check again.
 - 3) Use the open-ended wrench from the kit, tool, SPL-2020 to install the nut [4] to the pin [2].

SUBTASK 54-51-05-420-010

- (5) Do the steps that follow to install the side links [7] on the wing fitting:
 - (a) Apply a thin film of grease, D00014 to the outer diameter of the pin [2] for the wing fitting.
 - (b) Install the washer [9] to the pin [2] with the countersink side of washer adjacent to the pin head.
 - (c) Install the pin [2], washer [9], side links [7], and washer [10] to the wing fitting.

NOTE: The pin may be installed in either direction.

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- 1) If necessary, tap the pin [2] through the side links and wing fitting with a rubber mallet.
- (d) Install the nut [4] at the wing fitting.
 - 1) Apply Never-Seez NSBT compound, D00006 to the base and threads of the nut [4].
 - 2) Measure the run-on torque of the nut [4].
 - a) If the run-on torque is not 50 in-lb (6 N·m) - 400 in-lb (45 N·m), replace the nut and do the check again.
 - 3) Use the open-ended wrench from the kit, tool, SPL-2020 to install the nut [4] to the pin [2].

SUBTASK 54-51-05-420-011

- (6) Tighten the nuts [4] to a minimum torque of 50 in-lb (6 N·m) above the measured run-on torque.

SUBTASK 54-51-05-420-012

- (7) Tighten the nuts [4] or pins [2] to align nut castellation with cotter pin hole in pin, up to a maximum torque of 1500 in-lb (169 N·m).

SUBTASK 54-51-05-420-013

- (8) Install the new cotter pins [11].

SUBTASK 54-51-05-210-004

- (9) Make sure that all the parts are seated firmly.

SUBTASK 54-51-05-420-004

- (10) If the other pair of side links [7] are removed, do the steps above to install them.

SUBTASK 54-51-05-020-004

- (11) Remove the temporary shims.

I. Side Link Installation Test

SUBTASK 54-51-05-220-005

- (1) Make sure that the clearances between the wing fitting and the strut fitting are in tolerance (Figure 401).

J. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-002

- (1) Close these access panels:

(Aft Fairing Access Panel Installation, TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-05-440-002

- (2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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TASK 54-51-05-000-802

5. Lower Pin Removal

(Figure 401)

A. **General**

(1) This task has the steps to remove the lower pin from the side links.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. **Access Panels**

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

F. **Prepare for the Removal**

SUBTASK 54-51-05-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-51-05-010-002

(2) To get access to the side links, remove the applicable aft fairing forward access panel (TASK 54-52-06-000-801):

Open these access panels:

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

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G. Procedure

SUBTASK 54-51-05-020-003



WARNING

REMOVE ONLY ONE PAIR OF SIDE LINKS AT A TIME. IF YOU REMOVE BOTH, THE STRUT CAN MOVE SUDDENLY AND INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR.

- (1) Use the open-ended wrench from the kit, tool, SPL-2020 to remove the cotter pin [11], nut [4], pin [2] and washers [8] from the strut fitting.

————— END OF TASK —————

TASK 54-51-05-400-803

6. Lower Pin Installation

(Figure 401)

A. General

- (1) This task has the steps to install the lower pin in the side links.
- (2) If you will install a strut which is not the same strut that you removed, you must do the task to install new side links: New Side Link Installation, TASK 54-51-05-400-802.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-51-05-220-801	Strut Side Link Examination (P/B 601)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-2020	Kit - Fuse Pin, Removal/Installation Part #: C54022-1 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Pin	54-51-05-01-025	SIA ALL
11	Cotter pin	54-51-05-01-020	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2

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(Continued)

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Lower Pin Installation

SUBTASK 54-51-05-200-003

- (1) Make sure that the components for the side links [7] are within the wear limits, do this task: Strut Side Link Examination, TASK 54-51-05-220-801.

SUBTASK 54-51-05-420-005

- (2) Do the steps that follow to install the lower pin [2] to the strut:
 - (a) Apply a thin film of grease, D00014 to the outer diameter of the lower pin [2] for the strut fitting.
 - (b) Install the washers [8], side links [7], and pin [2] to the strut fitting.

NOTE: The pin may be installed in either direction.
 - (c) Install the nut [4] at the strut fitting.
 - 1) Apply Never-Seez NSBT compound, D00006 to the base and threads of the nut [4] for the strut fitting.
 - 2) Measure the run-on torque of the nut [4].
 - a) If the run-on torque is not 50 in-lb (6 N·m) - 400 in-lb (45 N·m), replace the nut and do the check again.
 - 3) Use the open-ended wrench from the kit, tool, SPL-2020 to install the nut [4] to the pin [2] at the strut fitting.
 - 4) Tighten the nut [4] to a minimum torque of 50 in-lb (6 N·m) above the measured run-on torque.
 - 5) Tighten the nut [4] or pin [2] to align nut castellation with cotter pin hole, up to a maximum of 1500 in-lb (169 N·m).
 - (d) Install the new cotter pin [11].
 - (e) Make sure that all the parts are seated firmly.

I. Lower Pin Installation Test

SUBTASK 54-51-05-220-006

- (1) Make sure that the clearances between the wing fitting and the strut fitting are in tolerance (Figure 401).

J. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-003

- (1) Close these access panels:
(Aft Fairing Access Panel Installation, TASK 54-52-06-400-801)

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<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-51-05-440-003

- (2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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STRUT SIDE LINK - INSPECTION/CHECK

1. General

- A. This procedure has this task:
- (1) Strut side link examination.

TASK 54-51-05-220-801

2. Strut Side Link Examination

(Figure 601)

A. **General**

- (1) This task examines the strut side links for worn areas. This task also examines the bearings in the underwing and strut aft upper spar fittings for worn areas.
 - (a) Each strut has two side link assemblies.
 - (b) Each side link assembly includes two side links, two pins, and two eccentric bushings.
- (2) You must remove and examine one side link assembly at the same time. Do not change parts from one side link to a different side link.

B. **References**

Reference	Title
54-51-05-000-801	Side Link Removal (P/B 401)
54-51-05-400-801	Original Side Link Installation (P/B 401)
54-51-05-400-802	New Side Link Installation (P/B 401)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Examination**

SUBTASK 54-51-05-000-001

- (1) To remove the applicable side link, do this task: Side Link Removal, TASK 54-51-05-000-801.

SUBTASK 54-51-05-930-002

- (2) Make a mark or put a tag on each part of each side link assembly, which identifies the strut location where you removed it.

NOTE: If you do not install each side link assembly in the same location where you remove it, you must do the task to install a new pair of side links, (New Side Link Installation, TASK 54-51-05-400-802).

E. **Side Link Examination**

SUBTASK 54-51-05-220-003

- (1) For each side link assembly that you will examine, measure these dimensions:
 - (a) Measure the outside diameter of the upper and lower side link pins.
 - (b) Measure the inside diameter of the upper bushings in the side links.
 - (c) Measure the inside diameter and the outside diameter of the eccentric bushings.
 - (d) Measure the inside diameter and the outside diameter of the upper and lower bearings.

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(e) Measure the inside diameter of the upper and lower bearing races.

SUBTASK 54-51-05-300-001

(2) Make sure the dimensions are in the tolerances as specified in Table 601.

Table 601/54-51-05-993-801 Side Link Wear Limits

INDEX NO.	NAME OF THE PARTS THAT ARE IN CONTACT	DIM.	DIAMETER DESIGN LIMITS		WEAR LIMITS	
			Minimum inches / mm	Maximum inches / mm	Allowed Wear Dimension	Maximum Clearance
1	BUSHING	I.D.	0.7500 in. (19.050 mm)	0.7505 in. (19.063 mm)	0.7525 in. (19.114 mm)	0.0040 in. (0.102 mm)
	PIN (UPPER)	O.D.	0.7485 in. (19.012 mm)	0.7490 in. (19.025 mm)	0.7465 in. (18.961 mm)	
2	BEARING	I.D.	0.7500 in. (19.050 mm)	0.7505 in. (19.063 mm)	0.7525 in. (19.114 mm)	0.0040 in. (0.102 mm)
	PIN (UPPER)	O.D.	0.7485 in. (19.012 mm)	0.7490 in. (19.025 mm)	0.7465 in. (18.961 mm)	
3	ECCENTRIC BUSHING	I.D.	0.7500 in. (19.050 mm)	0.7505 in. (19.063 mm)	0.7525 in. (19.114 mm)	0.0040 in. (0.102 mm)
	PIN (LOWER)	O.D.	0.7485 in. (19.012 mm)	0.7490 in. (19.025 mm)	0.7465 in. (18.961 mm)	
4	BEARING	I.D.	0.7500 in. (19.050 mm)	0.7505 in. (19.063 mm)	0.7525 in. (19.114 mm)	0.0040 in. (0.102 mm)
	PIN (LOWER)	O.D.	0.7485 in. (19.012 mm)	0.7490 in. (19.025 mm)	0.7465 in. (18.961 mm)	
5	SIDE LINK (LOWER HOLE)	I.D.	0.9997 in. (25.392 mm)	1.0002 in. (25.405 mm)	1.0004 in. (25.410 mm)	0.0004 in. (0.010 mm)
	ECCENTRIC BUSHING	O.D.	1.0000 in. (25.400 mm)	1.0005 in. (25.413 mm)	0.9998 in. (25.395 mm)	
6	SIDE LINK (UPPER HOLE)	I.D.	0.8750 in. (22.225 mm)	0.8754 in. (22.235 mm)	N/A	N/A
	BUSHING	O.D.	0.8765 in. (22.263 mm)	0.8770 in. (22.276 mm)	N/A	

(a) If the side link pin dimensions are not in the tolerances, replace the pin.

(b) If the side link dimension is not in the tolerances, replace the side link.

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- (c) If the bushing dimensions in the side links are not in the tolerances, replace the side links (Side Link Removal, TASK 54-51-05-000-801).

NOTE: This LRU is repairable. See applicable CMM.

- (d) If the eccentric bushing dimensions are not in the tolerances, replace the eccentric bushing.
- (e) If the bearing dimensions are not in the tolerances, replace the bearing.

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-05-400-001

- (1) Do this task: Original Side Link Installation, TASK 54-51-05-400-801.

———— **END OF TASK** ————

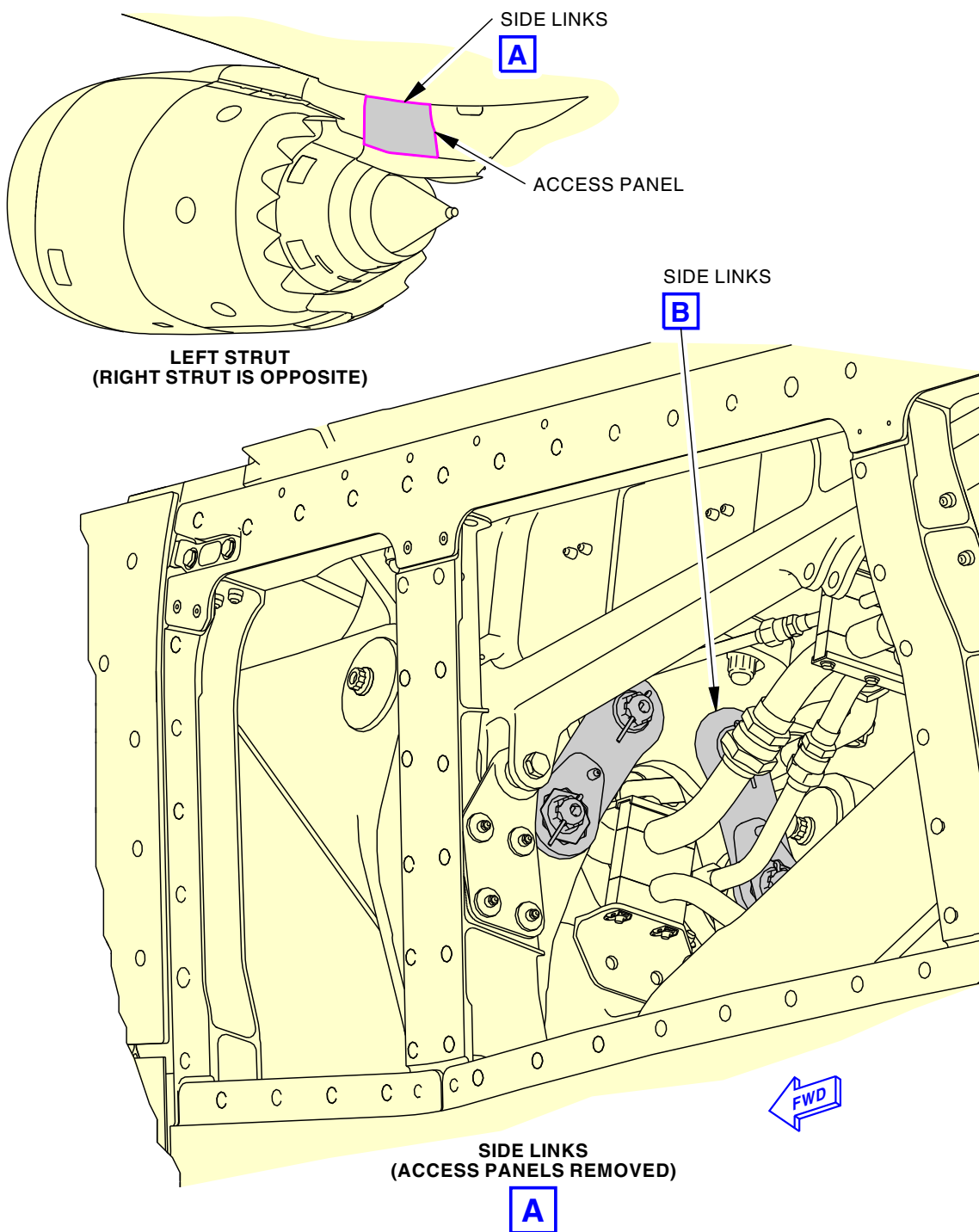
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Side Links Examination
Figure 601/54-51-05-990-802 (Sheet 1 of 2)

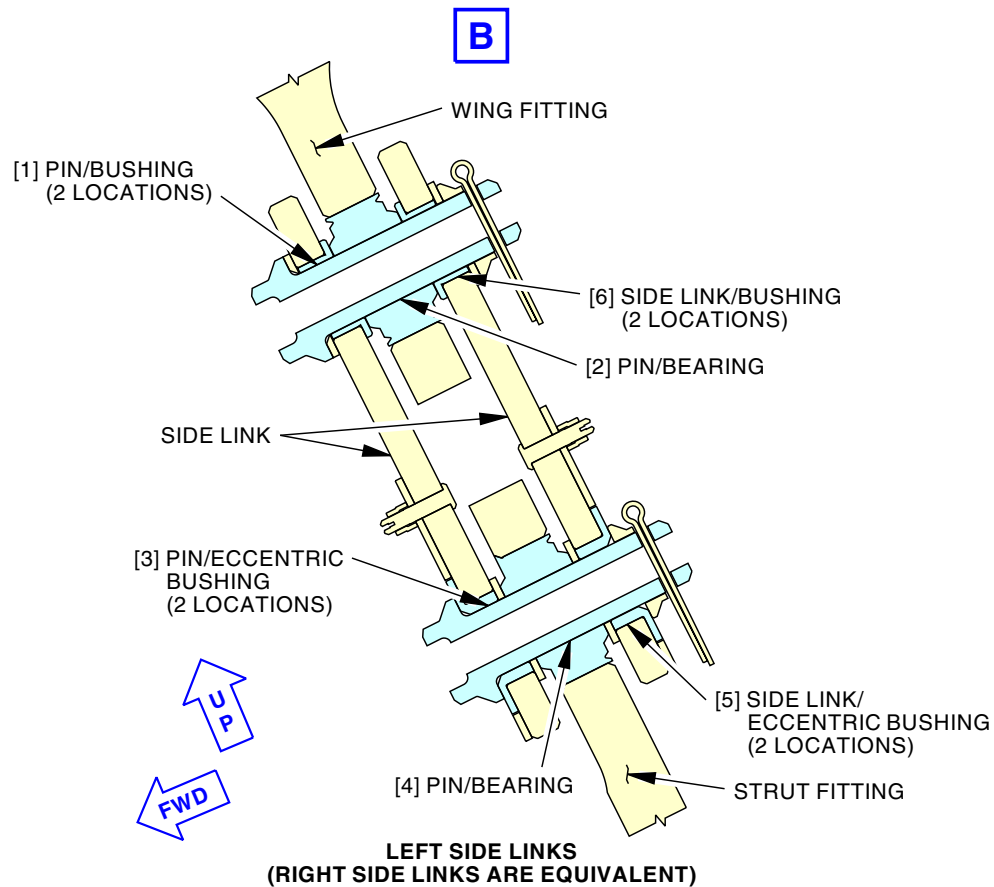
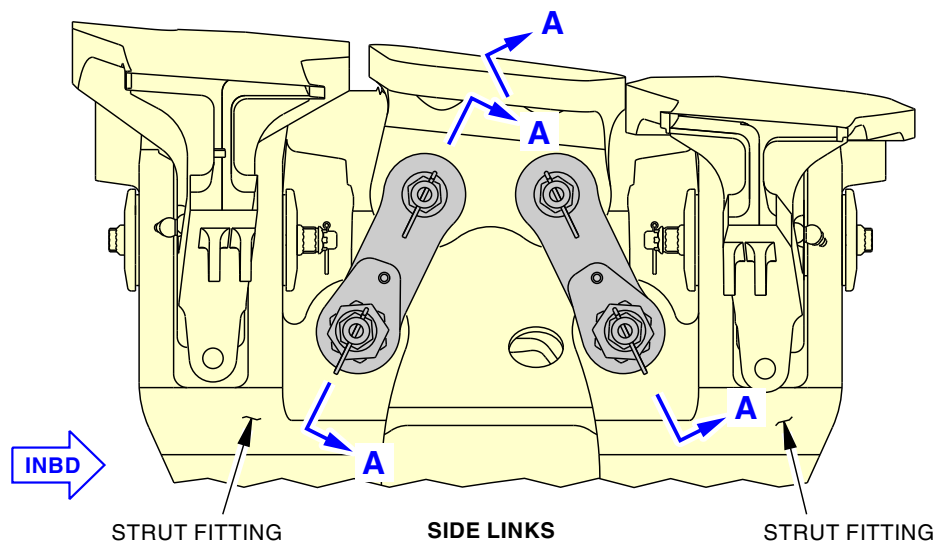
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Side Links Examination
Figure 601/54-51-05-990-802 (Sheet 2 of 2)

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THRUST REVERSER CROSS TIE ROD LANYARD - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the thrust reverser cross tie rod lanyard
- (2) An installation of the thrust reverser cross tie rod lanyard.

TASK 54-51-06-000-801

2. **Thrust Reverser Cross Tie Rod Lanyard Removal**

(Figure 401)

A. **General**

- (1) This task gives instructions to remove the thrust reverser cross tie rod lanyard.

B. **References**

Reference	Title
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)

C. **Location Zones**

Zone	Area
415	Engine 1 - Thrust Reverser, Left
416	Engine 1 - Thrust Reverser, Right
425	Engine 2 - Thrust Reverser, Left
426	Engine 2 - Thrust Reverser, Right

D. **Prepare for the Removal**

SUBTASK 54-51-06-010-001

- (1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-G00.

E. **Thrust Reverser Cross Tie Rod Lanyard Removal**

SUBTASK 54-51-06-020-001

- (1) Remove the lanyard [6], do these steps:
 - (a) Remove the nut [5] and release the tab of the lanyard [6] at the cross tie rod end.
 - (b) If necessary, install the nut [5] on the bolt to secure the assembly until the lanyard is installed.
 - (c) Remove the nut [4], washer [3], washer [2], and bolt [1] that attache the lanyard [6] to the hanger bracket.
 - (d) Remove the lanyard [6].

————— **END OF TASK** —————

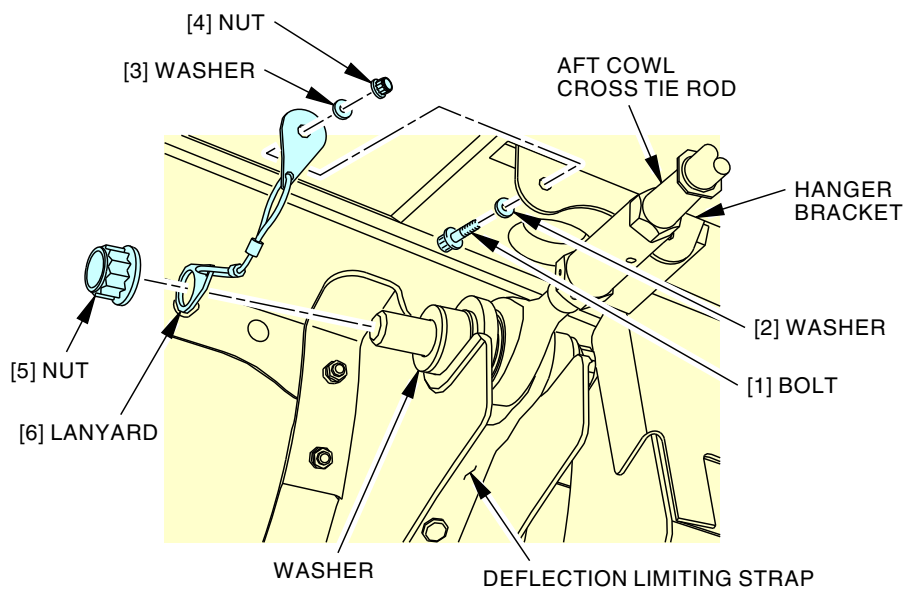
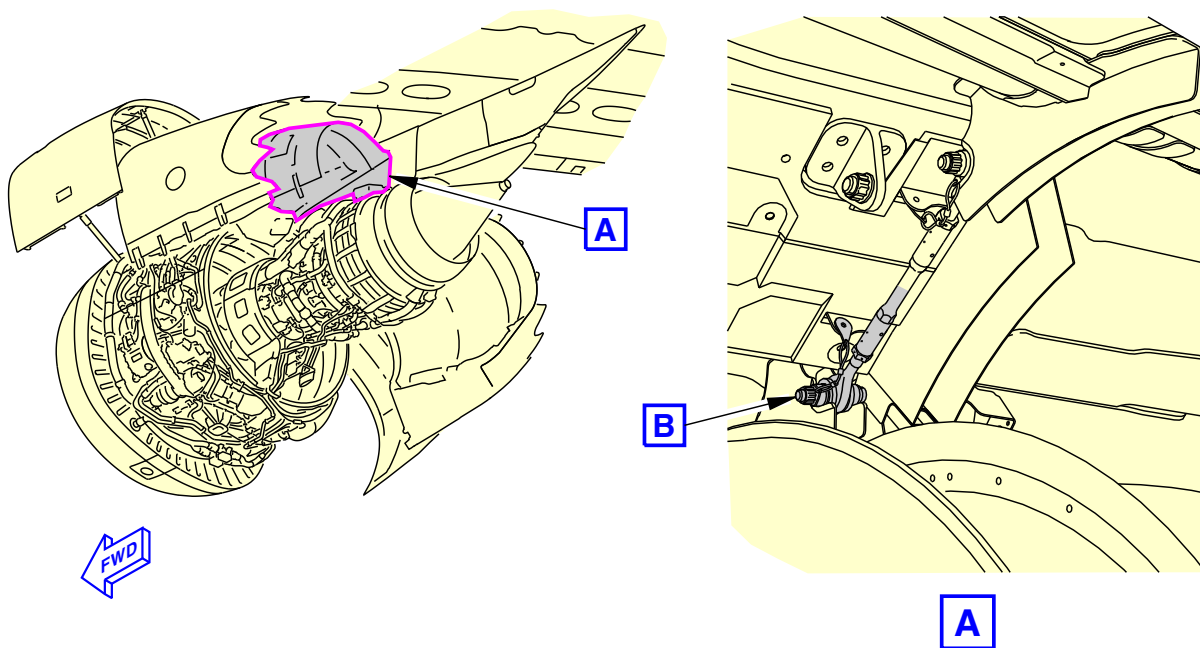
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(RIGHT SIDE IS SHOWN, LEFT SIDE IS OPPOSITE)

B

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Thrust Reverser Cross Tie Rod Lanyard Installation
Figure 401/54-51-06-990-801

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TASK 54-51-06-400-801

3. Thrust Reverser Cross Tie Rod Lanyard Installation

(Figure 401)

A. General

(1) This task gives instructions to install the thrust reverser cross tie rod lanyard.

B. References

Reference	Title
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Lanyard	54-51-01-50-220	SIA ALL
		54-51-01-51-220	SIA ALL

D. Location Zones

Zone	Area
415	Engine 1 - Thrust Reverser, Left
416	Engine 1 - Thrust Reverser, Right
425	Engine 2 - Thrust Reverser, Left
426	Engine 2 - Thrust Reverser, Right

E. Thrust Reverser Cross Tie Rod Lanyard Installation

SUBTASK 54-51-06-420-001

(1) Install the lanyard [6], do these steps:

- Put the applicable tab of the lanyard [6] in its position on the hanger bracket and install the bolt [1], washer [2], washer [3], and nut [4].
- Remove nut [5] if it was used to secure the assembly.
- Put the other tab of the lanyard [6] on the cross tie rod attachment bolt and install the nut [5].
 - Make sure that there is a washer under the tab of the lanyard [6].
 - Torque the nut [5] to 320 ± 80 in-lb (36 ± 9 N·m).
 - Torque the nut [4] to 35 ± 1 in-lb (3.95 ± 0.11 N·m).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-06-410-001

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

————— END OF TASK —————

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STRUT TO WING FAIRINGS - MAINTENANCE PRACTICES

1. General

A. This procedure has this task:

- (1) Aerodynamic smoothness requirements for the strut doors, panels, and fairings.

TASK 54-52-00-200-801

2. Aerodynamic Smoothness Requirements

(Figure 201)

A. **General**

- (1) This task gives the aerodynamic smoothness requirements for the strut access doors, panels, and fairings to permit smooth air flow. These doors, panels and fairings are located in areas where aerodynamic smoothness is very important.
- (2) This task gives the aerodynamic smoothness requirements for these components:
 - (a) The strut forward fairings.
 - (b) The strut wing junction fairings.
 - (c) The strut access doors and panels.
 - (d) The strut aft doors, panels, and fairings.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
SRM 54-50-70	ENGINE STRUT FAIRING SKIN

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Aerodynamic Smoothness Requirements**

SUBTASK 54-52-00-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-00-200-001

- (2) Do these steps to examine the clearance between the adjacent surfaces:
 - (a) Look for an unusually large change in contour (misfair/step) or clearance (gap) between adjacent surfaces.
 - (b) The misfair (step) and clearance (gap) between these surfaces must agree with the permitted tolerances in Table 201.

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Table 201/54-52-00-993-805 Aerodynamic Smoothness Limits - Strut Fairing

Edge Zone	Section	Clearance	NEV Table	Recommended Minimum # of measurements
[A]	B-B	0.000 ±0.060 in. (0.000 ±1.524 mm)	Table 202	8 (2@ B-B)
[B]	B-B	0.130 ±0.060 in. (3.302 ±1.524 mm)	Table 202	8 (2@ B-B)
[C]	G-G	0.100 ±0.070 in. (2.540 ±1.778 mm)	Table 203	5 (2@ G-G)
[D]	G-G	0.000 ±0.040 in. (0.000 ±1.016 mm)	Table 203	5 (2@ G-G)
[E]	J-J	0.000 ±0.040 in. (0.000 ±1.016 mm)	Table 204	6 (3 inbd + 3 outbd)
[F]	J-J	0.100 ±0.070 in. (2.540 ±1.778 mm)	Table 204	6 (3 inbd + 3 outbd)
[G]	K-K	0.000 ±0.030 in. (0.000 ±0.762 mm)	Table 206	6 (1@ K-K)
[H]	K-K	0.106 ±0.060 in. (2.692 ±1.524 mm)	Table 206	6 (1@ K-K)
[I]	K-K	0.194 ±0.060 in. (4.928 ±1.524 mm)	Table 206	6 (1@ K-K)
[J]	L-L	0.400 +0.070 / -0.120 in. (10.160 +1.778 / -3.048 mm)	Table 205	4 (1@ L-L)
[K]	L-L	0.000 ±0.080 in. (0.000 ±2.032 mm)	Table 205	4 (1@ L-L)
[L]	Z-Z	0.000 ±0.080 in. (0.000 ±2.032 mm)	Table 207	6 (1@ Z-Z)
[M]	Z-Z	0.400 +0.070 / -0.120 in. (10.160 +1.778 / -3.048 mm)	Table 207	6 (1@ Z-Z)
SIA 001-005				
[N]	W-W	0.000 ±0.040 in. (0.000 ±1.016 mm)	N/A	N/A
SIA 006-999				
[N]	W-W	0.000 +0.200 / -0.040 in. (0.000 +5.080 / -1.016 mm)	N/A	N/A
SIA 001-005				
[O]	Y-Y	0.000 ±0.040 in. (0.000 ±1.016 mm)	N/A	N/A
SIA 006-012				
[O]	Y-Y	0.000 +0.040 / -0.120 in. (0.000 +1.016 / -3.048 mm)	N/A	N/A

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SIA 006-012 (Continued)

Table 201/54-52-00-993-805 Aerodynamic Smoothness Limits - Strut Fairing (Continued)

Edge Zone	Section	Clearance	NEV Table	Recommended Minimum # of measurements
SIA 013-999				
[O]	Y-Y	0.000 +0.040 / -0.180 in. (0.000 +1.016 / -4.572 mm)	N/A	N/A
SIA 001-012				
[P]	X-X	0.125 ±0.080 in. (3.175 ±2.032 mm)	N/A	N/A
SIA 013-999				
[P]	X-X	0.125 +0.175 / -0.080 in. (3.175 +4.445 / -2.032 mm)	N/A	N/A
SIA 001-012				
[Q]	V-V	0.065 ±0.035 in. (1.651 ±0.889 mm)	N/A	N/A
SIA 013-999				
[Q]	V-V	0.1075 ±0.0775 in. (2.7305 ±1.9685 mm)	N/A	N/A
SIA ALL				
[R]	W-W	0.150 ±0.105 in. (3.810 ±2.667 mm)	N/A	N/A
SIA 001-012				
[S]	X-X	0.000 ±0.040 in. (0.000 ±1.016 mm)	N/A	N/A
SIA 013-999				
[S]	X-X	0.000 +0.040 / -0.180 in. (0.000 +1.016 / -4.572 mm)	N/A	N/A
SIA 001-012				
[T]	Y-Y	0.125 ±0.080 in. (3.175 ±2.032 mm)	N/A	N/A
SIA 013-999				
[T]	Y-Y	0.125 +0.175 / -0.080 in. (3.175 +4.445 / -2.032 mm)	N/A	N/A
SIA ALL				

SUBTASK 54-52-00-840-001

- (3) Net Effect: Calculate the Net Effect from measured step and/or gap values by the procedure that follow:
- (a) As a minimum, measure in less than 1 in. (25 mm) of each end of an interface and/or corner transition.

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- 1) More measurements should divide the interface length into equal intervals, with one of the measurements located in less than 1 in. (25 mm) of the midpoint of the interface length.
 - 2) See Table 201 for recommended minimum number of measurements.
- (b) Convert each measured value to Net Effect Value (NEV) by linear interpolation of the applicable column given in Table 202 through Table 207.

Table 202/54-52-00-993-806 Outer Barrel to Thumbnail Fairing

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.1600 in. (-4.0640 mm)	7.6268
0.0200 in. (0.5080 mm)	0.0894	-0.1400 in. (-3.5560 mm)	6.5132
0.0400 in. (1.0160 mm)	0.1776	-0.1200 in. (-3.0480 mm)	5.4240
0.0600 in. (1.5240 mm)	0.2670	-0.1000 in. (-2.5400 mm)	4.3642
0.0800 in. (2.0320 mm)	0.3552	-0.0800 in. (-2.0320 mm)	3.3385
0.1000 in. (2.5400 mm)	0.4446	-0.0600 in. (-1.5240 mm)	2.3559
0.1200 in. (3.0480 mm)	0.5327	-0.0400 in. (-1.0160 mm)	1.4318
0.1400 in. (3.5560 mm)	0.6222	-0.0200 in. (-0.5080 mm)	0.5969
0.1600 in. (4.0640 mm)	0.7116	0.0000 in. (0.0000 mm)	0.0000
0.1800 in. (4.5720 mm)	0.7997	0.0200 in. (0.5080 mm)	0.2751
0.2000 in. (5.0800 mm)	0.8892	0.0400 in. (1.0160 mm)	0.7452
0.2200 in. (5.5880 mm)	0.9773	0.0600 in. (1.5240 mm)	1.2883
0.2400 in. (6.0960 mm)	1.0668	0.0800 in. (2.0320 mm)	1.8792
0.2600 in. (6.6040 mm)	1.1562	0.1000 in. (2.5400 mm)	2.5060
0.2800 in. (7.1120 mm)	1.2443	0.1200 in. (3.0480 mm)	3.1609
0.3000 in. (7.6200 mm)	1.3338	0.1400 in. (3.5560 mm)	3.8391
0.3200 in. (8.1280 mm)	1.4219	0.1600 in. (4.0640 mm)	4.5377

Table 203/54-52-00-993-807 Thumbnail Fairing to Mid Strut Fairings

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.0800 in. (-2.0320 mm)	3.5796
0.0200 in. (0.5080 mm)	0.1083	-0.0700 in. (-1.7780 mm)	3.0451
0.0400 in. (1.0160 mm)	0.2165	-0.0600 in. (-1.5240 mm)	2.5249
0.0600 in. (1.5240 mm)	0.3248	-0.0500 in. (-1.2700 mm)	2.0214
0.0800 in. (2.0320 mm)	0.4330	-0.0400 in. (-1.0160 mm)	1.5344
0.1000 in. (2.5400 mm)	0.5385	-0.0300 in. (-0.7620 mm)	1.0713
0.1200 in. (3.0480 mm)	0.6467	-0.0200 in. (-0.5080 mm)	0.6390
0.1400 in. (3.5560 mm)	0.7550	-0.0100 in. (-0.2540 mm)	0.2565

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Table 203/54-52-00-993-807 Thumbnail Fairing to Mid Strut Fairings (Continued)

GAPS (Clearance)		STEPS (Misfair)	
0.1600 in. (4.0640 mm)	0.8632	0.0000 in. (0.0000 mm)	0.0000
0.1800 in. (4.5720 mm)	0.9715	0.0100 in. (0.2540 mm)	0.2969
0.2000 in. (5.0800 mm)	1.0798	0.0200 in. (0.5080 mm)	1.0000
0.2200 in. (5.5880 mm)	1.1880	0.0300 in. (0.7620 mm)	1.8599
0.2400 in. (6.0960 mm)	1.2963	0.0400 in. (1.0160 mm)	2.8195
0.2600 in. (6.6040 mm)	1.4046	0.0500 in. (1.2700 mm)	3.8551
0.2800 in. (7.1120 mm)	1.5128	0.0600 in. (1.5240 mm)	4.9477
0.3000 in. (7.6200 mm)	1.6182	0.0700 in. (1.7780 mm)	6.0903
0.3200 in. (8.1280 mm)	1.7265	0.0800 in. (2.0320 mm)	7.2755

Table 204/54-52-00-993-808 Mid Strut Fairings to Over Wing & Thrust Reversers Strut Fairing

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.0800 in. (-2.0320 mm)	3.6268
0.0200 in. (0.5080 mm)	0.1081	-0.0700 in. (-1.7780 mm)	3.0880
0.0400 in. (1.0160 mm)	0.2162	-0.0600 in. (-1.5240 mm)	2.5599
0.0600 in. (1.5240 mm)	0.3243	-0.0500 in. (-1.2700 mm)	2.0493
0.0800 in. (2.0320 mm)	0.4324	-0.0400 in. (-1.0160 mm)	1.5563
0.1000 in. (2.5400 mm)	0.5405	-0.0300 in. (-0.7620 mm)	1.0880
0.1200 in. (3.0480 mm)	0.6486	-0.0200 in. (-0.5080 mm)	0.6514
0.1400 in. (3.5560 mm)	0.7568	-0.0100 in. (-0.2540 mm)	0.2606
0.1600 in. (4.0640 mm)	0.8649	0.0000 in. (0.0000 mm)	0.0000
0.1800 in. (4.5720 mm)	0.9730	0.0100 in. (0.2540 mm)	0.2817
0.2000 in. (5.0800 mm)	1.0811	0.0200 in. (0.5080 mm)	1.0000
0.2200 in. (5.5880 mm)	1.1853	0.0300 in. (0.7620 mm)	1.9120
0.2400 in. (6.0960 mm)	1.2934	0.0400 in. (1.0160 mm)	2.9261
0.2600 in. (6.6040 mm)	1.4015	0.0500 in. (1.2700 mm)	4.0211
0.2800 in. (7.1120 mm)	1.5097	0.0600 in. (1.5240 mm)	5.1796
0.3000 in. (7.6200 mm)	1.6178	0.0700 in. (1.7780 mm)	6.3944
0.3200 in. (8.1280 mm)	1.7259	0.0800 in. (2.0320 mm)	7.6549

Table 205/54-52-00-993-809 AFT Cowl to Thrust Reversers Strut Fairings

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.1600 in. (-4.0640 mm)	3.5057
0.0400 in. (1.0160 mm)	0.0250	-0.1400 in. (-3.5560 mm)	2.9310

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Table 205/54-52-00-993-809 AFT Cowl to Thrust Reversers Strut Fairings (Continued)

GAPS (Clearance)		STEPS (Misfair)	
0.0800 in. (2.0320 mm)	0.0635	-0.1200 in. (-3.0480 mm)	2.3908
0.1200 in. (3.0480 mm)	0.1083	-0.1000 in. (-2.5400 mm)	1.8736
0.1600 in. (4.0640 mm)	0.1594	-0.0800 in. (-2.0320 mm)	1.3908
0.2000 in. (5.0800 mm)	0.2146	-0.0600 in. (-1.5240 mm)	0.9425
0.2400 in. (6.0960 mm)	0.2729	-0.0400 in. (-1.0160 mm)	0.5517
0.2800 in. (7.1120 mm)	0.3354	-0.0200 in. (-0.5080 mm)	0.2184
0.3200 in. (8.1280 mm)	0.4010	0.0000 in. (0.0000 mm)	0.0000
0.3600 in. (9.1440 mm)	0.4698	0.0200 in. (0.5080 mm)	0.4023
0.4000 in. (10.1600 mm)	0.5406	0.0400 in. (1.0160 mm)	1.0000
0.4400 in. (11.1760 mm)	0.6135	0.0600 in. (1.5240 mm)	1.7241
0.4800 in. (12.1920 mm)	0.6885	0.0800 in. (2.0320 mm)	2.5287
0.5200 in. (13.2080 mm)	0.7667	0.1000 in. (2.5400 mm)	3.4023
0.5600 in. (14.2240 mm)	0.8458	0.1200 in. (3.0480 mm)	4.3448
0.6000 in. (15.2400 mm)	0.9217	0.1400 in. (3.5560 mm)	5.3333
0.6400 in. (16.2560 mm)	1.0104	0.1600 in. (4.0640 mm)	6.3793

Table 206/54-52-00-993-810 Thrust Reversers Strut Fairings to FWD Side Panels

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.0800 in. (-2.0320 mm)	4.1313
0.0200 in. (0.5080 mm)	0.1074	-0.0700 in. (-1.7780 mm)	3.4646
0.0400 in. (1.0160 mm)	0.2314	-0.0600 in. (-1.5240 mm)	2.8182
0.0600 in. (1.5240 mm)	0.3636	-0.0500 in. (-1.2700 mm)	2.2121
0.0800 in. (2.0320 mm)	0.4876	-0.0400 in. (-1.0160 mm)	1.6364
0.1000 in. (2.5400 mm)	0.6281	-0.0300 in. (-0.7620 mm)	1.1212
0.1200 in. (3.0480 mm)	0.7769	-0.0200 in. (-0.5080 mm)	0.6465
0.1400 in. (3.5560 mm)	0.9256	-0.0100 in. (-0.2540 mm)	0.2626
0.1600 in. (4.0640 mm)	1.0744	0.0000 in. (0.0000 mm)	0.0000
0.1800 in. (4.5720 mm)	1.2397	0.0100 in. (0.2540 mm)	0.4747
0.2000 in. (5.0800 mm)	1.3802	0.0200 in. (0.5080 mm)	1.1818
0.2200 in. (5.5880 mm)	1.5455	0.0300 in. (0.7620 mm)	2.0303
0.2400 in. (6.0960 mm)	1.7107	0.0400 in. (1.0160 mm)	2.9798
0.2600 in. (6.6040 mm)	1.8760	0.0500 in. (1.2700 mm)	4.0202
0.2800 in. (7.1120 mm)	2.0416	0.0600 in. (1.5240 mm)	5.1212
0.3000 in. (7.6200 mm)	2.2231	0.0700 in. (1.7780 mm)	6.2929

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Table 206/54-52-00-993-810 Thrust Reversers Strut Fairings to FWD Side Panels (Continued)

GAPS (Clearance)		STEPS (Misfair)	
0.3200 in. (8.1280 mm)	2.3802	0.0800 in. (2.0320 mm)	7.5152

Table 207/54-52-00-993-811 AFT Cowl to FWD Side Panels & Heatshield

GAPS (Clearance)		STEPS (Misfair)	
WIDTH	NEV	HEIGHT	NEV
0.0000 in. (0.0000 mm)	0.0000	-0.1600 in. (-4.0640 mm)	3.4865
0.0400 in. (1.0160 mm)	0.0252	-0.1400 in. (-3.5560 mm)	2.9135
0.0800 in. (2.0320 mm)	0.0632	-0.1200 in. (-3.0480 mm)	2.3730
0.1200 in. (3.0480 mm)	0.1081	-0.1000 in. (-2.5400 mm)	1.8595
0.1600 in. (4.0640 mm)	0.1589	-0.0800 in. (-2.0320 mm)	1.3838
0.2000 in. (5.0800 mm)	0.2140	-0.0600 in. (-1.5240 mm)	0.9405
0.2400 in. (6.0960 mm)	0.2729	-0.0400 in. (-1.0160 mm)	0.5514
0.2800 in. (7.1120 mm)	0.3353	-0.0200 in. (-0.5080 mm)	0.2162
0.3200 in. (8.1280 mm)	0.4008	0.0000 in. (0.0000 mm)	0.0000
0.3600 in. (9.1440 mm)	0.4686	0.0200 in. (0.5080 mm)	0.3946
0.4000 in. (10.1600 mm)	0.5395	0.0400 in. (1.0160 mm)	1.0000
0.4400 in. (11.1760 mm)	0.6124	0.0600 in. (1.5240 mm)	1.7135
0.4800 in. (12.1920 mm)	0.6880	0.0800 in. (2.0320 mm)	2.5135
0.5200 in. (13.2080 mm)	0.7655	0.1000 in. (2.5400 mm)	3.3838
0.5600 in. (14.2240 mm)	0.8450	0.1200 in. (3.0480 mm)	4.3189
0.6000 in. (15.2400 mm)	0.9264	0.1400 in. (3.5560 mm)	5.3027
0.6400 in. (16.2560 mm)	1.0093	0.1600 in. (4.0640 mm)	6.3351

(c) Add all the calculated NEV values and divide the result by the total number of measurements. The result is the interface NEV.

- 1) The Net Effect Limit (NEL) is 1.0 for all interfaces listed in Table 201.
 - a) If the Interface NEV is less than or equal to the NEL, the interface is aerodynamically acceptable.
 - b) If the Interface NEV is greater than the NEL, the interface is still acceptable but with a penalty.
 - <1> The interface NEV must be documented by a quality tag.
 - <2> The documented information must be sent to propulsion Aerodynamics engineering for more review and instruction.

SUBTASK 54-52-00-350-001

- (4) If it is necessary, repair the fairings to make the surfaces smooth (SRM SUBJECT 54-50-70).

SUBTASK 54-52-00-440-001

- (5) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

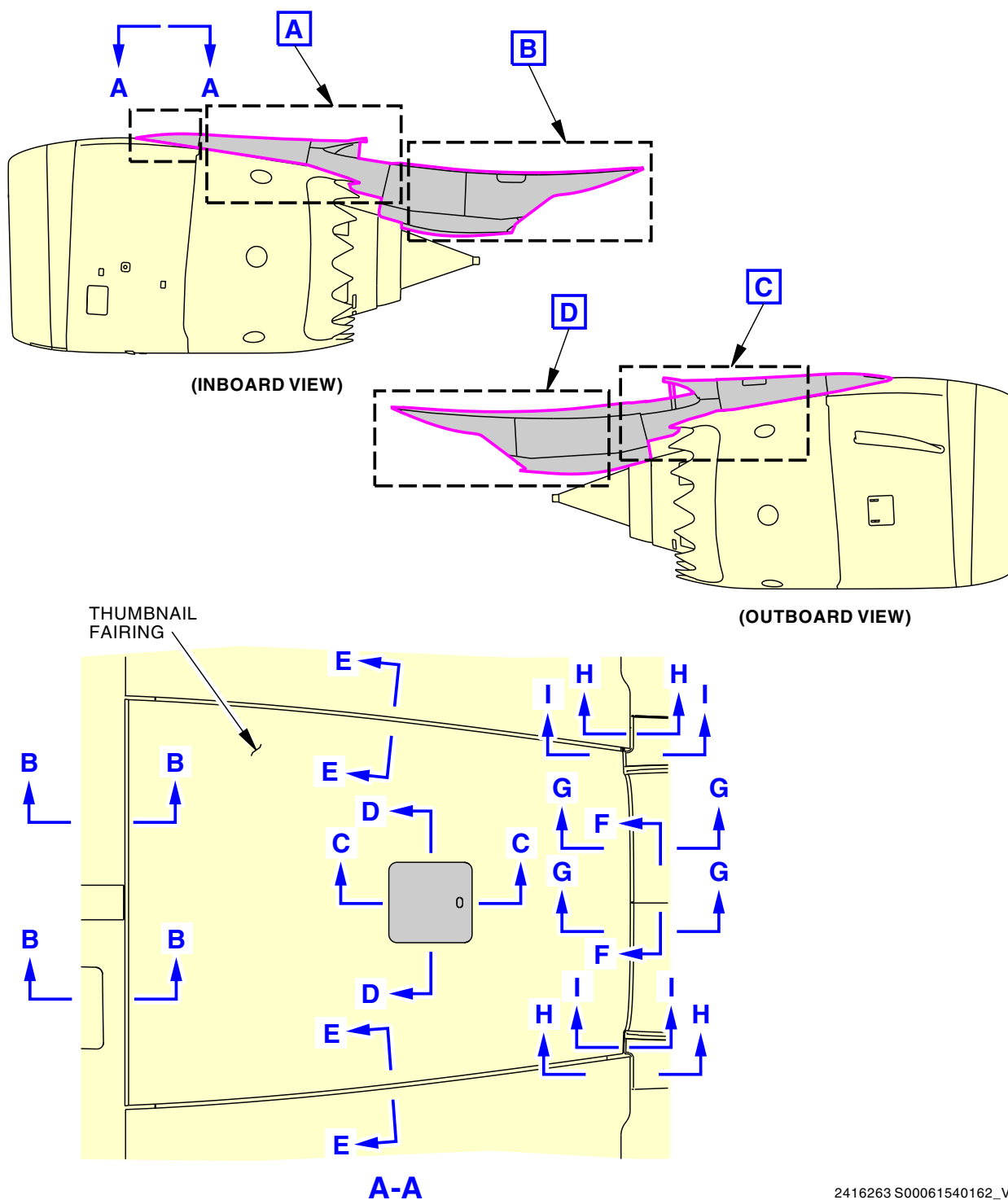
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2416263 S00061540162_V2

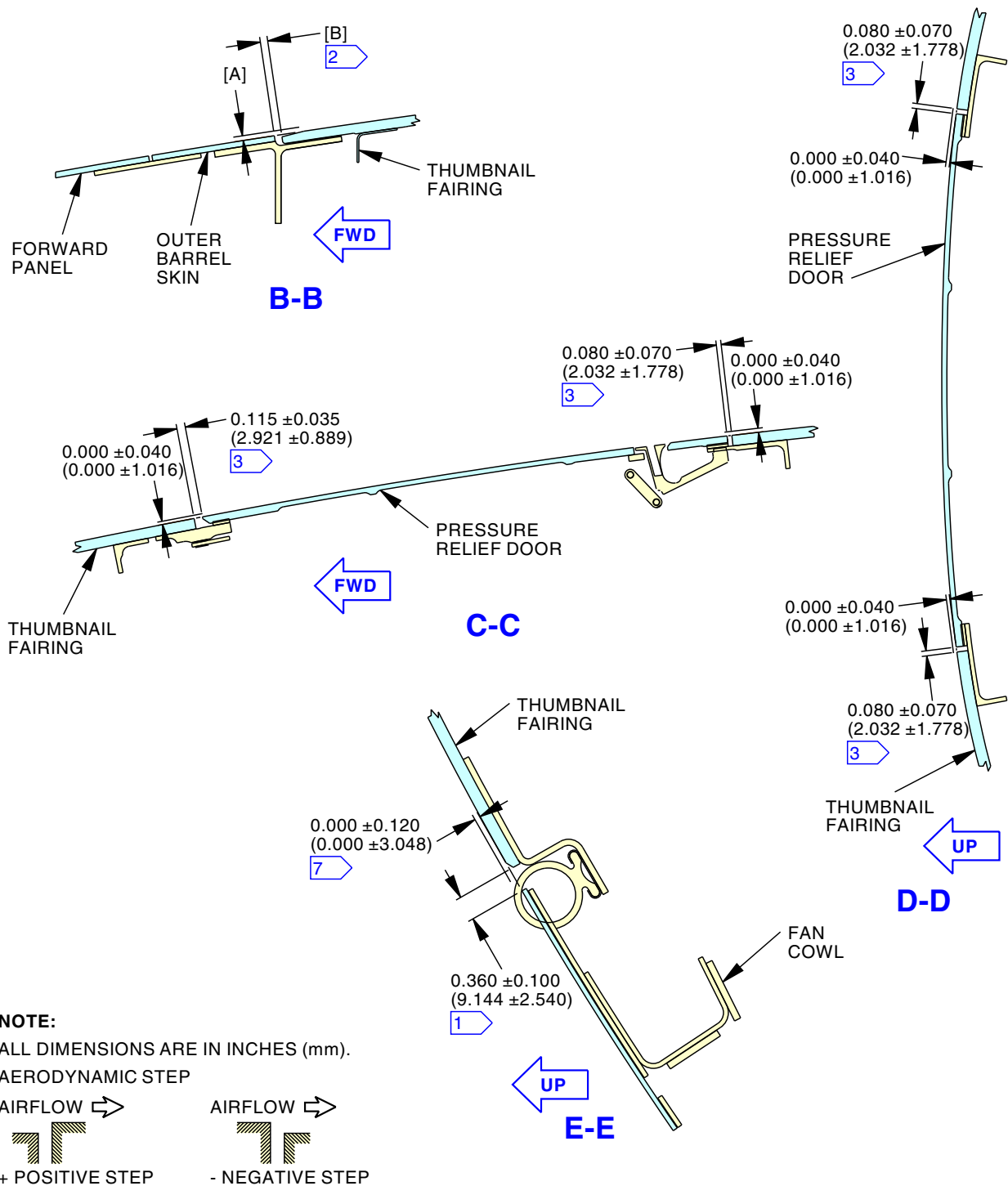
Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 1 of 9)

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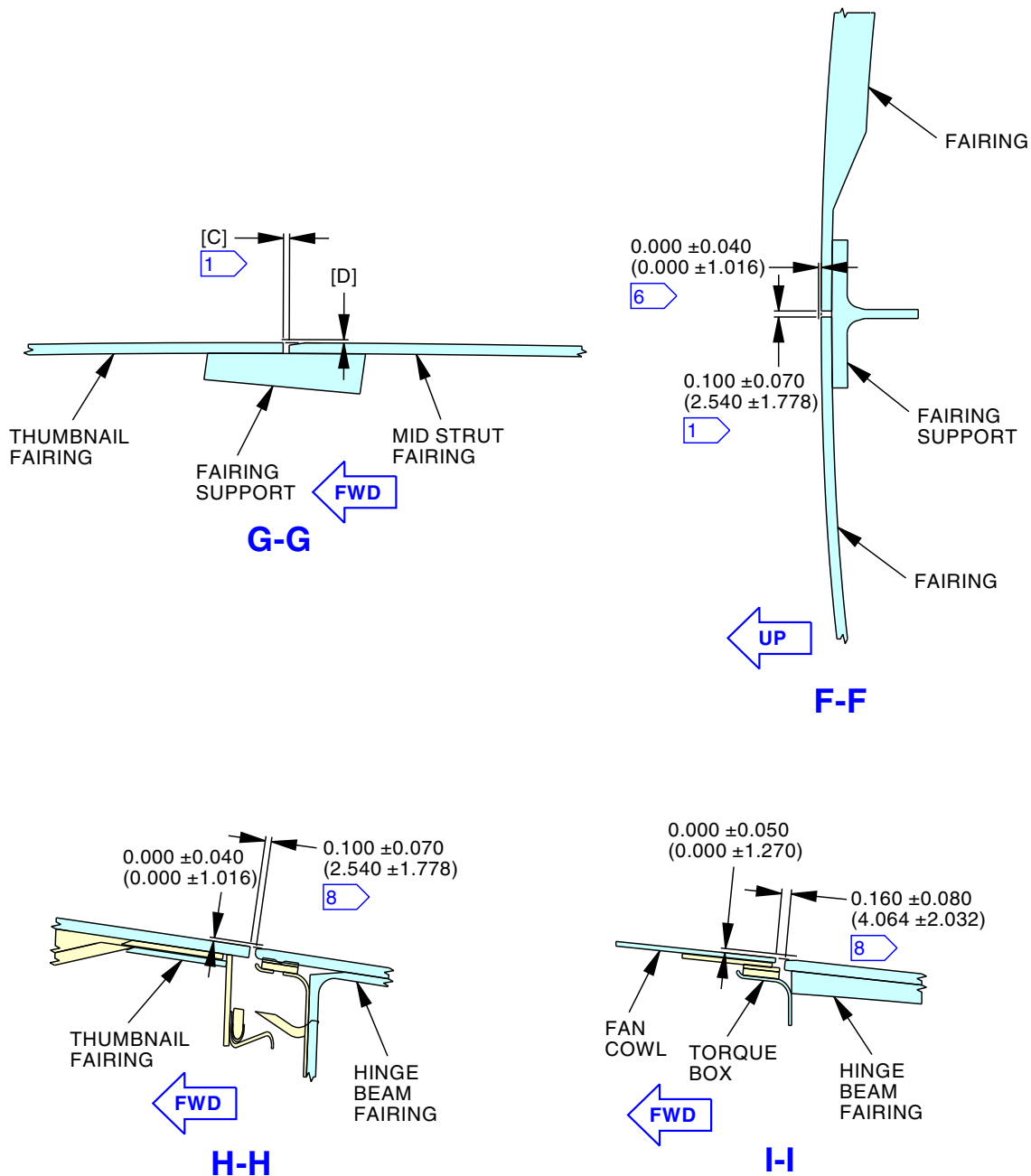
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2416264 S00061540163_V3

Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 2 of 9)

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NOTE:

ALL DIMENSIONS ARE IN INCHES (mm).

2416265 S00061540164_V4

Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 3 of 9)

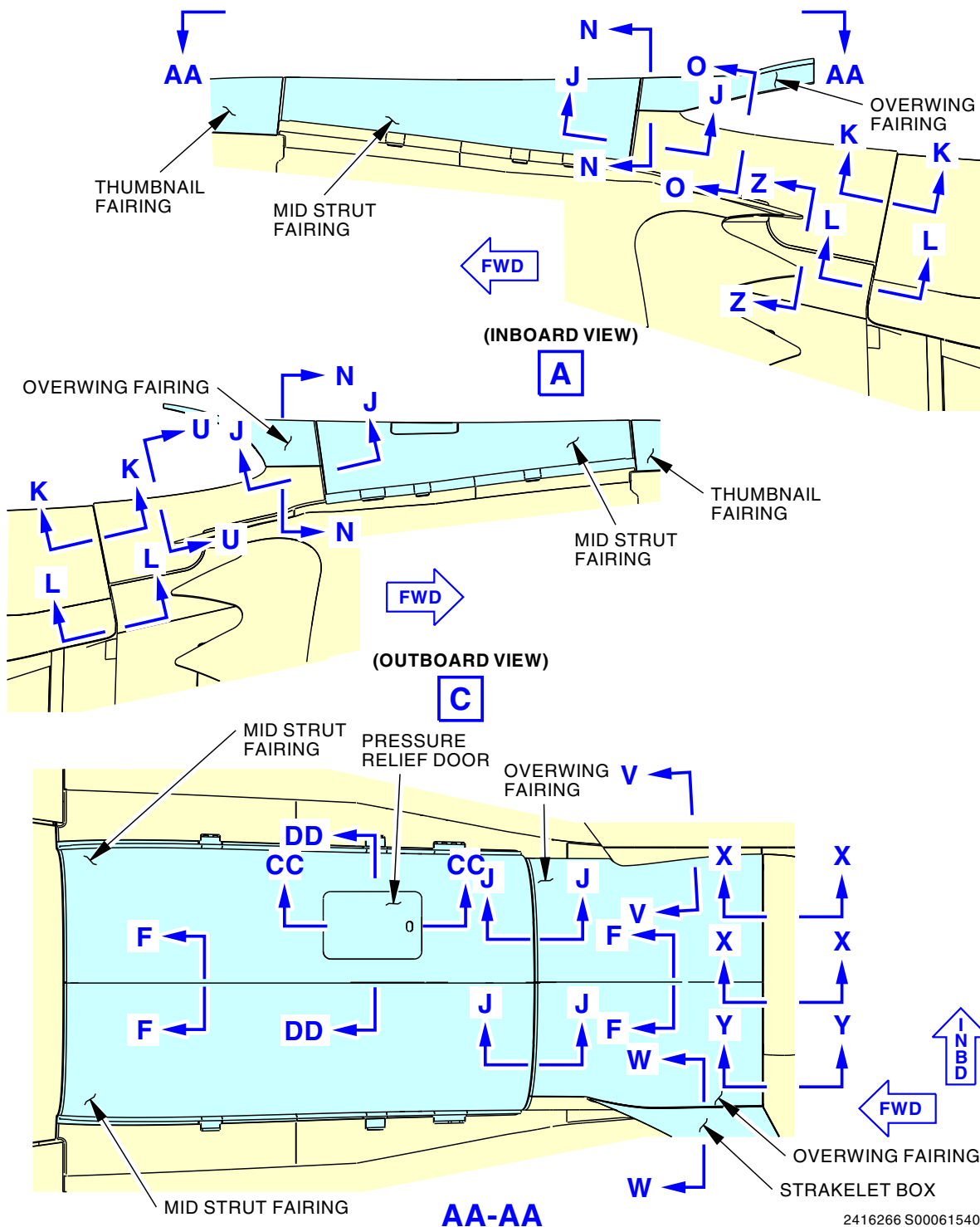
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Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 4 of 9)

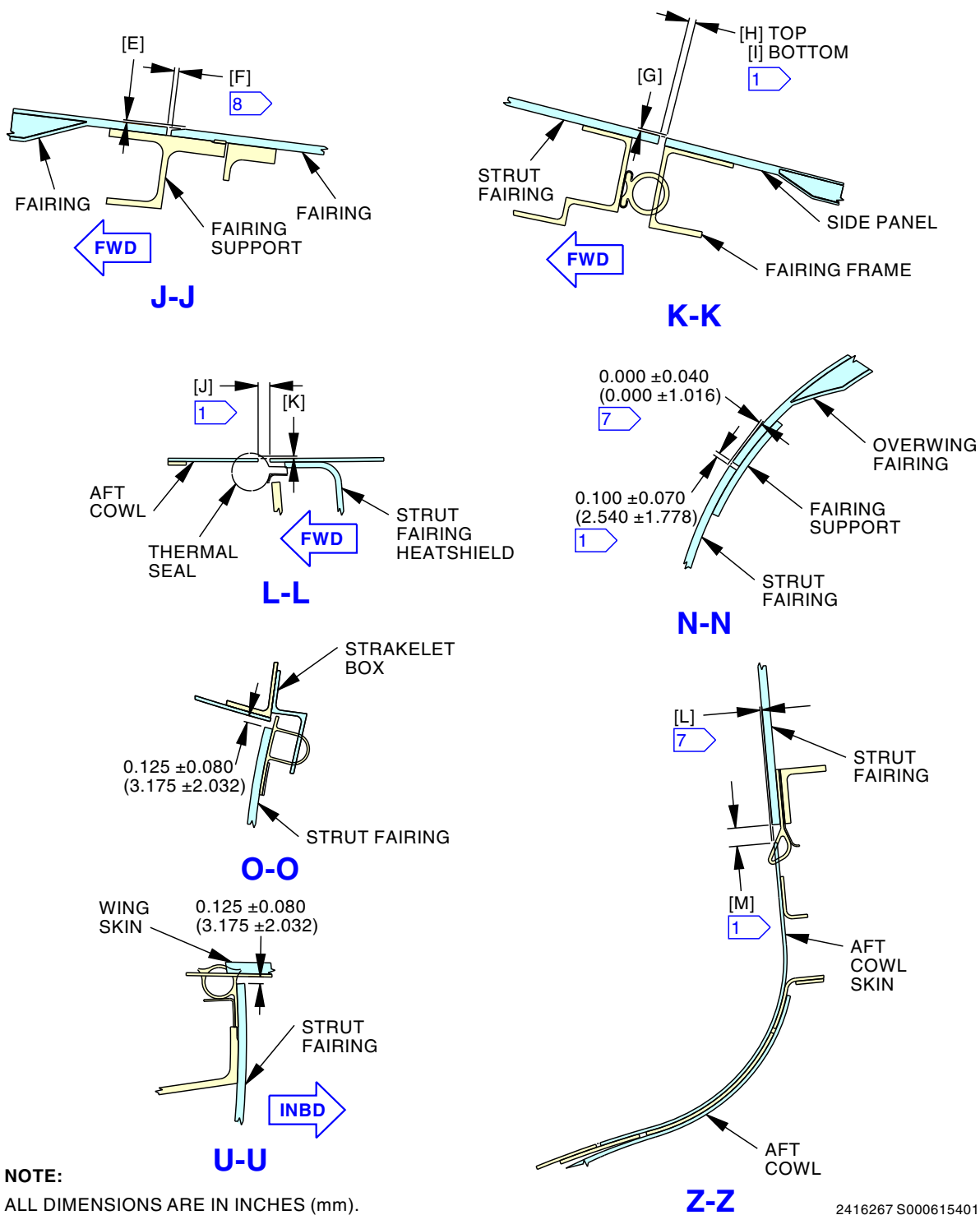
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Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 5 of 9)

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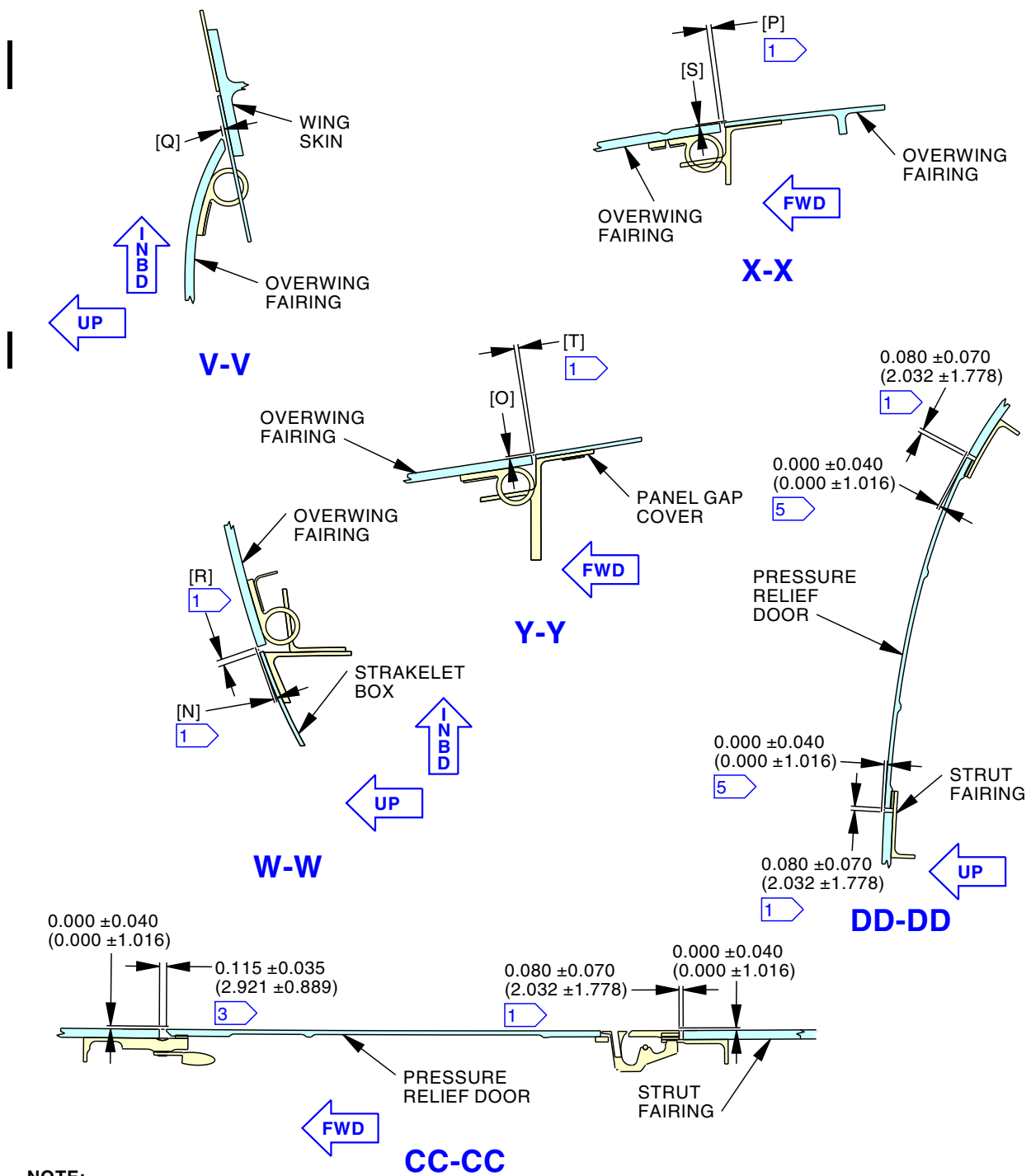
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NOTE:
ALL DIMENSIONS ARE IN INCHES (mm).

2416268 S00061540167_V10

Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 6 of 9)

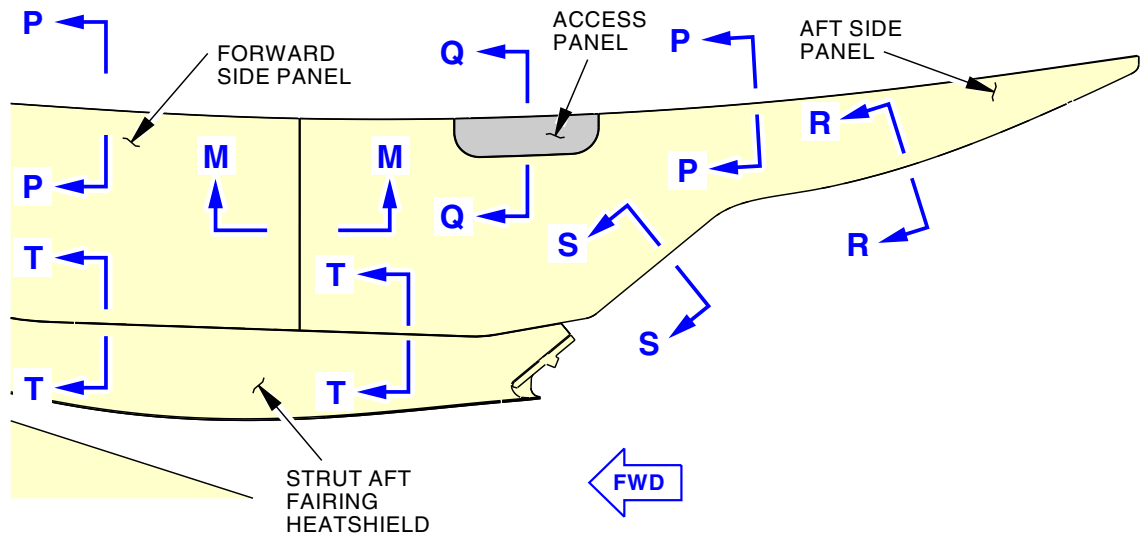
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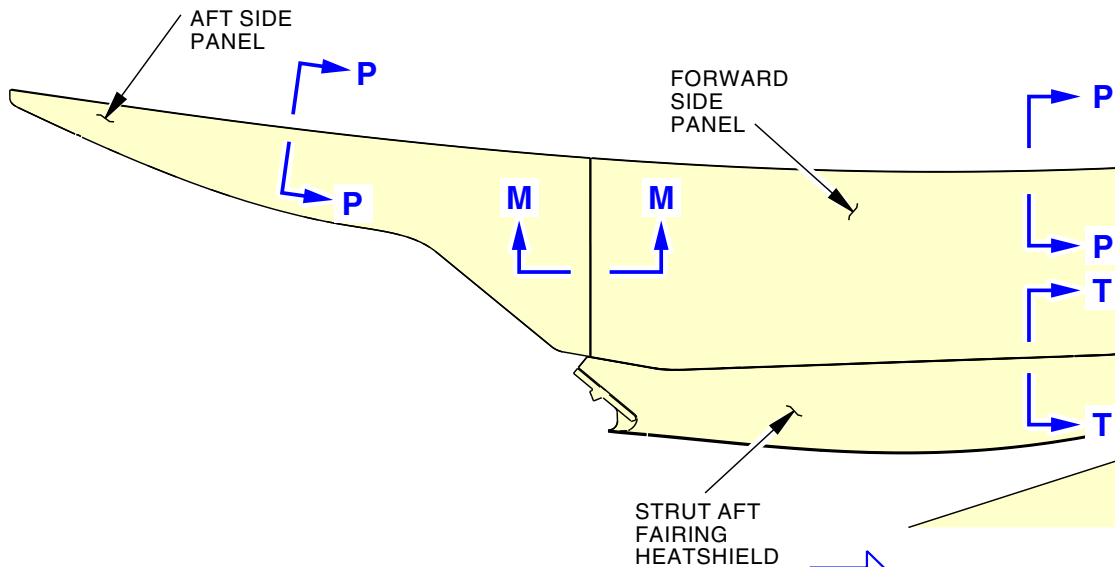
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(INBOARD VIEW)

B



(OUTBOARD VIEW)

D

2416269 S00061540168_V3

Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 7 of 9)

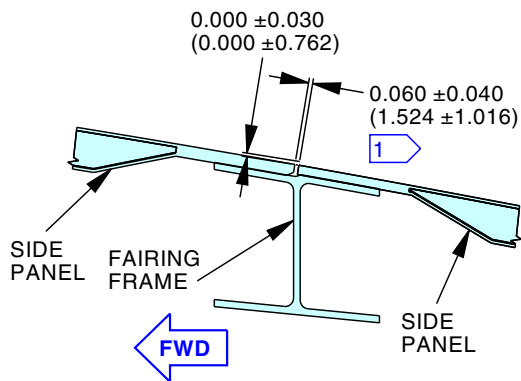
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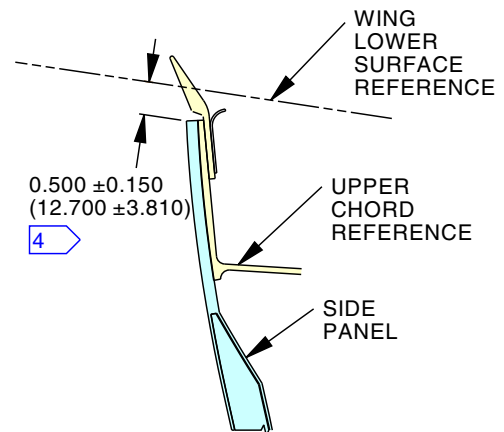
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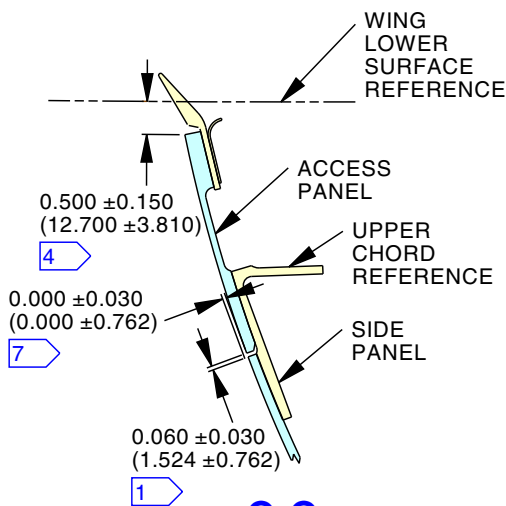
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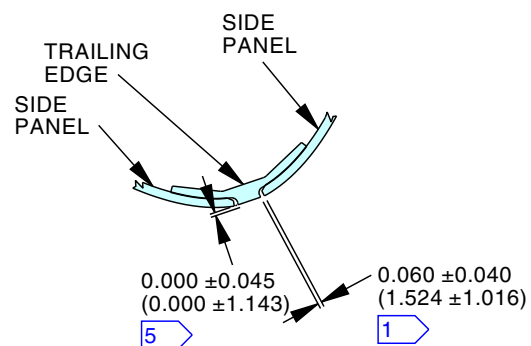
M-M



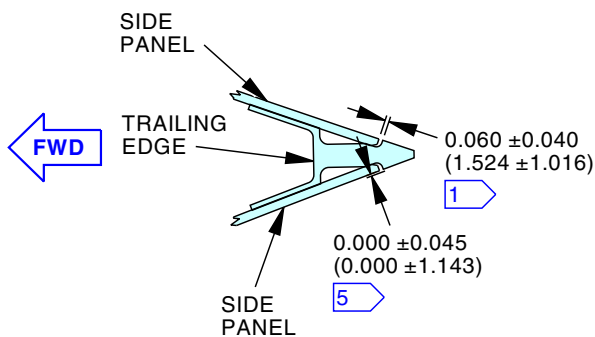
P-P



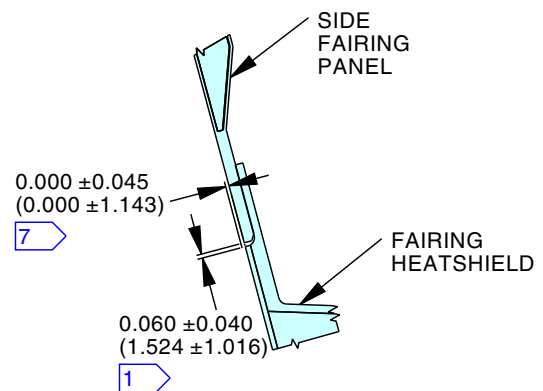
Q-Q



R-R



S-S



T-T

NOTE:

ALL DIMENSIONS ARE IN INCHES (mm).

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Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 8 of 9)

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- | | | | |
|---|---|---|---|
| 1 | GAP MUST BE SEALED OR BLOCKED. | 6 | NACELLE L/H SURFACE TO NACELLE R/H SURFACE = + STEP |
| 2 | GAP MUST BE SEALED OR BLOCKED. LEADING EDGE OF THUMBNAIL FAIRING MUST BE CHAMFERED. | 7 | UPPER SURFACE TO LOWER SURFACE = + STEP |
| 3 | AERO-SEALANT IS NOT NECESSARY. | 8 | GAP MUST BE SEALED OR BLOCKED. LEADING EDGE OF FAIRING PANEL MUST BE CHAMFERED. |
| 4 | VERIFY 100% SEAL CONTACT TO WING. | 9 | NACELLE INBOARD SURFACE TO NACELLE OUTBOARD SURFACE = + STEP |
| 5 | DETAIL SURFACE TO SURROUNDING SURFACE(S) = + STEP | | |

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Aerodynamic Smoothness Limits - Strut Fairing
Figure 201/54-52-00-990-801 (Sheet 9 of 9)

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FORWARD FAIRINGS - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Forward fairing removal
 - (2) Forward fairing installation.

TASK 54-52-01-010-801

2. Forward Fairing Removal

(Figure 401)

A. **General**

- (1) This task has the steps to remove the strut forward fairings that follow:
- (a) Thumbnail fairing
 - (b) Mid strut fairings.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Access Panels**

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2

E. **Prepare for the Removal**

SUBTASK 54-52-01-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

F. **Forward Fairing Removal**

SUBTASK 54-52-01-000-001

- (1) Do these steps to remove the thumbnail fairing [1]:
- (a) Remove the 37 bolts [4] from the thumbnail fairing [1].
 - (b) Open these access panels:

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

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SUBTASK 54-52-01-000-002

- (2) Do these steps to remove the left or right mid strut fairing:
- (a) Remove the 32 bolts [4] from the mid strut fairing [2] or mid strut fairing [3].
 - (b) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2
 - (c) Remove the mid strut fairing [2] or mid strut fairing [3].

————— **END OF TASK** —————

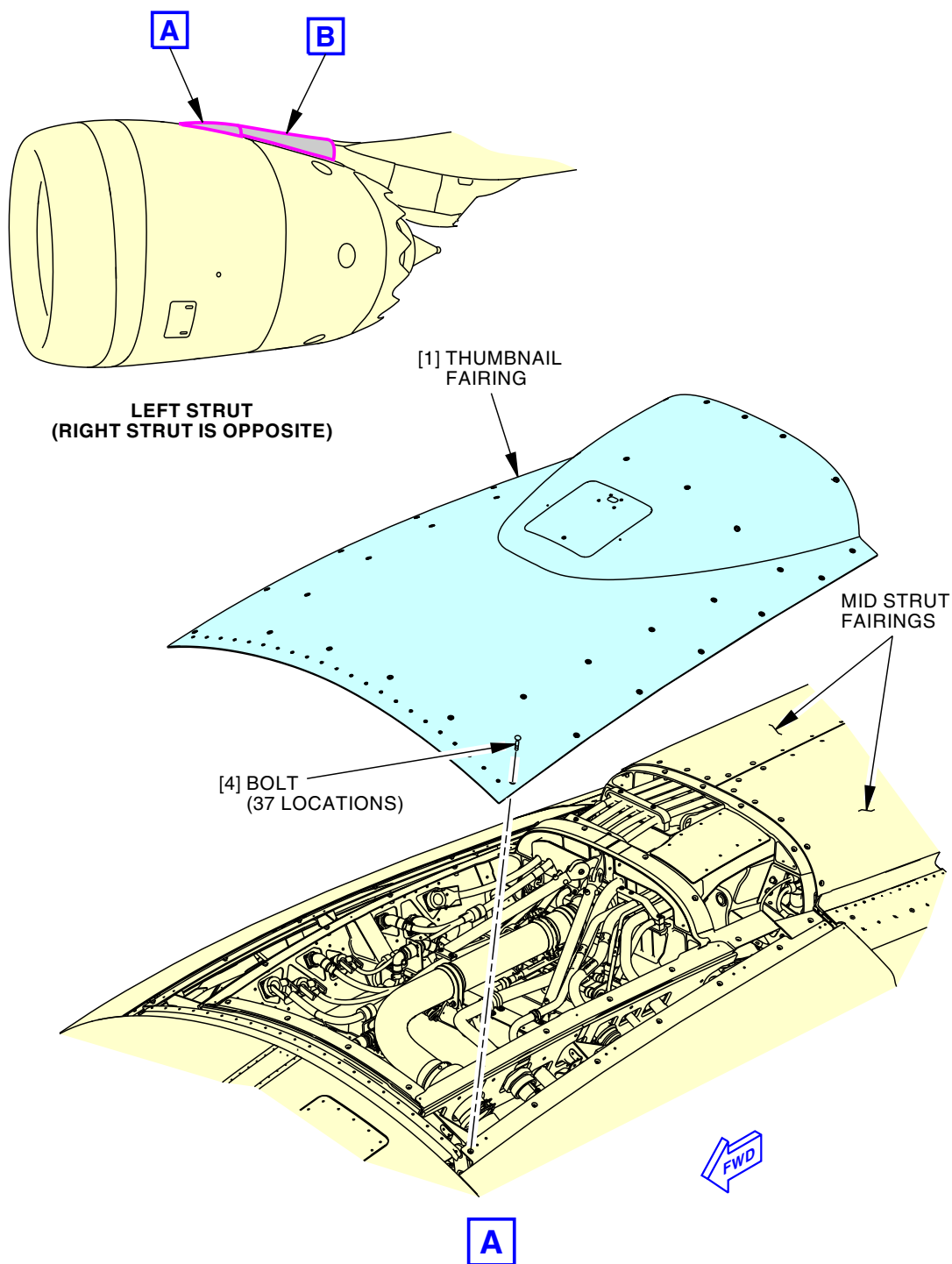
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Forward Fairing Installation
Figure 401/54-52-01-990-801 (Sheet 1 of 2)

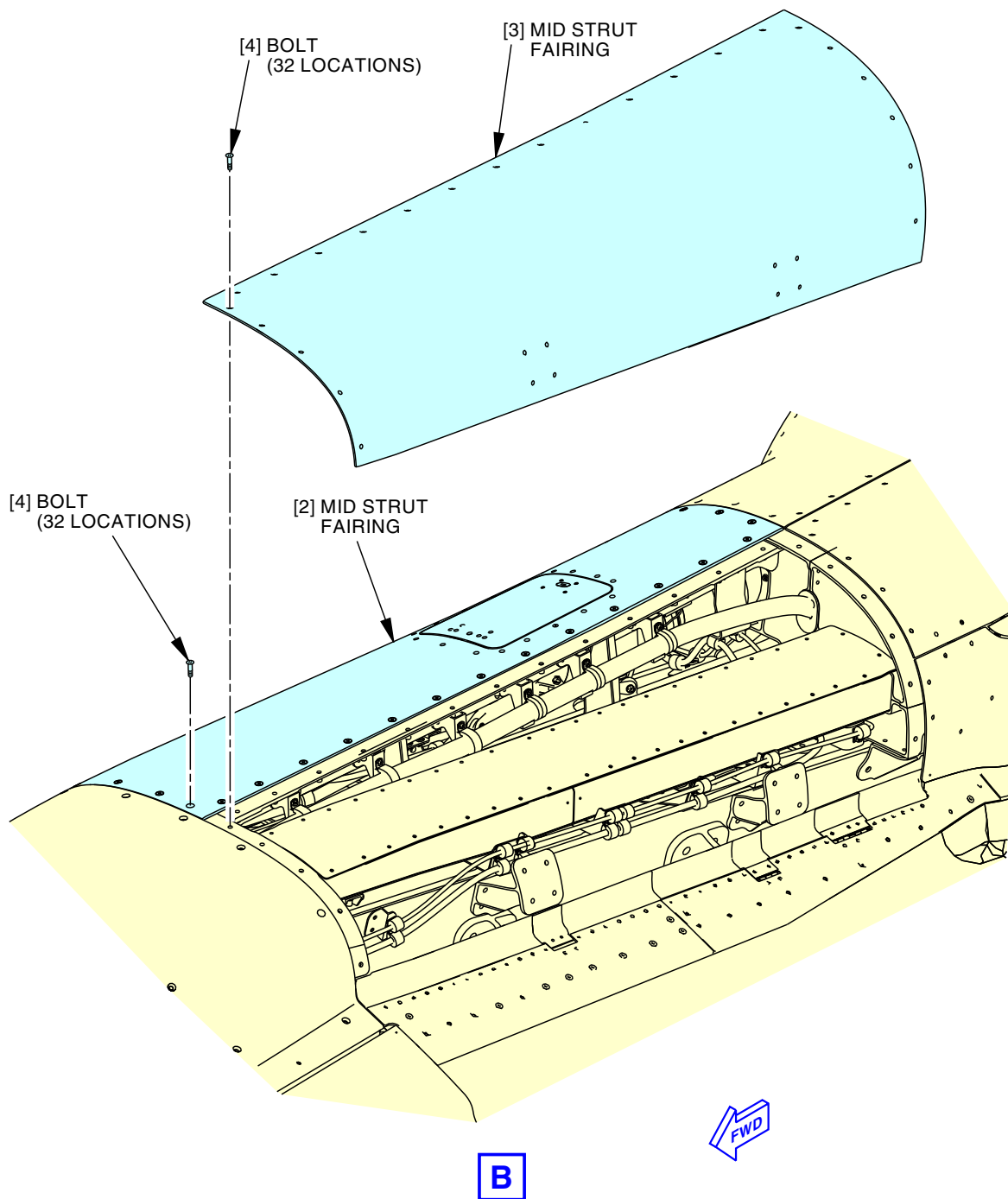
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Forward Fairing Installation
Figure 401/54-52-01-990-801 (Sheet 2 of 2)

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TASK 54-52-01-410-801

3. **Forward Fairing Installation**

(Figure 401)

A. General

(1) This task has the steps to install the strut forward fairings that follow:

- (a) Thumbnail fairing
- (b) Mid strut fairings.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)

C. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Thumbnail fairing	54-52-01-01-150	SIA ALL
2	Mid strut fairing	54-52-01-10-180	SIA ALL
3	Mid strut fairing	54-52-01-10-045	SIA ALL

E. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2

G. Forward Fairing Installation

SUBTASK 54-52-01-400-001

(1) Do these steps to install the thumbnail fairing [1]:

(a) Close these access panels:

Number Name/Location

431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

(b) Install the 37 bolts [4] with grease, D00633, on the thumbnail fairing [1].

1) Tighten the 37 bolts [4] to 50 ±3 in-lb (5.6 ±0.3 N·m).

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SUBTASK 54-52-01-000-003

- (2) Do these steps to install the mid strut fairing [2] or mid strut fairing [3]:
- (a) Close these access panels:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|---|
| 431BL | Forward Strut Fairing, Left Mid Strut Fairing, Strut 1 |
| 431BR | Forward Strut Fairing, Right Mid Strut Fairing, Strut 1 |
| 441BL | Forward Strut Fairing, Left Mid Strut Fairing, Strut 2 |
| 441BR | Forward Strut Fairing, Right Mid Strut Fairing, Strut 2 |
- (b) Make sure that the aerodynamic seal is inside the lower edge of the fairing.
- (c) Install the 32 bolts [4] with grease, D00633, on the mid strut fairing [2] or mid strut fairing [3].
- 1) Tighten the 32 bolts [4] to 50 ±3 in-lb (5.6 ±0.3 N·m).

SUBTASK 54-52-01-211-001

- (3) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-01-440-001

- (1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

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FORWARD FAIRINGS - INSPECTION/CHECK

1. General

- A. This procedure has one task:
(1) Forward Fairings Inspection.

TASK 54-52-01-000-801

2. Forward Fairings Inspection

A. General

- (1) This task inspects the forward fairings for damage.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-01-010-801	Forward Fairing Removal (P/B 401)
54-52-01-410-801	Forward Fairing Installation (P/B 401)
SRM 54-50-70	ENGINE STRUT FAIRING SKIN
SRM 54-50-71	ENGINE STRUT FAIRING STRUCTURE

C. Consumable Materials

Reference	Description	Specification
B00065	Alcohol - Denatured, Ethyl (Ethanol)	AMS 3002 (Supersedes O-A-396)
B00130	Alcohol - Isopropyl	TT-I-735
G50262	Wiper - Cleaning	BMS15-5
G51301	Tape - Aluminum Foil Tape, Heavy Duty, 3M 438	

D. Location Zones

Zone	Area
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing

E. Access Panels

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2

F. Forward Fairing Inspection

SUBTASK 54-52-01-040-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

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SUBTASK 54-52-01-010-001

(2) To remove the applicable forward fairing panel, do this task: Forward Fairing Removal, TASK 54-52-01-010-801.

(a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2

SUBTASK 54-52-01-020-001

(3) Inspect the forward fairings.

(a) Examine the forward fairings for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.

1) If you find damage to the forward fairings, repair the fairing as specified:
SRM SUBJECT 54-50-70.

(b) Examine the support structure for cracks or damage.

1) If you find damage to the forward fairing support structure, repair the structure as specified in this procedure: SRM SUBJECT 54-50-71.

(c) Examine the tape on the frame assembly for damage.

1) If you find damage to the tape, do these steps:

a) Remove the tape that is damaged.

<1> Remove unwanted adhesive.

b) Use a wiper, G50262, wet with alcohol, B00130, or alcohol, B00065, to clean the frame assembly surface.

c) Use a clean dry wiper, G50262, to remove unwanted alcohol, B00130, or alcohol, B00065.

d) Apply 3M 438 Aluminum Foil Tape, G51301, to the frame assembly surface.

<1> If more than one piece of tape is used, make sure that the edges of the tape touch.

<2> Make sure that the pieces of tape do not overlap.

SUBTASK 54-52-01-010-002

(4) To install the applicable forward fairing panel, do this task: Forward Fairing Installation, TASK 54-52-01-410-801.

(a) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
431BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2
441BR	Forward Strut Fairing, Right Mid Strut Fairing, Strut 2

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SUBTASK 54-52-01-040-003

(5) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

SUBTASK 54-52-01-040-004

(6) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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FORWARD FAIRING PRESSURE RELIEF DOOR LATCH - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) Forward fairing pressure relief door latch removal
- (2) Forward fairing pressure relief door latch installation.

TASK 54-52-02-000-801

2. **Forward Fairing Pressure Relief Door Latch Removal**

(Figure 401)

A. **General**

- (1) This task has the steps to remove the forward fairing pressure relief door latches.
- (2) Each strut has two pressure relief doors, located on the forward fairings. One pressure relief door is on the thumbnail fairing. One pressure relief door is on the right mid strut fairing. Each pressure relief door has one door latch.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)

C. **Location Zones**

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Removal**

SUBTASK 54-52-02-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-02-010-001

- (2) Open the pressure relief door on the top surface by inserting a screwdriver into the tool slot and moving the screwdriver handle parallel to the latch centerline until the latch releases.

E. **Pressure Relief Door Latch Removal**

SUBTASK 54-52-02-020-001

- (1) Remove the nuts [5], washers [4], and screws [3] which are located on the aft end of the pressure relief door [1].

SUBTASK 54-52-02-020-002

- (2) Remove the door latch [2] from the pressure relief door [1].

————— **END OF TASK** —————

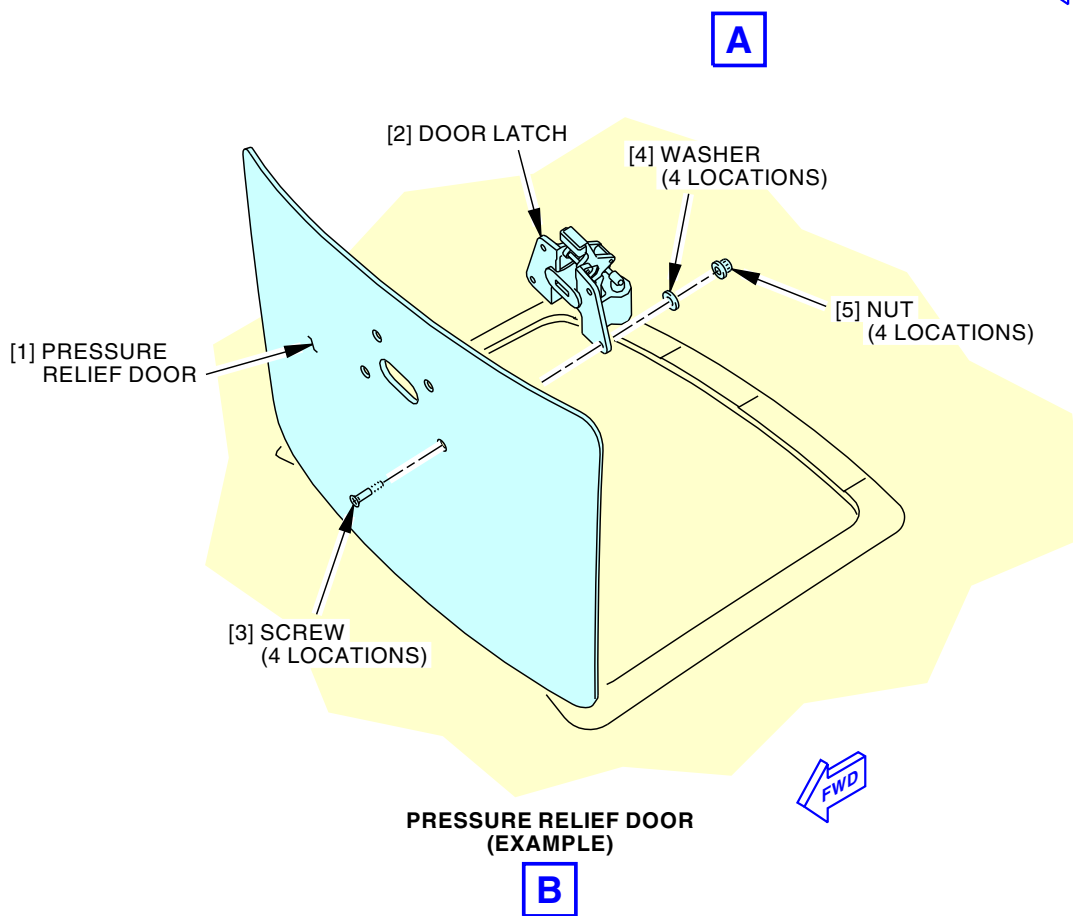
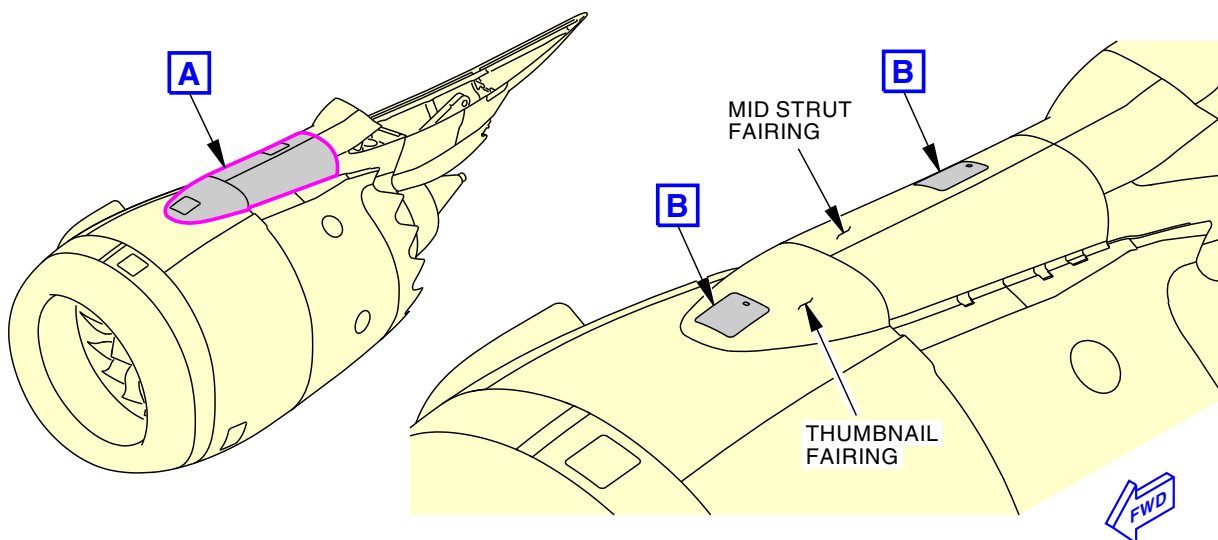
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Forward Fairing Pressure Relief Door Latches Installation
Figure 401/54-52-02-990-801

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TASK 54-52-02-400-801

3. **Forward Fairing Pressure Relief Door Latch Installation**

(Figure 401)

A. General

(1) This task has the steps to install the forward fairing pressure relief door latches.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-02-200-801	Pressure Relief Door Latch Test (P/B 501)

C. Consumable Materials

Reference	Description	Specification
A00767	Sealant - Fuel Tank	BMS5-45

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Door latch	54-52-02-01-005	SIA ALL
		54-52-02-10-005	SIA ALL

E. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Prepare for the Installation

SUBTASK 54-52-02-100-001

(1) Prepare the inside surface of the door for sealing.

G. Pressure Relief Door Latch Installation

SUBTASK 54-52-02-390-001

(1) Make sure that the area between the door latch [2] and the pressure relief door [1] is clean.

SUBTASK 54-52-02-390-002

(2) Apply sealant, A00767, between the door latch [2] and the pressure relief door [1].

SUBTASK 54-52-02-390-003

(3) Do the steps that follow to install the door latch [2] to the pressure relief door [1]:

- (a) Install the door latch [2] to the pressure relief door [1] so that the holes in the latch align with the holes in the door.
- (b) Install the screws [3], washers [4], and nuts [5].
- (c) Tighten the nuts [5].

H. Installation Test

SUBTASK 54-52-02-200-001

(1) Make sure that the pressure relief door [1] opens and closes smoothly.

SUBTASK 54-52-02-200-002

(2) Do this task: Pressure Relief Door Latch Test, TASK 54-52-02-200-801.

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I. Put the Airplane Back to its Usual Condition

SUBTASK 54-52-02-410-001

(1) Close the forward fairing pressure relief door.

SUBTASK 54-52-02-440-001

(2) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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FORWARD FAIRING PRESSURE RELIEF DOOR - ADJUSTMENT/TEST

1. General

- A. This procedure has one task:
- (1) Pressure relief door latch test.

TASK 54-52-02-200-801

2. Pressure Relief Door Latch Test

(Figure 501)

A. **General**

- (1) This task is a test for the strut pressure relief door latch.
- (2) Each strut has two pressure relief doors.
- (3) The pressure relief doors are on the strut forward fairings.
 - (a) One pressure relief door is on the thumbnail fairing.
 - (b) One pressure relief door is on the right mid strut fairing.
- (4) Each pressure relief door has one latch.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-02-000-801	Forward Fairing Pressure Relief Door Latch Removal (P/B 401)
54-52-02-400-801	Forward Fairing Pressure Relief Door Latch Installation (P/B 401)

C. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-4410	Adapter Equipment - Load Test, Pressure Relief Door Latch Part #: B71044-28 Supplier: 81205 Opt Part #: B71044-10 Supplier: 81205
STD-1012	Wrench - Torque, 0 to 100 in-lbs (0 to 11.3 Nm)

D. **Location Zones**

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. **Prepare for the Check**

SUBTASK 54-52-02-040-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-02-010-002

- (2) Open the latch of the pressure relief door.

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F. Pressure Relief Door Latch Check

SUBTASK 54-52-02-200-003

- (1) Do a check on the latch of the pressure relief door:
 - (a) Install the adapter equipment, SPL-4410 on the pressure relief door as shown on the usage placard.
 - (b) Close the latch.
 - (c) Attach the pivot support assembly and torque wrench, STD-1012 to the adapter assembly.

NOTE: The adapter/pivot tool will apply a torque value that is two times the load necessary to open the latch. To apply a latch opening load of 90 lbf (400 N), set the torque wrench to 180 in-lb (20 N·m).
 - (d) With the torque wrench handle parallel to the door edge, turn the handle until the latch releases.
 - 1) Make sure that the latch opens immediately when you apply a force of 90 ± 9 lbf (400 ± 40 N) to the door.

SUBTASK 54-52-02-080-001

- (2) Remove the adapter equipment, SPL-4410 and the torque wrench, STD-1012 from the pressure relief door.

SUBTASK 54-52-02-400-001

- (3) If the latch is defective, replace the latch. Do the tasks that follow:
 - (a) Forward Fairing Pressure Relief Door Latch Removal, TASK 54-52-02-000-801
 - (b) Forward Fairing Pressure Relief Door Latch Installation, TASK 54-52-02-400-801.

G. Put the Airplane Back to its Usual Condition.

SUBTASK 54-52-02-410-002

- (1) Make sure that you close the pressure relief door.

SUBTASK 54-52-02-440-002

- (2) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

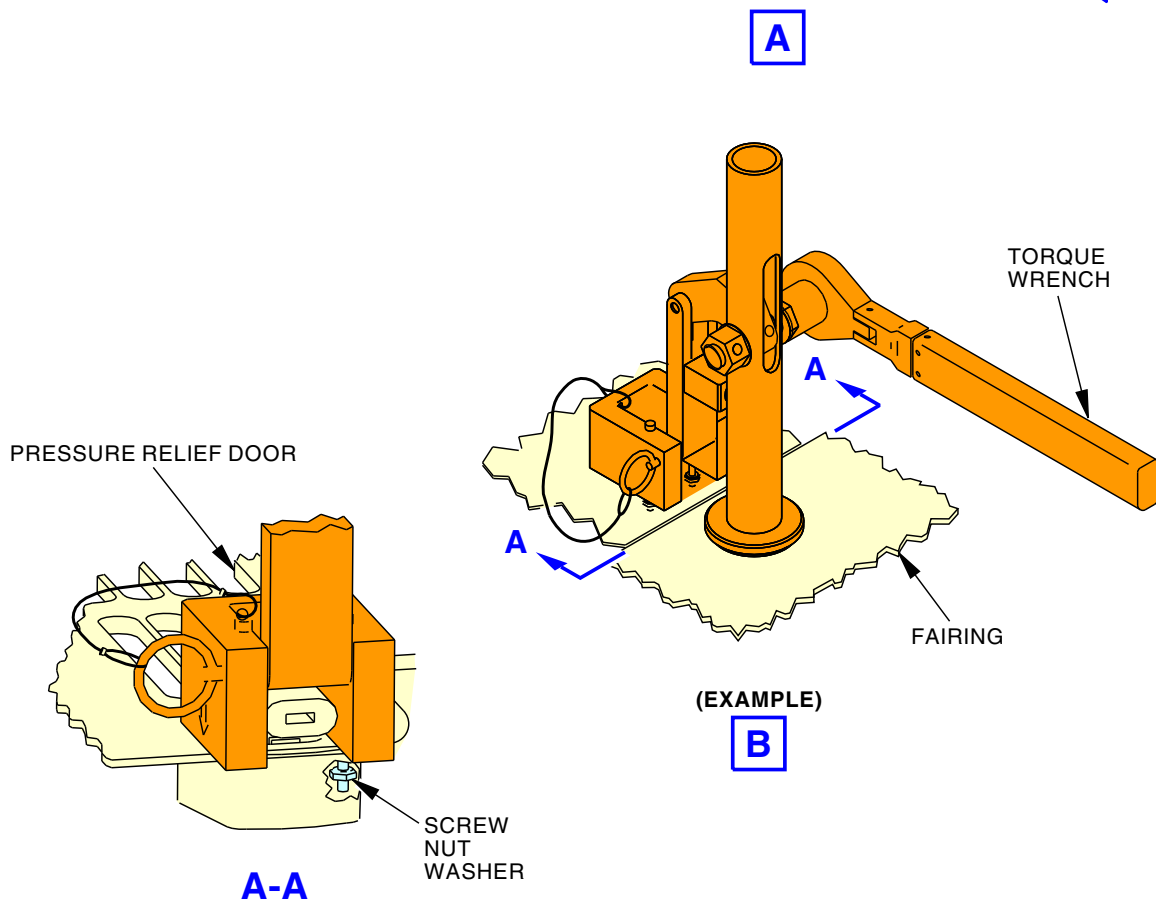
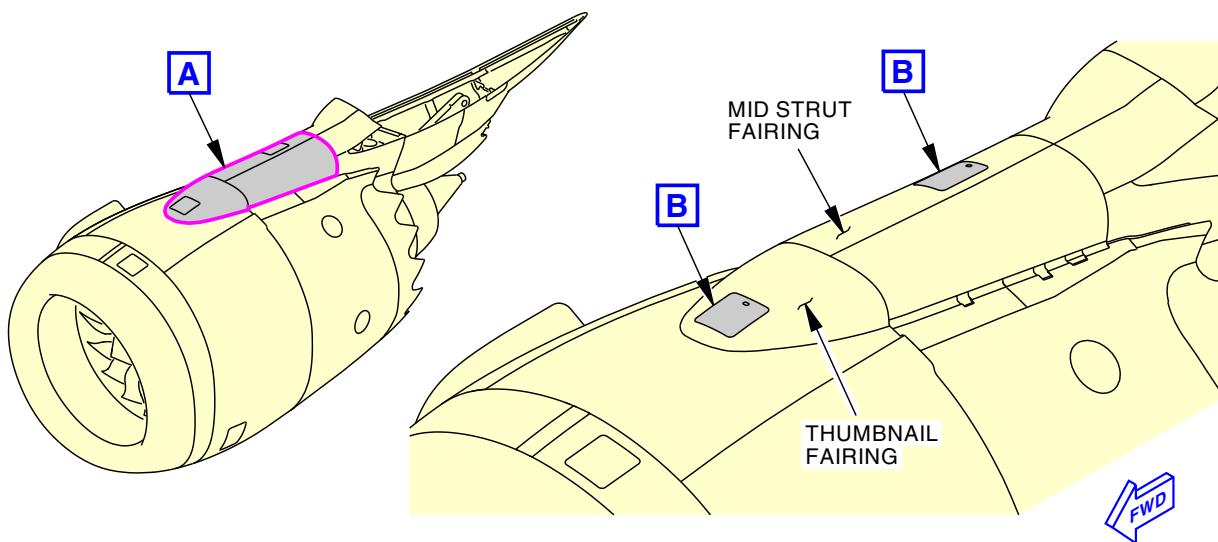
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Pressure Relief Door Latch Test
Figure 501/54-52-02-990-802

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WING JUNCTION FAIRINGS - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) Wing junction fairing removal
 - (2) Wing junction fairing installation.

TASK 54-52-03-000-801

2. **Wing Junction Fairing Removal**

(Figure 401 and Figure 402)

A. **General**

- (1) This task gives the instructions to remove the wing junction fairings.
- (2) Each strut has these wing junction fairings:
 - (a) Inboard overwing fairing
 - (b) Inboard underwing fairing
 - (c) Outboard overwing fairing
 - (d) Outboard underwing fairing.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)

C. **Location Zones**

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Access Panels**

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

E. **Prepare for the Removal**

SUBTASK 54-52-03-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

F. **Wing Junction Fairing Removal**

SUBTASK 54-52-03-020-001

- (1) Do these steps to remove the outboard overwing fairing:
 - (a) Remove the bolts [5] that attach the outboard overwing fairing [1] to the strut.

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- (b) Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

- (c) Remove the screw [6] and two washers [7] that attach the ground strap.
(d) Remove the outboard overwing fairing [1].

SUBTASK 54-52-03-020-002

- (2) Do these steps to remove the outboard underwing fairing [2]:

- (a) Remove the bolts [8] that attach the outboard underwing fairing [2] to the strut.
(b) Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

- (c) Remove the outboard underwing fairing [2].

SUBTASK 54-52-03-020-003

- (3) Do these steps to remove the inboard overwing fairing [3]:

- (a) Remove the bolts [5] that attach the inboard overwing fairing [3] to the strut.
(b) Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2

- (c) Remove the screw [6] and two washers [7] that attach the ground strap.
(d) Remove the inboard overwing fairing [3].

SUBTASK 54-52-03-020-004

- (4) Do these steps to remove the inboard underwing fairing:

- (a) Remove the bolts [8] that attach the inboard underwing fairing [4] to the strut.
(b) Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2

- (c) Remove the inboard underwing fairing [4].

————— END OF TASK —————

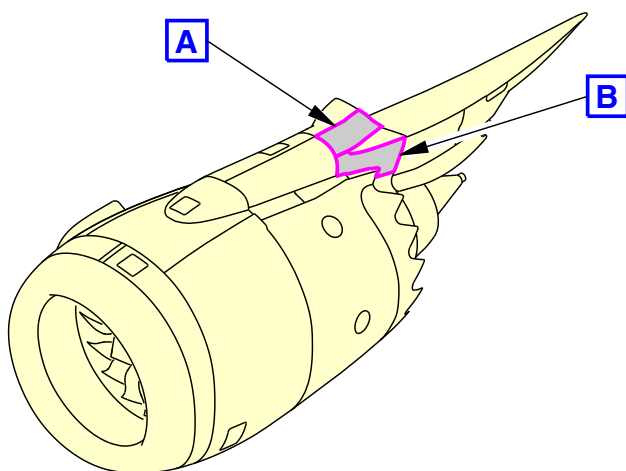
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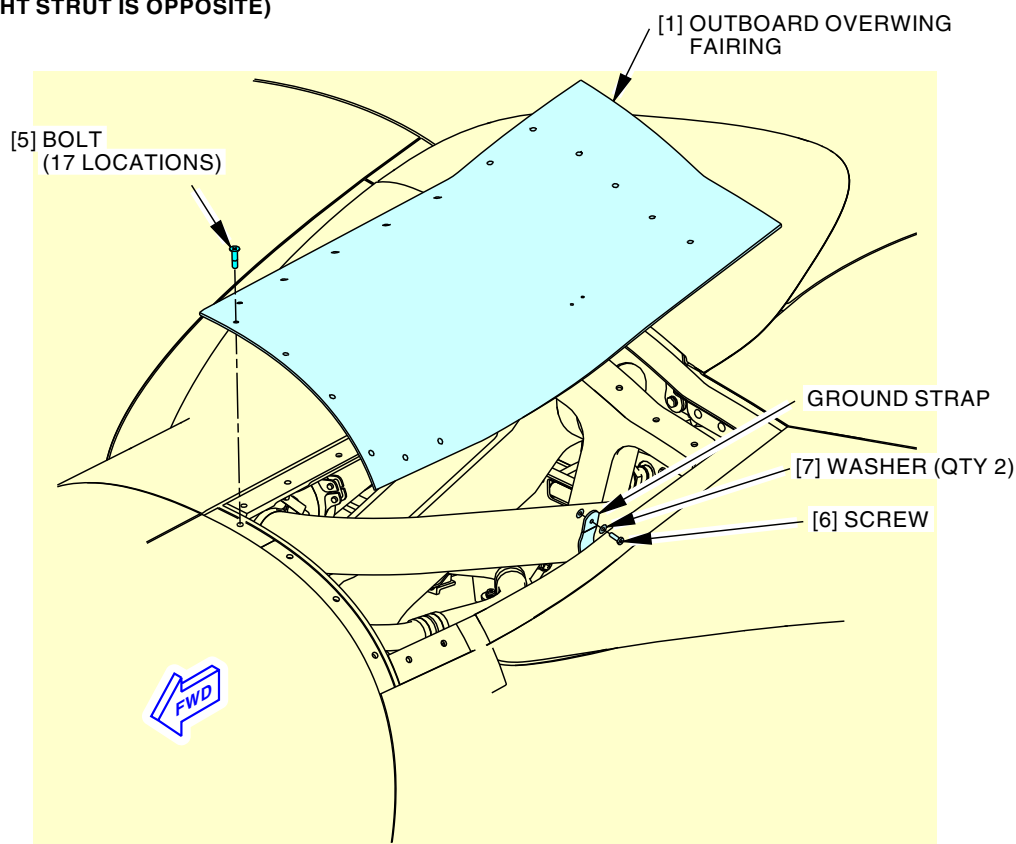
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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



OUTBOARD OVERWING FAIRING

A

2416275 S00061540190_V1

Outboard Wing Junction Fairings
Figure 401/54-52-03-990-801 (Sheet 1 of 2)

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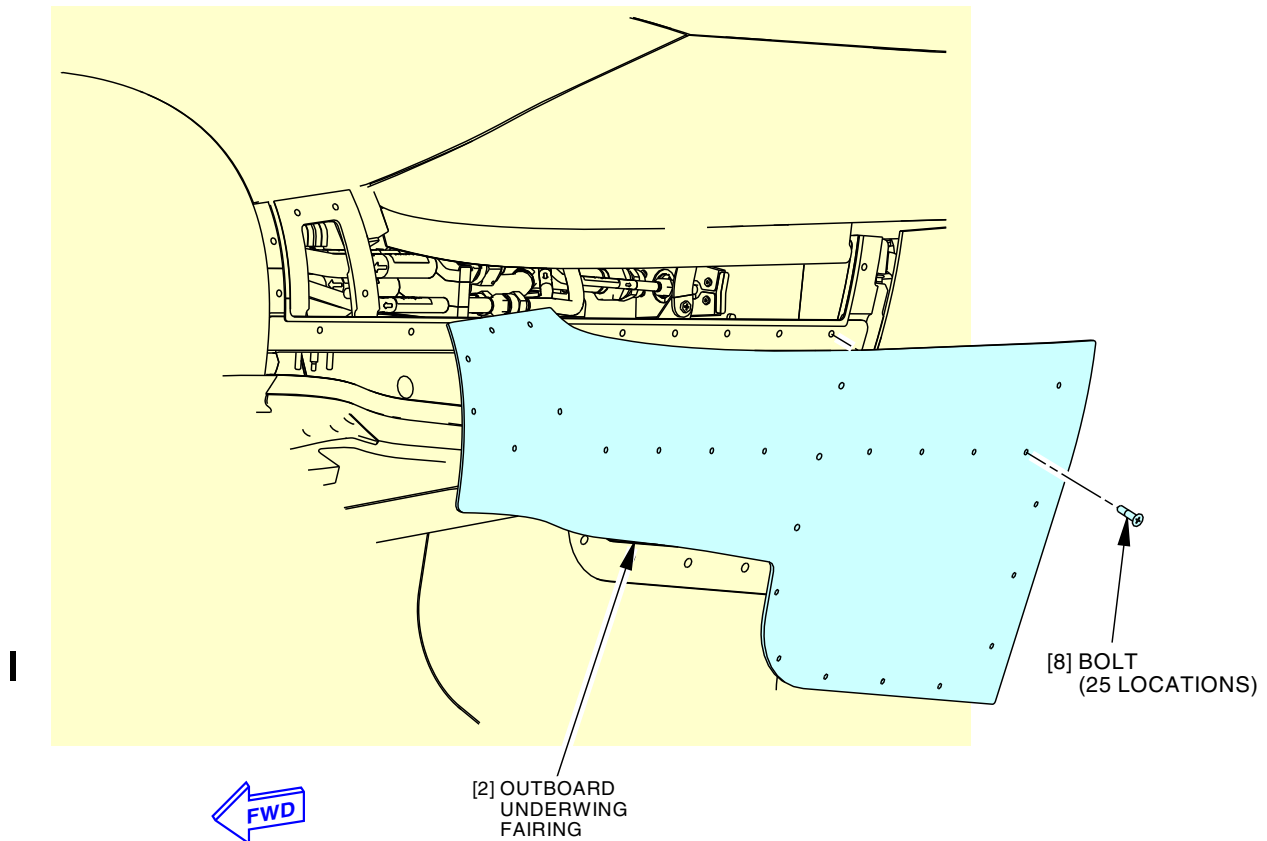
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OUTBOARD UNDERWING FAIRING

B

2416276 S00061540191_V3

Outboard Wing Junction Fairings
Figure 401/54-52-03-990-801 (Sheet 2 of 2)

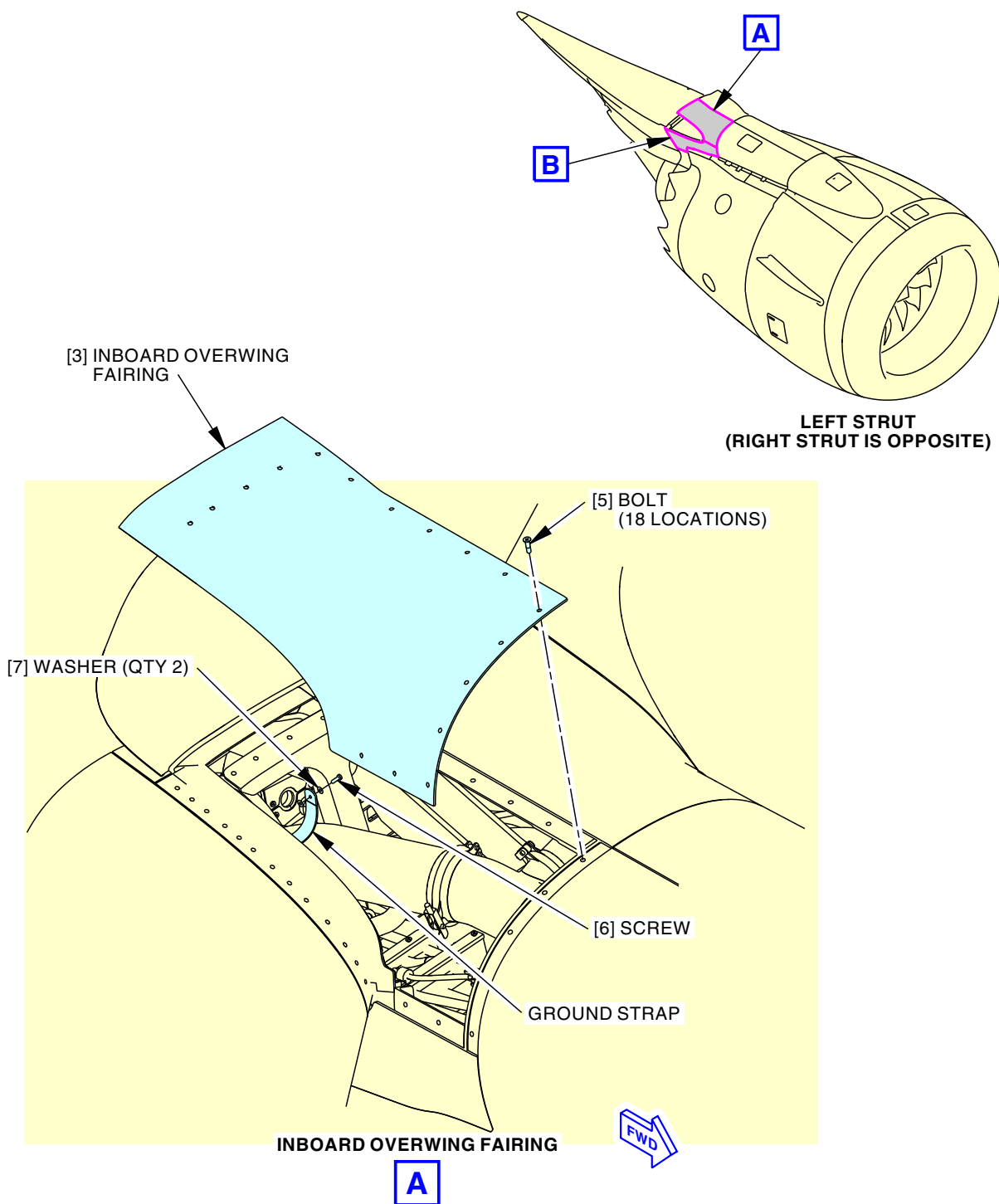
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2416277 S00061540192_V2

Inboard Wing Junction Fairings
Figure 402/54-52-03-990-802 (Sheet 1 of 2)

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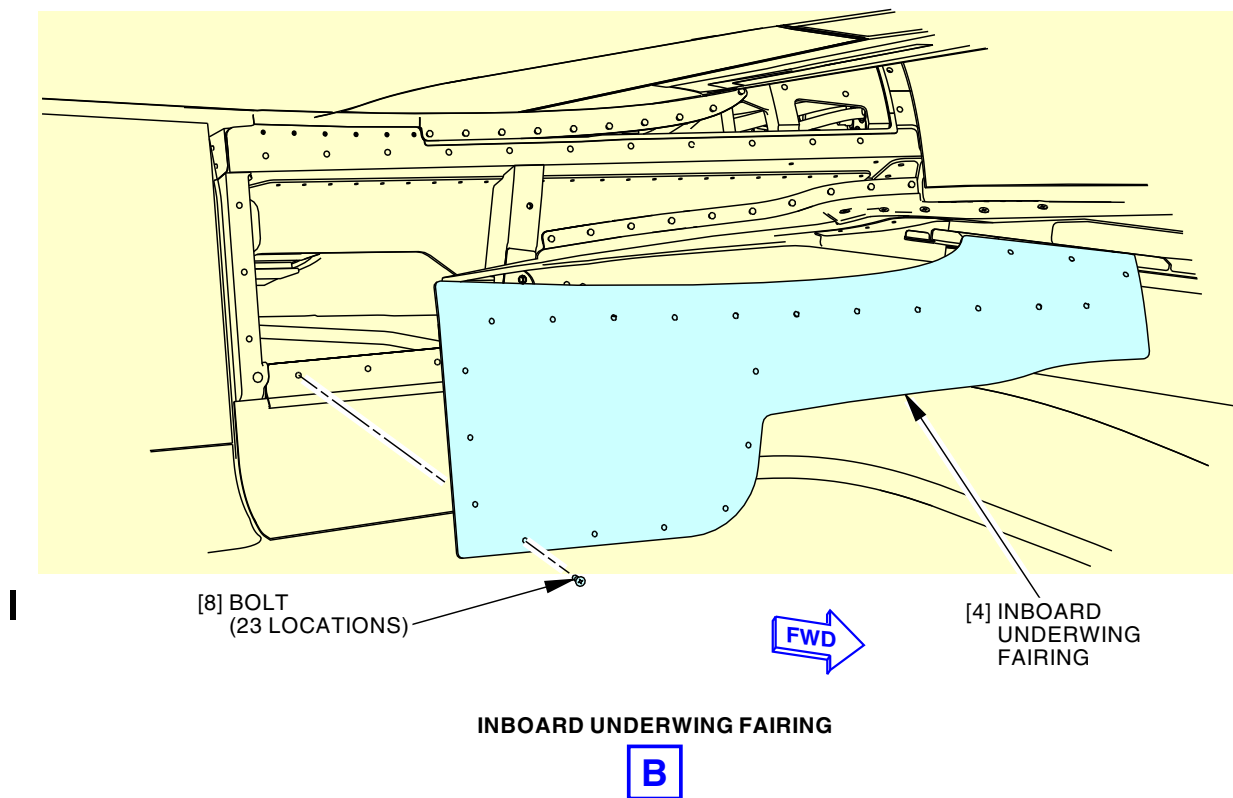
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2416278 S00061540193_V2

Inboard Wing Junction Fairings
Figure 402/54-52-03-990-802 (Sheet 2 of 2)

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TASK 54-52-03-400-801

3. Wing Junction Fairing Installation

(Figure 401 and Figure 402)

A. General

- (1) This task gives the instructions to install the wing junction fairings.
- (2) Each strut has these wing junction fairings:
 - (a) Inboard overwing fairing
 - (b) Inboard underwing fairing
 - (c) Outboard overwing fairing
 - (d) Outboard underwing fairing.

B. References

Reference	Title
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

D. Consumable Materials

Reference	Description	Specification
A50396	Sealant - Dapco 2200 Primerless Silicone Firewall Sealant	BMS5-63 Type II Class B-1/2
B00130	Alcohol - Isopropyl	TT-I-735
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00862	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)
G50262	Wiper - Cleaning	BMS15-5

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(Continued)

Reference	Description	Specification
G50398	Pad - Adbrasive, Scotch-Brite Type S, Abrasive Pad	
G50492	Pad - 3M Scotch Brite 7448 Ultra Fine Pad	MIL-A-9962A Type III Grade AAA

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Outboard overwing fairing	54-52-03-01-020	SIA ALL
		54-52-03-01-025	SIA ALL
2	Outboard underwing fairing	54-53-02-01-040	SIA 001-012
		54-53-02-01-042	SIA 013-999
		54-53-02-01-045	SIA 001-012
		54-53-02-01-047	SIA 013-999
3	Inboard overwing fairing	54-52-03-01-175	SIA ALL
		54-52-03-01-180	SIA ALL
4	Inboard underwing fairing	54-53-02-01-100	SIA ALL
		54-53-02-01-105	SIA ALL
		54-53-02-01-120	SIA 001-012
		54-53-02-01-122	SIA ALL
		54-53-02-01-125	SIA 001-012

F. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

H. Wing Junction Fairing Installation

SUBTASK 54-52-03-420-001

- (1) Do these steps to install the ground strap to the outboard overwing fairing [1] (Figure 401):
 - (a) Clean the fasteners and fay seal surfaces of the ground strap and bracket (SWPM 20-20-00).
 - 1) Use cleaning Procedure 1 to manually clean the ground strap and the bracket.
 - a) Prepare approximately 0.6 in. (1.5 cm) diameter area of fay surface of the ground strap and bracket.

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- b) Use a very fine Scotch-Brite Type S pad, G50398, or an ultra-fine Scotch-Brite 7448 pad, G50492.
- c) Twist pad with circular movement while you push with your thumb.
- d) Use a new cotton wiper, G00034, soaked with alcohol, B00130.
- e) Use a new cotton wiper, G00034, to dry the surfaces.
- 2) Use cleaning Procedure 5 to clean the fasteners.
 - a) Use a new cotton wiper, G00034, soaked with alcohol, B00130.
 - b) Use a new cotton wiper, G00034, to dry the surfaces.
- (b) Apply Dapco 2200 firewall sealant, A50396, to the area of the bonding contact of the bracket, ground strap, threads of the screw [6], and the faces of the washers [7].
- (c) Install the screw [6] and washers [7] that attach the ground strap to the bracket.
 - 1) Make sure that the sealant is continuous around each component and fastener.
- (d) Smooth out the extruded sealant with a clean wiper, G50262.
- (e) Measure the resistance between the ground strap and the bracket with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-00).
 - 1) Make sure that the resistance is 0.001 ohm (1.0 milliohm) or less.
- (f) Refinish abraded surfaces that you can see.
 - 1) Apply Bonderite M-CR 600 Aero coating, C00862 (TASK 51-21-41-370-802).
 - 2) Apply one coat of primer, C00259.

SUBTASK 54-52-03-020-005

- (2) Do these steps to install the outboard overwing fairing [1] (Figure 401):



CAUTION

BONDING GROMMETS HELP PREVENT POSSIBLE DAMAGE DUE TO LIGHTNING. IF THE BONDING GROMMETS ARE NOT INSTALLED, DAMAGE TO THE AIRPLANE MAY OCCUR.

- (a) Make sure that all of the fastener holes have bonding (metallic) grommets.
 - 1) If the grommets are missing, replace them.
- (b) Close the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
- (c) Install the bolts [5] that attach the outboard overwing fairing [1] to the strut.
 - 1) Tighten the bolts [5] to 50 ±3 in-lb (5.6 ±0.3 N·m).

SUBTASK 54-52-03-020-006

- (3) Do these steps to install the outboard underwing fairing [2] (Figure 401):



CAUTION

BONDING GROMMETS HELP PREVENT POSSIBLE DAMAGE DUE TO LIGHTNING. IF THE BONDING GROMMETS ARE NOT INSTALLED, DAMAGE TO THE AIRPLANE MAY OCCUR.

- (a) Make sure that all of the fastener holes have bonding (metallic) grommets.
 - 1) If the grommets are missing, replace them.

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- (b) Close the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

- (c) Install the bolts [8] that attach the outboard underwing fairing [2] to the strut.

- 1) Tighten the bolts [8] to 70 ±3 in-lb (7.9 ±0.3 N·m).

SUBTASK 54-52-03-420-002

- (4) Do these steps to install the ground strap to the inboard overwing fairing [3] (Figure 402):

- (a) Clean the fasteners and fay seal surfaces of the ground strap and bracket (SWPM 20-20-00).

- 1) Use cleaning Procedure 1 to manually clean the ground strap and the bracket.

- a) Prepare approximately 0.6 in. (1.5 cm) diameter area of fay surface of the ground strap and bracket.

- b) Use a very fine Scotch-Brite Type S pad, G50398, or an ultra-fine Scotch-Brite 7448 pad, G50492.

- c) Twist pad with circular movement while you push with your thumb.

- d) Use a new cotton wiper, G00034, soaked with alcohol, B00130.

- e) Use a new cotton wiper, G00034, to dry the surfaces.

- 2) Use cleaning Procedure 5 to clean the fasteners.

- a) Use a new cotton wiper, G00034, soaked with alcohol, B00130.

- b) Use a new cotton wiper, G00034, to dry the surfaces.

- (b) Apply Dapco 2200 firewall sealant, A50396, to the area of the bonding contact of the bracket, ground strap, threads of the screw [6], and the faces of the washers [7].

- (c) Install the screw [6] and washers [7] that attach the ground strap to the bracket.

- 1) Make sure that the sealant is continuous around each component and fastener.

- (d) Smooth out the extruded sealant with a clean wiper, G50262.

- (e) Measure the resistance between the ground strap and the bracket with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-00).

- 1) Make sure that the resistance is 0.001 ohm (1.0 milliohm) or less.

- (f) Refinish abraded surfaces that you can see.

- 1) Apply Bonderite M-CR 600 Aero coating, C00862 (TASK 51-21-41-370-802).

- 2) Apply one coat of primer, C00259.

SUBTASK 54-52-03-020-007

- (5) Do these steps to install the inboard overwing fairing [3] (Figure 402):



CAUTION

BONDING GROMMETS HELP PREVENT POSSIBLE DAMAGE DUE TO LIGHTNING. IF THE BONDING GROMMETS ARE NOT INSTALLED, DAMAGE TO THE AIRPLANE MAY OCCUR.

- (a) Make sure that all of the fastener holes have bonding (metallic) grommets.

- 1) If the grommets are missing, replace them.

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- (b) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2

- (c) Install the bolts [5] that attach the inboard overwing fairing [3] to the strut.

- 1) Tighten the bolts [5] to 50 ± 3 in-lb (5.6 ± 0.3 N·m).

SUBTASK 54-52-03-020-008

- (6) Do these steps to install the inboard underwing fairing [4]:



CAUTION

BONDING GROMMETS HELP PREVENT POSSIBLE DAMAGE DUE TO LIGHTNING. IF THE BONDING GROMMETS ARE NOT INSTALLED, DAMAGE TO THE AIRPLANE MAY OCCUR.

- (a) Make sure that all of the fastener holes have bonding (metallic) grommets.

- 1) If the grommets are missing, replace them.

- (b) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2

- (c) Install the bolts [8] that attach the inboard underwing fairing [4] to the strut.

- 1) Tighten the bolts [8] to 70 ± 3 in-lb (7.9 ± 0.3 N·m).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-03-440-001

- (1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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WING JUNCTION FAIRINGS - INSPECTION/CHECK

1. General

- A. This procedure examines the wing junction fairings.

TASK 54-52-03-200-801

2. Wing Junction Fairing Examination

A. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)
SRM 54-50-70	ENGINE STRUT FAIRING SKIN
SRM 54-50-71	ENGINE STRUT FAIRING STRUCTURE
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

C. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

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E. Prepare for the Examination

SUBTASK 54-52-03-040-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-03-010-001

- (2) Do this task: Wing Junction Fairing Removal, TASK 54-52-03-000-801.

- (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

F. Wing Junction Fairing Examination

SUBTASK 54-52-03-210-001

- (1) Do these steps to examine the wing junction fairings:

- (a) Examine the wing junction fairings for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
- 1) If you find damage to the wing junction fairings, repair the fairings as specified in this procedure: SRM SUBJECT 54-50-70.
- (b) Examine the ground straps on the overwing fairings for damage.
- 1) If you find damage to the ground straps on the overwing fairings, replace the ground straps.
- (c) Examine the support structure of the wing junction fairings for cracks or damage.
- 1) If you find damage to the wing junction fairing support structure, repair the support structure as specified in this procedure: SRM SUBJECT 54-50-71.

SUBTASK 54-52-03-410-001

- (2) Do this task: Wing Junction Fairing Installation, TASK 54-52-03-400-801.

- (a) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
431DL	Forward Strut Fairing, Left Underwing Fairing, Strut 1
431DR	Forward Strut Fairing, Right Underwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
441DL	Forward Strut Fairing, Left Underwing Fairing, Strut 2
441DR	Forward Strut Fairing, Right Underwing Fairing, Strut 2

SUBTASK 54-52-03-210-002

- (3) Measure the resistance between the ground strap and the overwing fairings with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-00).
- (a) Make sure that the resistance is 0.001 ohm (1.0 milliohm) or less.

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SUBTASK 54-52-03-210-003

- (4) To make sure the wing junction fairings are in the aerodynamic smoothness limits, do this task:
Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-03-440-002

- (1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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AFT FAIRING - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) Aft fairing removal (engine removed)
- (2) Aft fairing installation (engine removed)
- (3) Aft fairing removal (without primary nozzle and plug)
- (4) Aft fairing installation (without primary nozzle and plug).

TASK 54-52-04-000-801

2. Aft Fairing Removal (Engine Removed)

(Figure 401, Figure 402 and Figure 403).

A. General

- (1) This task gives the instructions to remove the aft fairing while the engine is removed.
- (2) The aft fairing has these adjustable components:
 - (a) Frame 2 attach fittings
 - (b) Frame 4 attach fittings
 - (c) Rod assemblies
 - (d) Lateral restraints.
- (3) If you will install the aft fairing on the same airplane and location, it is not necessary to make adjustments on the adjustable components.

B. References

Reference	Title
27-51-00-040-801	Trailing Edge Flap System Deactivation (P/B 201)
27-51-00-860-803	Extend the Trailing Edge Flaps (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1561	Jack - Hydraulic Part #: 930002 Supplier: FA2A9 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205
SPL-1584	Adapter Assembly - Telescoping Hydraulic Part #: J20009-136 Supplier: 81205 Opt Part #: J20009-68 Supplier: 81205
SPL-2019	Tool - Removal/Installation, Engine Strut Aft Fairing Part #: C54017-90 Supplier: 81205

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(Continued)

Reference	Description
SPL-2430	Hoist - Boom, Ground Based Part #: C20002-267 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
G50140	Gloves - Protective, Latex or Nitrile	

E. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

F. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Prepare for the Removal

SUBTASK 54-52-04-860-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-04-860-002

- (2) Do this task: Extend the Trailing Edge Flaps, TASK 27-51-00-860-803.

SUBTASK 54-52-04-860-003

- (3) Do this task: Trailing Edge Flap System Deactivation, TASK 27-51-00-040-801.

SUBTASK 54-52-04-020-001

- (4) Do this task: Power Plant - Removal, TASK 71-00-02-000-801-G00.

SUBTASK 54-52-04-010-001

- (5) Open these access panels:

(TASK 54-52-06-000-801)

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-52-04-480-001

- (6) Install the tool, SPL-2019, to the aft fairing [1] (Figure 401).
- (a) Put the tool, SPL-2019, on the hydraulic jack, SPL-1561, with its telescoping hydraulic adapter assembly, SPL-1584, or on a ground based boom hoist, SPL-2430.
 - (b) Lift the tool, SPL-2019, to the bottom of the aft fairing [1].
 - (c) Make sure that the tool, SPL-2019, holds the weight of the aft fairing [1].

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H. Aft Fairing Removal

SUBTASK 54-52-04-020-002

- (1) Do these steps to disconnect the strut drain tubes from the aft fairing [1] (Figure 402):
 - (a) Wear the protective gloves, G50140, to prevent silicone contamination on your hands and airplane surfaces from the silicone drain tubes.
 - 1) Make sure that you do not get silicone contamination on the airplane surfaces when you disconnect the silicone drain tubes.
 - 2) Immediately discard the protective gloves, G50140, after you disconnect the silicone tubes.
 - (b) Loosen the clamp [2].
 - (c) Disconnect the strut drain hose [4] from the aft fairing drain tube [3].
 - (d) Put a cap on the aft fairing drain tube [3].
 - (e) Loosen the clamps [5].
 - (f) Disconnect the condensate drain tubes [6] from the strut drain tubes.
 - (g) Put a cap on each strut drain tube.
 - (h) If it is necessary, remove the silicone contamination with general solvent, B50118.

SUBTASK 54-52-04-020-003

- (2) Do these steps to disconnect the aft fairing rod assemblies from the wing fittings (Figure 403):
 - (a) Remove the nuts [17], washers [18], sleeves [19], bolts [21], and washers [20] to disconnect the inboard and outboard rod assemblies [22] from the wing fitting clevises.
 - (b) Remove the bolt [11], washer [12], and sleeve [13] to disconnect the rod assembly [14] from the aft attach fitting.

SUBTASK 54-52-04-020-004

- (3) Do these steps to disconnect the aft fairing [1] from the wing fittings (Figure 403):
 - (a) Remove the nuts [26], washers [25], bolts [23], and washers [24] to disconnect the inboard and outboard frame 2 fittings from the wing fitting clevises.
 - (b) Remove the bolts [16] and washers [15] to disconnect the inboard and outboard frame 4 fittings from the wing fitting clevises.

SUBTASK 54-52-04-020-005

 WARNING	GET SUFFICIENT AID FROM OTHER PERSONNEL AND EQUIPMENT TO HOLD THE COMPONENT DURING THE REMOVAL, AND INSTALLATION. THE COMPONENT IS HEAVY. THIS WILL PREVENT INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.
---	---

- (4) Carefully lower the aft fairing [1] with the tool, SPL-2019.
 - (a) Be careful when you move the aft fairing [1] because it weighs approximately 122 lb (55 kg).
 - (b) Move the aft fairing [1] aft and down in an axis-parallel small step-motion pattern to carefully disengage the aft fairing lateral restraints from the strut horse shoe fittings, and clear the lugs of each wing fitting clevis.

————— **END OF TASK** —————

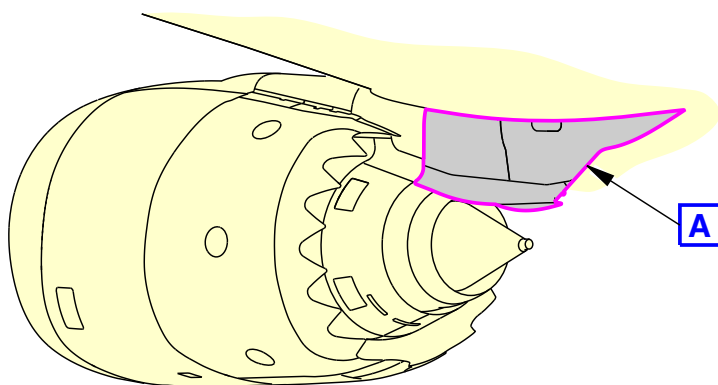
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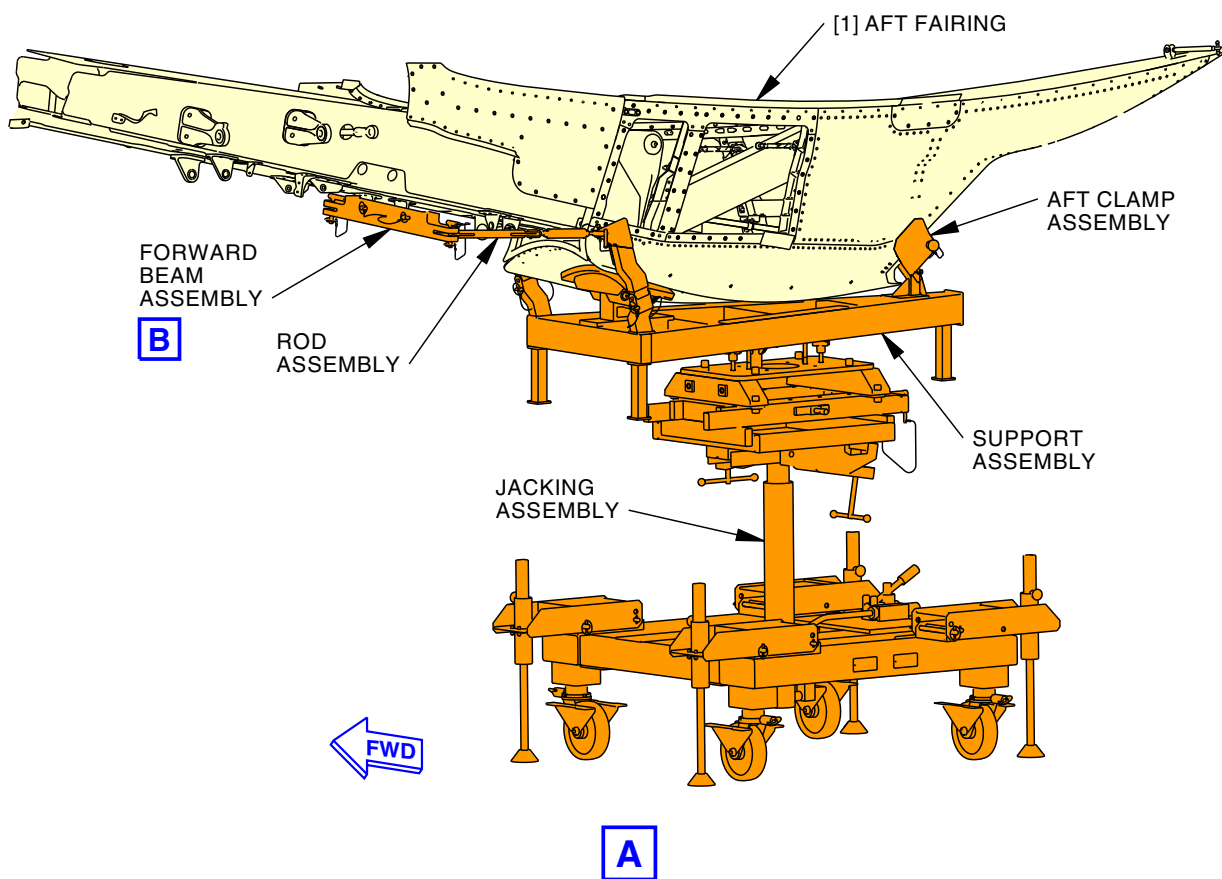
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**LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)**



2416279 S00061540201_V2

Aft Fairing Installation Tool
Figure 401/54-52-04-990-801 (Sheet 1 of 2)

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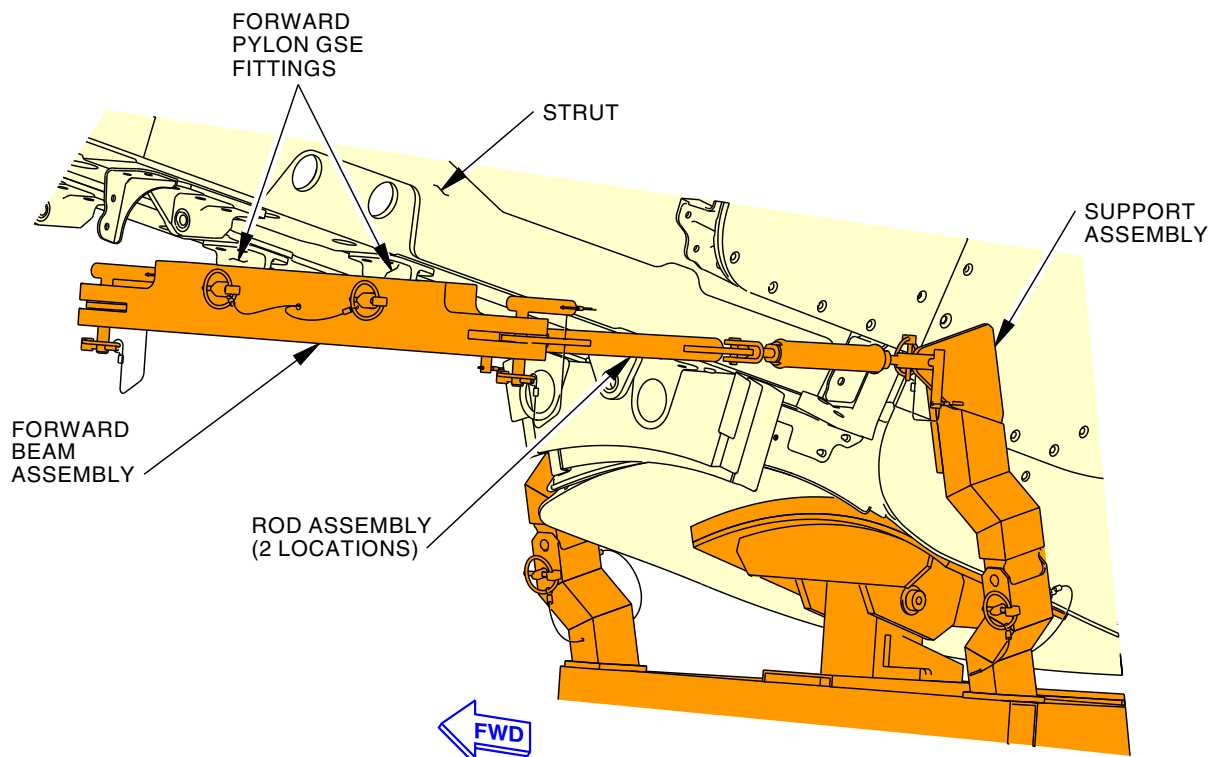
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FORWARD BEAM ASSEMBLY

B

2416280 S00061540202_V1

Aft Fairing Installation Tool
Figure 401/54-52-04-990-801 (Sheet 2 of 2)

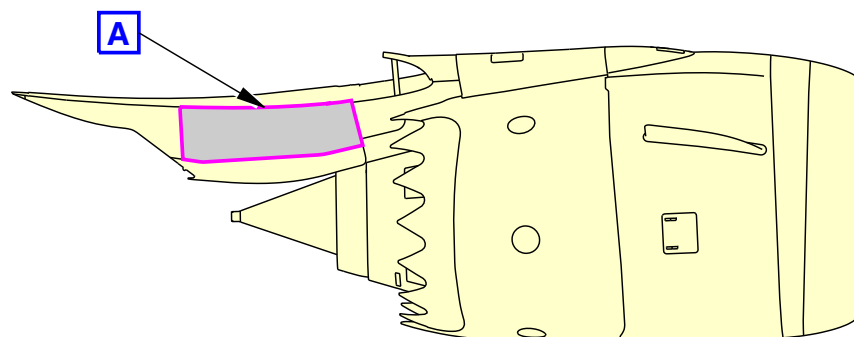
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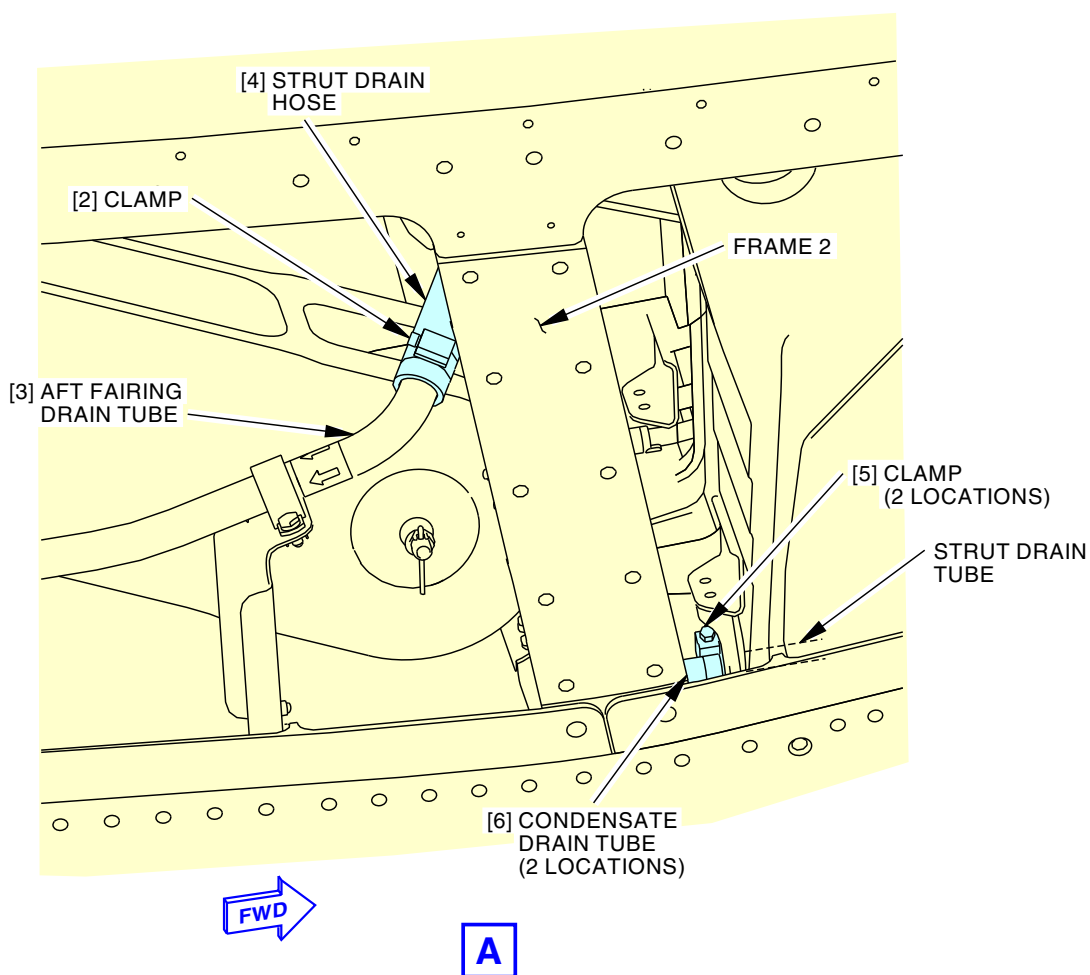
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**LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)**



2416281 S00061540203_V2

**Aft Fairing Drain Tube Disconnect
Figure 402/54-52-04-990-802**

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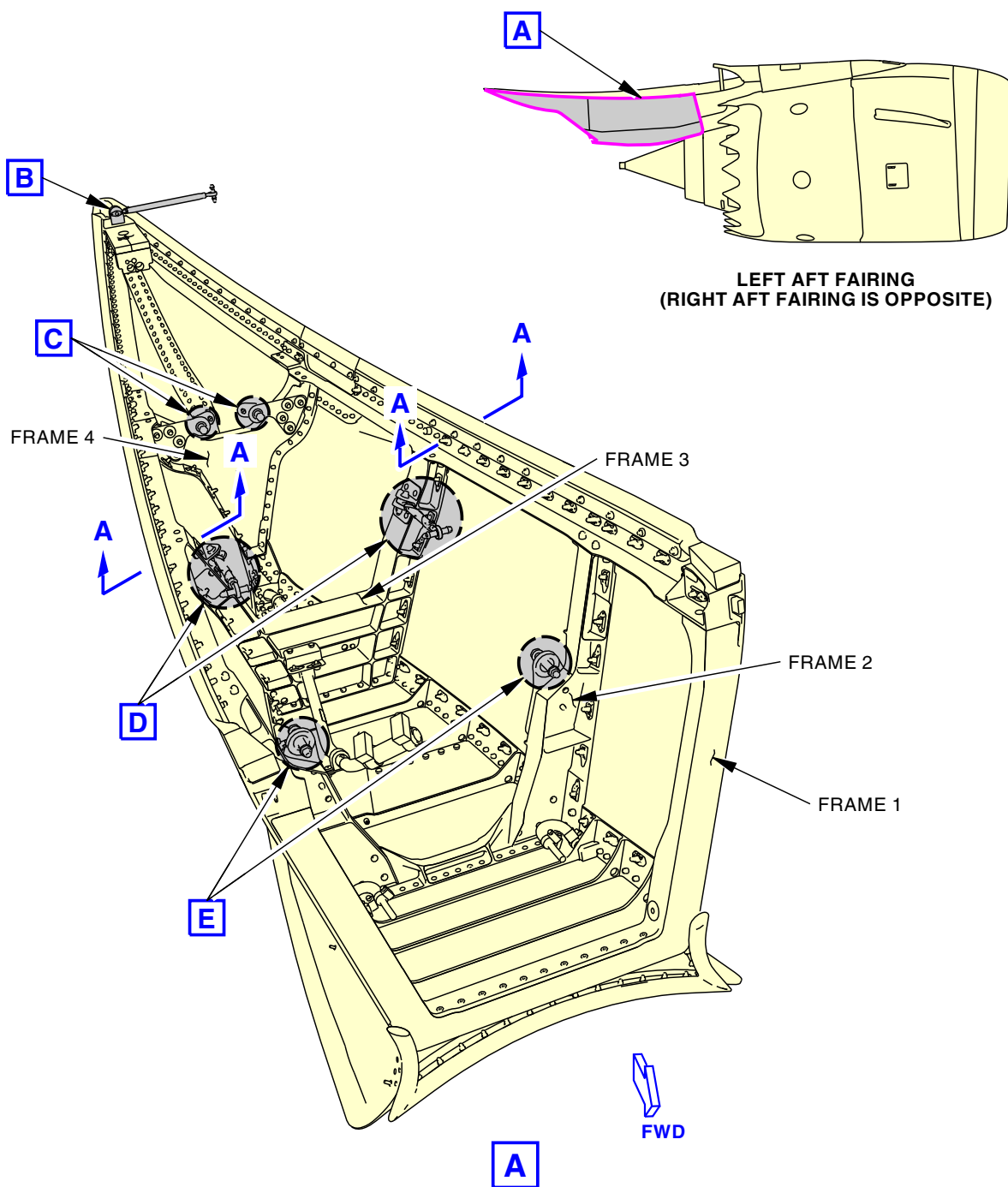
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2416282 S00061540204_V3

Aft Fairing Installation
Figure 403/54-52-04-990-803 (Sheet 1 of 4)

EFFECTIVITY
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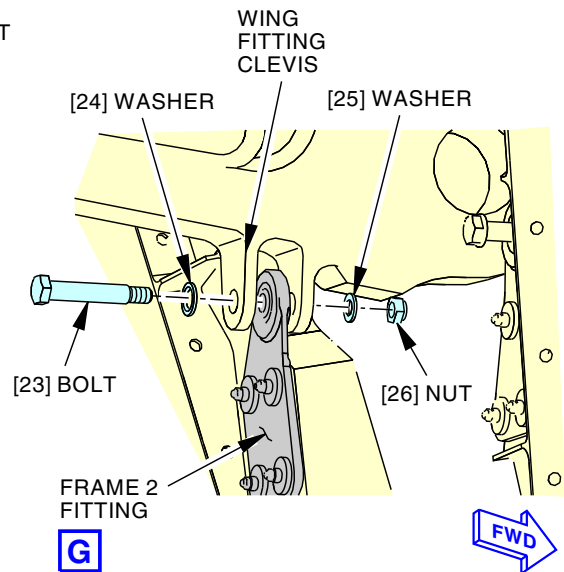
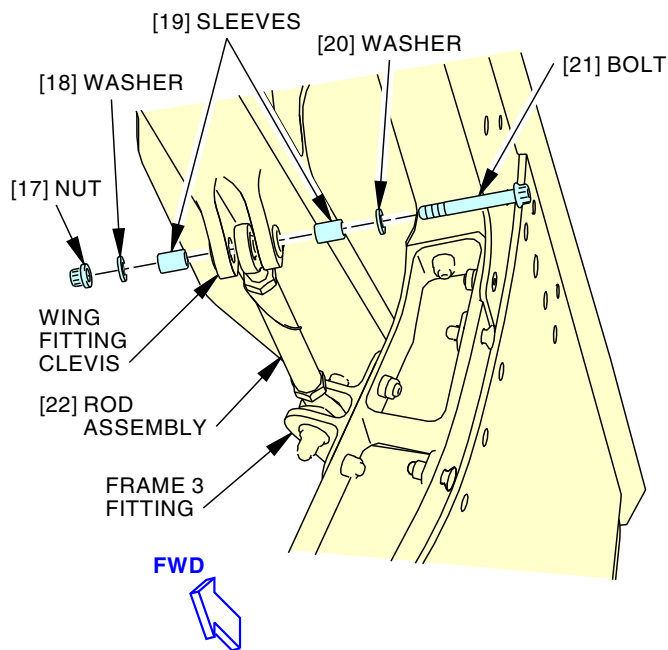
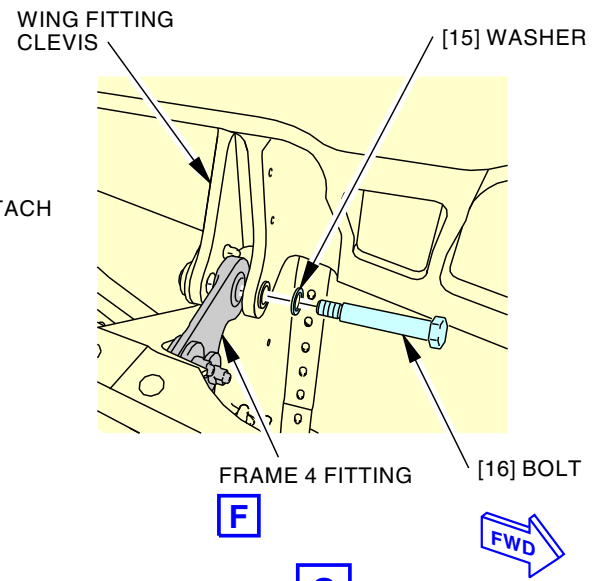
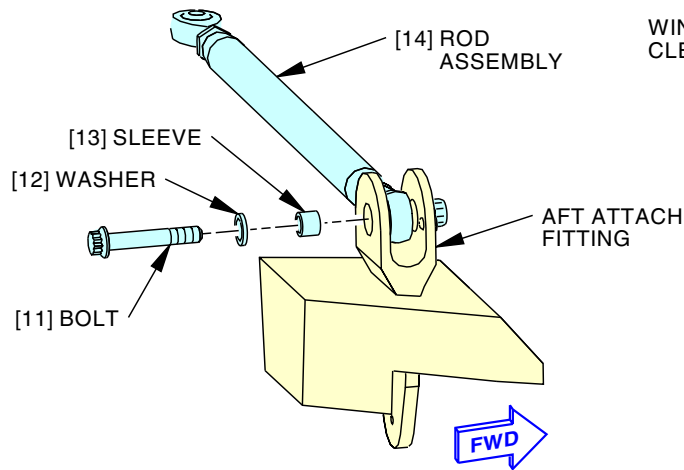
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2416283 S00061540205_V2

Aft Fairing Installation
Figure 403/54-52-04-990-803 (Sheet 2 of 4)

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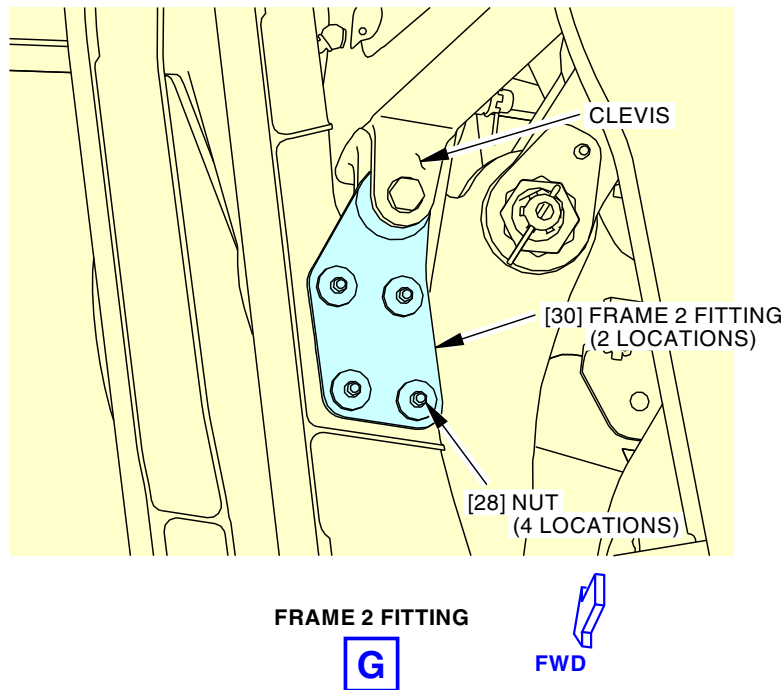
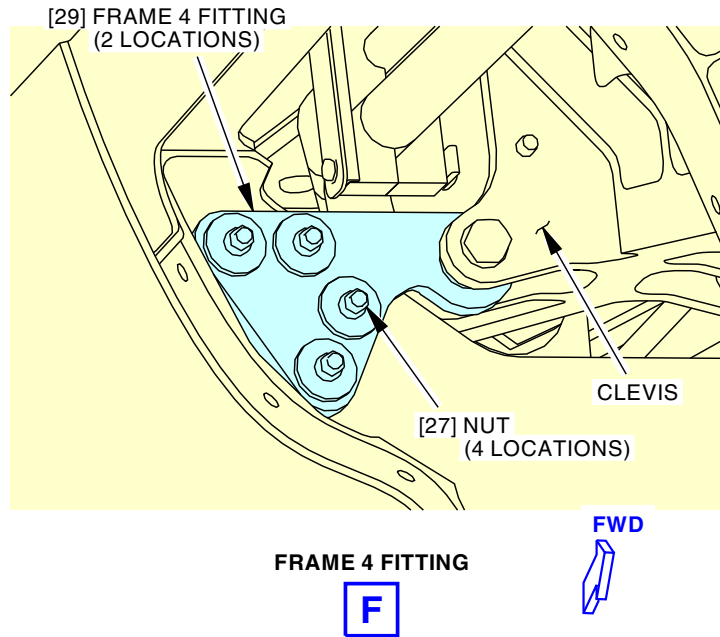
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2529826 S0000597616_V1

Aft Fairing Installation
Figure 403/54-52-04-990-803 (Sheet 3 of 4)

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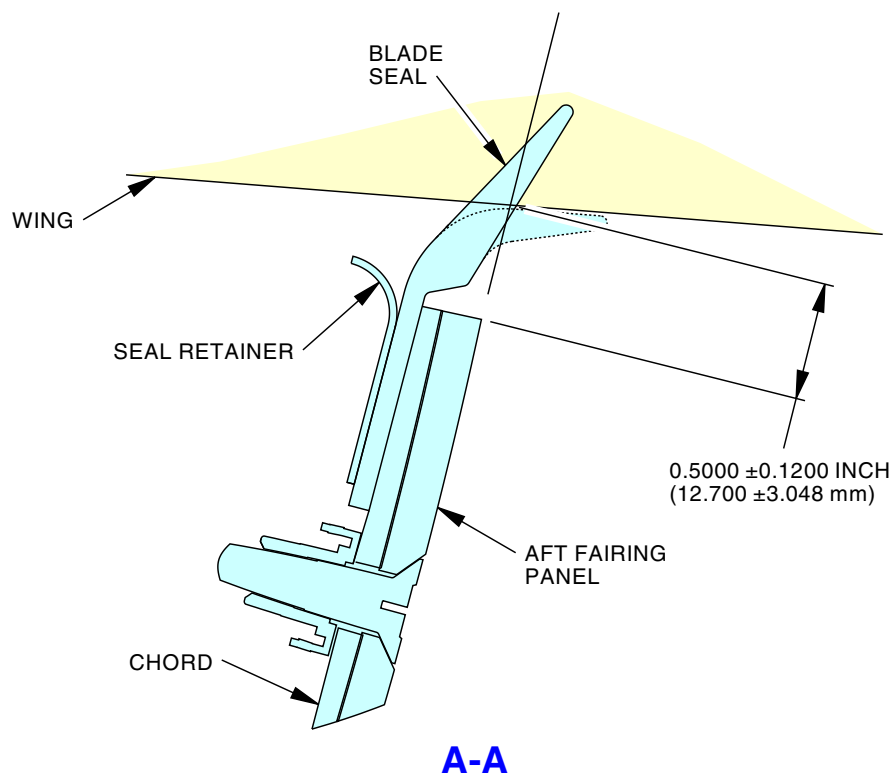
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2416284 S00061540206_V4

Aft Fairing Installation
Figure 403/54-52-04-990-803 (Sheet 4 of 4)

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TASK 54-52-04-400-801

3. **Aft Fairing Installation (Engine Removed)**

(Figure 401, Figure 402 and Figure 403)

A. General

- (1) This task gives the instructions to install the aft fairing while the engine is removed.
- (2) The aft fairing has these adjustable components:
 - (a) Frame 2 attach fittings
 - (b) Frame 4 attach fittings
 - (c) Rod assemblies
 - (d) Lateral restraints.
- (3) If you will install the aft fairing on the same airplane and location, it is not necessary to make adjustments on the adjustable components.

B. References

Reference	Title
27-51-00-440-801	Trailing Edge Flap System Reactivation (P/B 201)
27-51-00-860-804	Retract the Trailing Edge Flaps (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
SPL-1561	Jack - Hydraulic Part #: 930002 Supplier: FA2A9 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205
SPL-1584	Adapter Assembly - Telescoping Hydraulic Part #: J20009-136 Supplier: 81205 Opt Part #: J20009-68 Supplier: 81205
SPL-2019	Tool - Removal/Installation, Engine Strut Aft Fairing Part #: C54017-90 Supplier: 81205
SPL-2430	Hoist - Boom, Ground Based Part #: C20002-267 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
D00633	Grease - Aircraft General Purpose	BMS3-33
G50140	Gloves - Protective, Latex or Nitrile	

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Reference	Description	Specification
G50375	Kit - Safety Cable, 321 CRES - 0.032 Inch (0.81 mm) Diameter, (Contains both Cable and Ferrule)	BACC13AT3K, AMS 5689

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Aft fairing	54-52-04-01-370	SIA ALL
		54-52-04-01-375	SIA ALL

F. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Aft Fairing Installation

SUBTASK 54-52-04-640-001

- (1) Apply a thin layer of grease, D00633, to these areas (optional):
 - (a) Forward surface area of frame 1 that touches the strut seal.
 - (b) Lower wing surface rub strips.
 - (c) Wing areas that touch the aft fairing blade seals.

SUBTASK 54-52-04-420-001



GET SUFFICIENT AID FROM OTHER PERSONNEL AND EQUIPMENT TO HOLD THE COMPONENT DURING THE REMOVAL, AND INSTALLATION. THE COMPONENT IS HEAVY. THIS WILL PREVENT INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) Do these steps to align the aft fairing [1] to the wing fittings (Figure 403):
 - (a) Attach the forward beam assembly to the forward pylon GSE fittings located at NAC STA 255 (Figure 401).
 - (b) Be careful when you move the aft fairing [1] because it weighs approximately 122 lb (55 kg).
 - (c) Use the hydraulic jack, SPL-1561, with its telescoping hydraulic adapter assembly, SPL-1584, or the boom hoist, SPL-2430, to lift the aft fairing [1] in its position under the wing.



WHEN YOU LIFT THE AFT FAIRING, MAKE SURE THAT THE DRAIN TUBE DOES NOT TOUCH THE DIAGONAL BRACE. IF THE DRAIN TUBE TOUCHES THE DIAGONAL BRACE, DAMAGE TO THE EQUIPMENT CAN OCCUR.

- 1) Make sure that the aft fairing drain tube [3] does not touch the diagonal brace.

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- 2) Align the frame 2 fittings and frame 4 fittings below the aft lug of each wing fitting clevis.
- 3) Move the aft fairing [1] forward and up in an axis-parallel small step-motion pattern to engage the aft fairing lateral restraints with the strut horse shoe fittings (Figure 403).
- (d) Attach the rod assembly to the forward beam assembly and the support assembly from the tool, SPL-2019, (Figure 401, View B).
- (e) Turn the turnbuckles on the rod assemblies to apply a preload in the forward direction.
- (f) Move the aft fairing [1] to align the frame 4 fittings and the frame 2 fittings with the wing fitting clevises.

SUBTASK 54-52-04-420-002

- (3) Do these steps to install the frame 4 fittings to the wing fitting clevises (Figure 403, View C):
 - (a) Apply a thin layer of grease, D00633, to the shank and threads of the bolts [16] and to the faces of the washers [15].
 - (b) Install the washers [15] and bolts [16] to the frame 4 fittings and the wing fitting clevis.
 - (c) Make sure that the panels and wing align with the inboard and outboard clearance requirements (Figure 403, View A-A).



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the frame 4 fittings [29] (Figure 403, View F):
 - a) Remove the bolt [16] and washer [15].
 - b) Adjust the vertical position of the aft fairing to align with the inboard and outboard clearance gap requirements.
 - c) Loosen the nuts [27] on one frame 4 fitting [29] at a time.
 - d) Adjust the frame 4 fitting [29] to align with the wing fitting clevis.
 - e) Tighten the nuts [27].
 - f) Make sure that the frame 4 fitting [29] fully engages the serrated plate.
 - g) Re-tighten the nuts [27].
 - h) Install the washer [15] and bolt [16].
- (d) Make sure that the forward clearances between the wing fitting clevises and the frame 4 fittings are 0.3000 ± 0.0200 in. (7.620 ± 0.508 mm).

SUBTASK 54-52-04-420-003

- (4) Do these steps to install the frame 2 fittings to the wing fitting clevises (Figure 403, View E):
 - (a) Apply a thin layer of grease, D00633, to the shanks and threads of the bolts [23], to the faces of the washers [24] and washers [25], and to the mating faces of the nuts [26].
 - (b) Make sure that you install the bolts [23] with the heads on the aft side.
 - (c) Install the bolts [23], washers [24], washers [25], and nuts [26] to the frame 2 fittings and the wing fitting clevises.

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DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the frame 2 fittings [30] (Figure 403, View G):
 - a) Loosen the nuts [28] on one frame 2 fitting [30] at a time.
 - b) Adjust the frame 2 fitting [30] to align with the wing fitting clevis.
 - c) Tighten the nuts [28].
 - d) Make sure that the frame 2 fitting [30] fully engages the serrated plate.
 - e) Re-tighten the nuts [28].

SUBTASK 54-52-04-420-004

- (5) Do these steps to install the rod assemblies [22] to the wing fitting clevises (Figure 403, View D):
 - (a) Apply a thin layer of grease, D00633, to the shanks and threads of the bolts [21], to the faces of the washer [18] and washers [20], and to the mating faces of the nuts [17].
 - (b) Make sure that you install the bolts [21] with the heads on the outboard side.
 - (c) Install the sleeves [19], washers [20], bolts [21], washers [18], and nuts [17] to the rod assemblies [22] and the wing fitting clevises.



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the rod assemblies [22]:
 - a) Remove the safety wire from the rod assembly.
 - b) Loosen the nuts common to the rod end.
 - c) Adjust the rod assembly.
 - d) Re-tighten the nuts at the rod end to 45 ± 2 in-lb (5.1 ± 0.2 N·m).
 - e) Install the safety cable kit, G50375.

SUBTASK 54-52-04-420-005

- (6) Do these steps to install the rod assembly [14] at the aft attach fitting (Figure 403, View B):
 - (a) Apply a thin layer of grease, D00633, to the shank and threads of the bolt [11] and to the faces of the washer [12].
 - (b) Install the sleeve [13], washer [12], and bolt [11] to the rod assembly [14] and the aft attach fitting.



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the rod assembly [14]:
 - a) Remove the lockwire from the rod assembly [14].



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- b) Loosen the nuts common to the rod end.
- c) Adjust the rod assembly [14].
- d) Re-tighten the nuts at the rod end to 60 in-lb (6.8 N·m) - 95 in-lb (10.7 N·m).
- e) Install the safety cable kit, G50375.

SUBTASK 54-52-04-080-001

- (7) Remove the tool, SPL-2019, and the forward beam assembly (Figure 401).

SUBTASK 54-52-04-420-006

- (8) Do these steps to connect the strut drain tubes to the aft fairing [1] (Figure 402):
 - (a) Wear the protective gloves, G50140, to protect your hands from the drain tubes.
 - 1) Make sure that you do not get silicone contamination on the airplane surfaces when you connect the silicone drain tubes.
 - 2) Immediately discard the protective gloves, G50140, after you connect the silicone drain tubes.
 - (b) Remove the caps from the strut drain tubes.
 - (c) Connect the condensate drain tubes [6] to the strut drain tubes.



DO NOT TIGHTEN THE CLAMPS TOO MUCH. IF YOU TIGHTEN THE CLAMPS TOO MUCH, DAMAGE TO THE SOFT SILICON TUBES CAN OCCUR.

- (d) Tighten the clamps [5].
- (e) Remove the cap from the aft fairing drain tube [3].
- (f) Connect the strut drain hose [4] to the aft fairing drain tube [3].



DO NOT TIGHTEN THE CLAMPS TOO MUCH. IF YOU TIGHTEN THE CLAMPS TOO MUCH, DAMAGE TO THE SOFT SILICON TUBES CAN OCCUR.

- (g) Tighten the clamp [2] on the strut drain hose [4].
- (h) If it is necessary, remove silicone contamination with general solvent, B50118.

SUBTASK 54-52-04-410-001

- (9) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

I. Aft Fairing Installation Test

SUBTASK 54-52-04-220-001

- (1) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-04-420-007

- (1) Do this task: Power Plant - Installation, TASK 71-00-02-400-801-G00.

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SUBTASK 54-52-04-860-004

- (2) Do this task: Trailing Edge Flap System Reactivation, TASK 27-51-00-440-801.

SUBTASK 54-52-04-860-005

- (3) Do this task: Retract the Trailing Edge Flaps, TASK 27-51-00-860-804.

SUBTASK 54-52-04-860-006

- (4) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

END OF TASK

TASK 54-52-04-000-802

4. Aft Fairing Removal (Without Primary Nozzle and Plug)

(Figure 404, Figure 402, and Figure 403)

A. General

- (1) This task gives the instructions to remove the aft fairing while the engine is installed and the engine primary nozzle and plug is removed.
- (2) The aft fairing has these adjustable components:
 - (a) Frame 2 attach fittings
 - (b) Frame 4 attach fittings
 - (c) Rod assemblies
 - (d) Lateral restraints.
- (3) If you will install the aft fairing on the same airplane and location, it is not necessary to make adjustments on the adjustable components.

B. References

Reference	Title
27-51-00-040-801	Trailing Edge Flap System Deactivation (P/B 201)
27-51-00-860-803	Extend the Trailing Edge Flaps (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
78-11-01-000-801-G00	Primary Nozzle Assembly Removal (P/B 401)
78-11-02-000-801-G00	Primary Plug Assembly Removal (P/B 401)
78-11-03-000-801-G00	Center Vent Tube Extension Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1561	Jack - Hydraulic Part #: 930002 Supplier: FA2A9 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205
SPL-1584	Adapter Assembly - Telescoping Hydraulic Part #: J20009-136 Supplier: 81205 Opt Part #: J20009-68 Supplier: 81205

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Reference	Description
SPL-2019	Tool - Removal/Installation, Engine Strut Aft Fairing Part #: C54017-90 Supplier: 81205
SPL-2430	Hoist - Boom, Ground Based Part #: C20002-267 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
G50140	Gloves - Protective, Latex or Nitrile	

E. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

F. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Prepare for the Removal

SUBTASK 54-52-04-860-007

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-04-860-008

(2) Do this task: Extend the Trailing Edge Flaps, TASK 27-51-00-860-803.

SUBTASK 54-52-04-040-001

(3) Do this task: Trailing Edge Flap System Deactivation, TASK 27-51-00-040-801.

SUBTASK 54-52-04-020-006

(4) Do this task: Primary Nozzle Assembly Removal, TASK 78-11-01-000-801-G00.

SUBTASK 54-52-04-020-007

(5) Do this task: Primary Plug Assembly Removal, TASK 78-11-02-000-801-G00.

SUBTASK 54-52-04-020-013

(6) Do this task: Center Vent Tube Extension Removal, TASK 78-11-03-000-801-G00.

SUBTASK 54-52-04-010-002

(7) Open these access panels:

(TASK 54-52-06-000-801)

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-52-04-480-002

(8) Install the tool, SPL-2019, to the aft fairing [1] (Figure 404).

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- (a) Put the tool, SPL-2019, on the hydraulic jack, SPL-1561, with its telescoping hydraulic adapter assembly, SPL-1584, or on a ground based boom hoist, SPL-2430.
- (b) Lift the tool, SPL-2019, to the bottom of the aft fairing [1].
- (c) Make sure that the tool, SPL-2019, holds the weight of the aft fairing [1].

H. Aft Fairing Removal

SUBTASK 54-52-04-020-008

- (1) Do these steps to disconnect the strut drain tubes from the aft fairing [1] (Figure 402):
 - (a) Wear the protective gloves, G50140, to prevent silicone contamination on your hands and airplane surfaces from the silicone drain tubes.
 - 1) Make sure that you do not get silicone contamination on the airplane surfaces when you disconnect the silicone drain tubes.
 - 2) Immediately discard the protective gloves, G50140, after you disconnect the silicone tubes.
 - (b) Loosen the clamp [2].
 - (c) Disconnect the strut drain hose [4] from the aft fairing drain tube [3].
 - (d) Put a cap on the aft fairing drain tube [3].
 - (e) Loosen the clamps [5].
 - (f) Disconnect the condensate drain tubes [6] from the strut drain tubes.
 - (g) Put a cap on each strut drain tube.
 - (h) If it is necessary, remove silicone contamination with general solvent, B50118.

SUBTASK 54-52-04-020-009

- (2) Do these steps to disconnect the aft fairing rod assemblies from the wing fittings (Figure 403):
 - (a) Remove the nuts [17], washers [18], sleeves [19], bolts [21], and washers [20] to disconnect the inboard and outboard rod assemblies [22] from the wing fitting clevises.
 - (b) Remove the bolt [11], washer [12], and sleeve [13] to disconnect the rod assembly [14] from the aft attach fitting.

SUBTASK 54-52-04-020-010

- (3) Do these steps to disconnect the aft fairing [1] from the wing fittings:
 - (a) Remove the nuts [26], washers [25], bolts [23], and washers [24] to disconnect the inboard and outboard frame 2 fittings from the wing fitting clevises.
 - (b) Remove the bolts [16] and washers [15] to disconnect the inboard and outboard frame 4 fittings from the wing fitting clevises.

SUBTASK 54-52-04-020-011



GET SUFFICIENT AID FROM OTHER PERSONNEL AND EQUIPMENT TO HOLD THE COMPONENT DURING THE REMOVAL, AND INSTALLATION. THE COMPONENT IS HEAVY. THIS WILL PREVENT INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (4) Carefully lower the aft fairing [1] with the tool, SPL-2019.
 - (a) Be careful when you move the aft fairing [1] because it weighs approximately 122 lb (55 kg).



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- (b) Move the aft fairing [1] aft and down in an axis-parallel small step-motion pattern to carefully disengage the aft fairing lateral restraints from the strut horse shoe fittings, and clear the lugs of each wing fitting clevis.

———— **END OF TASK** ————

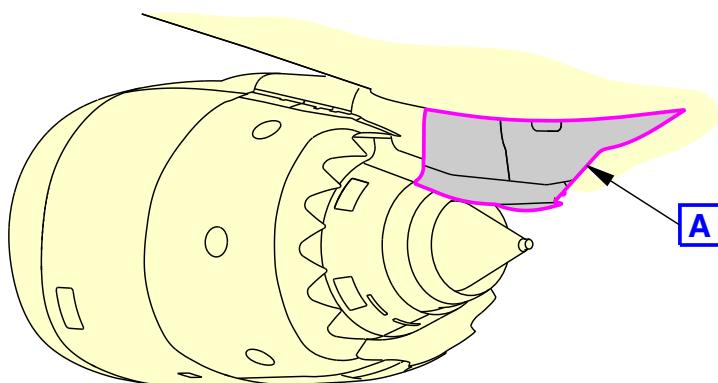
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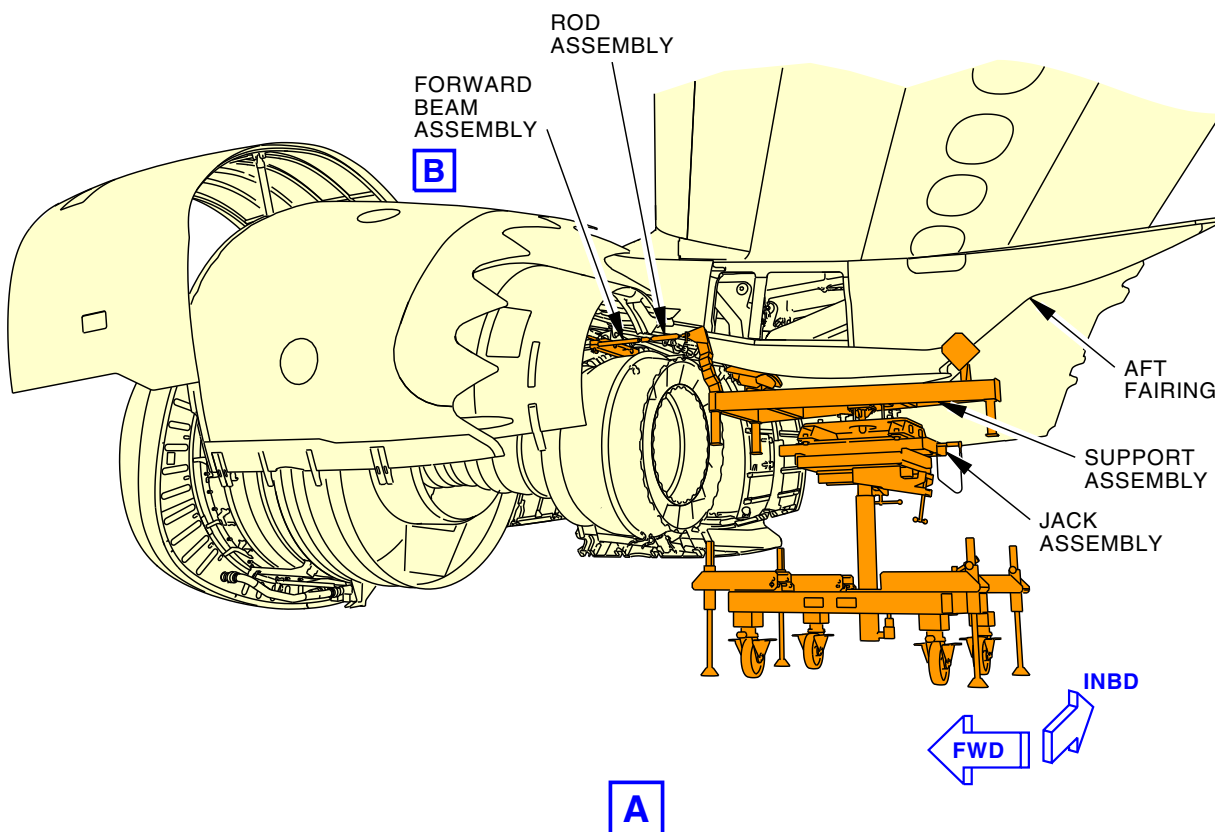
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LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)



2416285 S00061540208_V2

Aft Fairing Installation Tool (Without Primary Plug and Nozzle)
Figure 404/54-52-04-990-804 (Sheet 1 of 2)

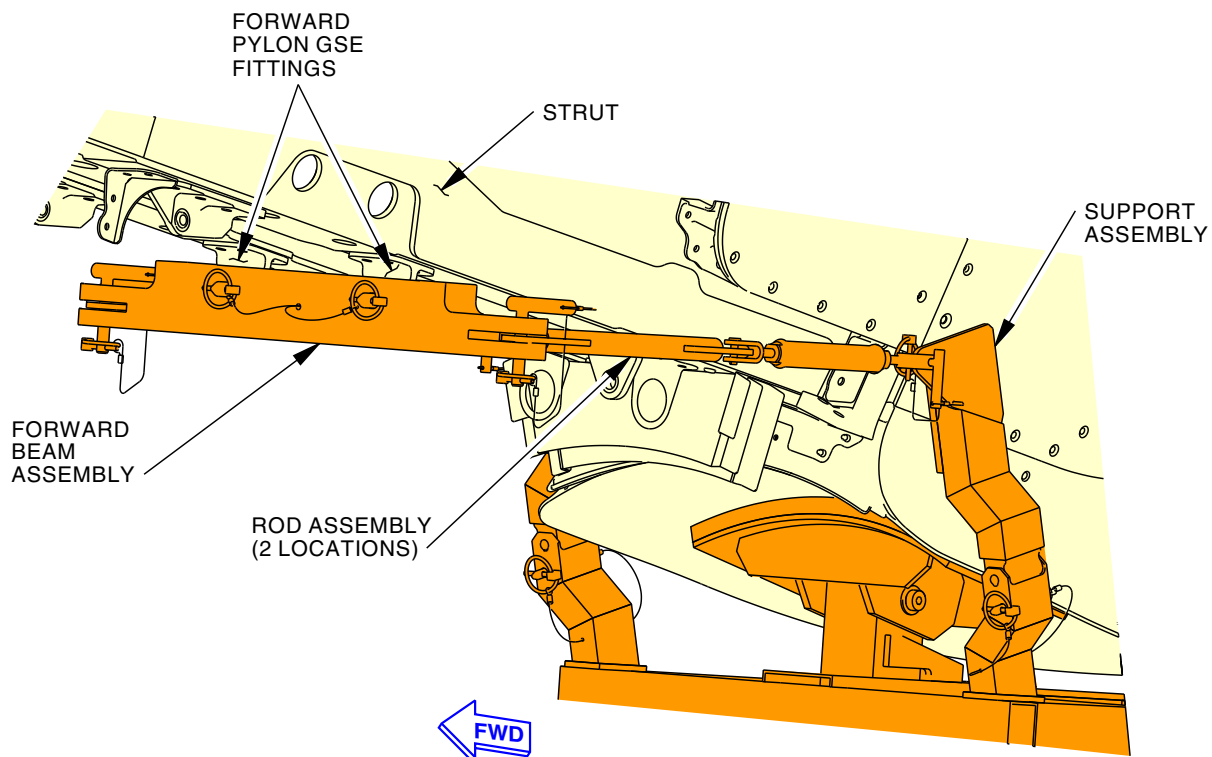
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FORWARD BEAM ASSEMBLY

B

2416280 S00061540202_V1

Aft Fairing Installation Tool (Without Primary Plug and Nozzle)
Figure 404/54-52-04-990-804 (Sheet 2 of 2)

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TASK 54-52-04-400-802

5. **Aft Fairing Installation (Without Primary Nozzle and Plug)**

(Figure 404, Figure 402 and Figure 403)

A. General

- (1) This task gives the instructions to install the aft fairing while the engine is installed and the engine primary nozzle and plug is removed.
- (2) The aft fairing has these adjustable components:
 - (a) Frame 2 attach fittings
 - (b) Frame 4 attach fittings
 - (c) Rod assemblies
 - (d) Lateral restraints.
- (3) If you will install the aft fairing on the same airplane and location, it is not necessary to make adjustments on the adjustable components.

B. References

Reference	Title
27-51-00-440-801	Trailing Edge Flap System Reactivation (P/B 201)
27-51-00-860-804	Retract the Trailing Edge Flaps (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
78-11-01-400-801-G00	Primary Nozzle Assembly Installation (P/B 401)
78-11-02-400-801-G00	Primary Plug Assembly Installation (P/B 401)
78-11-03-400-801-G00	Center Vent Tube Extension Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1561	Jack - Hydraulic Part #: 930002 Supplier: FA2A9 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205
SPL-1584	Adapter Assembly - Telescoping Hydraulic Part #: J20009-136 Supplier: 81205 Opt Part #: J20009-68 Supplier: 81205
SPL-2019	Tool - Removal/Installation, Engine Strut Aft Fairing Part #: C54017-90 Supplier: 81205
SPL-2430	Hoist - Boom, Ground Based Part #: C20002-267 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
D00633	Grease - Aircraft General Purpose	BMS3-33

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Reference	Description	Specification
G50140	Gloves - Protective, Latex or Nitrile	
G50375	Kit - Safety Cable, 321 CRES - 0.032 Inch (0.81 mm) Diameter, (Contains both Cable and Ferrule)	BACC13AT3K, AMS 5689

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Aft fairing	54-52-04-01-370	SIA ALL
		54-52-04-01-375	SIA ALL

F. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

G. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

H. Aft Fairing Installation

SUBTASK 54-52-04-640-002

- (1) Apply a thin layer of grease, D00633, to these areas (optional):
- (a) Forward surface area of fairing frame 1 that touches the strut seal.
 - (b) Lower wing surface rub strips.
 - (c) Wing areas that touch the aft fairing blade seals.

SUBTASK 54-52-04-420-008



GET SUFFICIENT AID FROM OTHER PERSONNEL AND EQUIPMENT TO HOLD THE COMPONENT DURING THE REMOVAL, AND INSTALLATION. THE COMPONENT IS HEAVY. THIS WILL PREVENT INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) Do these steps to align the aft fairing [1] to the wing fittings (Figure 403):
- (a) Attach the forward beam assembly to the forward pylon GSE fittings located at NAC STA 255 (Figure 404).
 - (b) Be careful when you move the aft fairing [1] because it weighs approximately 122 lb (55 kg).
 - (c) Use the hydraulic jack, SPL-1561, with its telescoping hydraulic adapter assembly, SPL-1584, or the boom hoist, SPL-2430, to lift the aft fairing [1] in its position under the wing.

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WHEN YOU LIFT THE AFT FAIRING, MAKE SURE THAT THE DRAIN TUBE DOES NOT TOUCH THE DIAGONAL BRACE. IF THE DRAIN TUBE TOUCHES THE DIAGONAL BRACE, DAMAGE TO THE EQUIPMENT CAN OCCUR.

- 1) Make sure that the aft fairing drain tube [3] does not touch the diagonal brace.
- 2) Align the frame 2 fittings and frame 4 fittings below the aft lug of each wing fitting clevis.
- 3) Move the aft fairing [1] forward and up in an axis-parallel small step-motion pattern to engage the aft fairing lateral restraints with the strut horse shoe fittings (Figure 403).
- (d) Attach the rod assembly to the forward beam assembly and the support assembly from the tool, SPL-2019, (Figure 401, View B).
- (e) Turn the turnbuckles on the rod assemblies to apply a preload in the forward direction.
- (f) Move the aft fairing [1] to align the frame 4 fittings and the frame 2 fittings with the wing fitting clevises.

SUBTASK 54-52-04-420-009

- (3) Do these steps to install the frame 4 fittings to the wing fitting clevises (Figure 403, View C):
 - (a) Apply a thin layer of grease, D00633, to the shank and threads of the bolts [16] and to the faces of the washers [15].
 - (b) Install the washers [15] and bolts [16] to the frame 4 fittings and the wing fitting clevises.
 - (c) Make sure that the panels and wing align with the inboard and outboard clearance requirements (Figure 403, View A-A).



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the frame 4 fittings [29] (Figure 403, View F):
 - a) Remove the bolt [16] and washer [15].
 - b) Adjust the vertical position of the aft fairing to align with the inboard and outboard clearance gap requirements.
 - c) Loosen the nuts [27] on one frame 4 fitting [29] at a time.
 - d) Adjust the frame 4 fitting [29] to align with the wing fitting clevis.
 - e) Tighten the nuts [27].
 - f) Make sure that the frame 4 fitting [29] fully engages the serrated plate.
 - g) Re-tighten the nuts [27].
 - h) Install the washer [15] and bolt [16].
- (d) Make sure that the forward clearances between the wing fitting clevises and the frame 4 fittings are 0.3000 ± 0.0200 in. (7.620 ± 0.508 mm).

SUBTASK 54-52-04-420-010

- (4) Do these steps to install the frame 2 fittings to the wing fitting clevises (Figure 403, View E):

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- (a) Apply a thin layer of grease, D00633, to the shanks and threads of the bolts [23], to the faces of the washers [24] and washers [25], and to the mating faces of the nuts [26].
- (b) Make sure that you install the bolts [23] with the heads on the aft side.
- (c) Install the bolts [23], washers [24], washers [25], and nuts [26] to the frame 2 fittings and the wing fitting clevises.



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the frame 2 fittings [30] (Figure 403, View G):
 - a) Loosen the nuts [28] on one frame 2 fitting [30] at a time.
 - b) Adjust the frame 2 fitting [30] to align with the wing fitting clevis.
 - c) Tighten the nuts [28].
 - d) Make sure that the frame 2 fitting [30] fully engages the serrated plate.
 - e) Re-tighten the nuts [28].

SUBTASK 54-52-04-420-011

- (5) Do these steps to install the rod assemblies [22] to the wing fitting clevises (Figure 403, View D):
 - (a) Apply a thin layer of grease, D00633, to the shanks and threads of the bolts [21], to the faces of the washers [18] and washers [20], and to the mating faces of the nuts [17].
 - (b) Make sure that you install the bolts [21] with the heads on the outboard side.
 - (c) Install the sleeves [19], washers [20], bolts [21], washers [18], and nuts [17] to the rod assemblies [22] and the wing fitting clevises.



DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the rod assemblies [22]:
 - a) Remove the safety wire from the rod assembly [22].
 - b) Loosen the nuts common to the rod end.
 - c) Adjust the rod assembly [22].
 - d) Re-tighten the nuts at the rod end to 45 ±2 in-lb (5.1 ±0.2 N·m).
 - e) Install the safety cable kit, G50375.

SUBTASK 54-52-04-420-012

- (6) Do these steps to install the rod assembly [14] at the aft attach fitting (Figure 403, View B):
 - (a) Apply a thin layer of grease, D00633, to the shank and threads of the bolt [11] and to the face of the washer [12].
 - (b) Install the sleeve [13], washer [12], and bolt [11] to the rod assembly [14] and the aft attach fitting.

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DO NOT MAKE UNNECESSARY ADJUSTMENTS TO THE HINGE ATTACH POINTS ON THE AFT FAIRING WHEN YOU INSTALL AT THE SAME LOCATION. IF YOU MAKE ADJUSTMENTS, DAMAGE CAN OCCUR.

- 1) If it is necessary, do these steps to adjust the rod assembly [14]:
 - a) Remove the lockwire from the rod assembly [14].
 - b) Loosen the nuts common to the rod end.
 - c) Adjust the rod assembly [14].
 - d) Re-tighten the nuts at the rod end to 60 in-lb (6.8 N·m) - 95 in-lb (10.7 N·m).
 - e) Install the safety cable kit, G50375.

SUBTASK 54-52-04-080-002

- (7) Remove the tool, SPL-2019, and the forward beam assembly (Figure 404).

SUBTASK 54-52-04-420-013

- (8) Do these steps to connect the strut drain tubes to the aft fairing [1] (Figure 402):
 - (a) Wear the protective gloves, G50140, to protect your hands from the drain tubes.
 - 1) Make sure that you do not get silicone contamination on the airplane surfaces when you connect the silicone drain tubes.
 - 2) Immediately discard the gloves after you connect the silicone drain tubes.
 - (b) Remove the caps from the strut drain tubes.
 - (c) Connect the condensate drain tubes [6] to the strut drain tubes.



DO NOT TIGHTEN THE CLAMPS TOO MUCH. IF YOU TIGHTEN THE CLAMPS TOO MUCH, DAMAGE TO THE SOFT SILICON TUBES CAN OCCUR.

- (d) Tighten the clamps [5].
- (e) Remove the cap from the aft fairing drain tube [3].
- (f) Connect the strut drain hose [4] to the aft fairing drain tube [3].



DO NOT TIGHTEN THE CLAMPS TOO MUCH. IF YOU TIGHTEN THE CLAMPS TOO MUCH, DAMAGE TO THE SOFT SILICON TUBES CAN OCCUR.

- (g) Tighten the clamp [2] on the strut drain hose [4].
- (h) If it is necessary, remove silicone contamination with general solvent, B50118.

SUBTASK 54-52-04-410-002

- (9) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

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I. Aft Fairing Installation Test

SUBTASK 54-52-04-220-002

- (1) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-04-420-017

- (1) Do this task: Center Vent Tube Extension Installation, TASK 78-11-03-400-801-G00.

SUBTASK 54-52-04-420-014

- (2) Do this task: Primary Plug Assembly Installation, TASK 78-11-02-400-801-G00.

SUBTASK 54-52-04-420-015

- (3) Do this task: Primary Nozzle Assembly Installation, TASK 78-11-01-400-801-G00.

SUBTASK 54-52-04-440-001

- (4) Do this task: Trailing Edge Flap System Reactivation, TASK 27-51-00-440-801.

SUBTASK 54-52-04-860-009

- (5) Do this task: Retract the Trailing Edge Flaps, TASK 27-51-00-860-804.

SUBTASK 54-52-04-860-010

- (6) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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AFT FAIRING - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
- (1) Aft fairing examination
 - (2) Aft fairing frame examination.

TASK 54-52-04-200-801

2. Aft Fairing Examination

A. **General**

- (1) This task has the steps to examine the skin, access panels, fasteners, and drain lines.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-04-400-801	Aft Fairing Installation (Engine Removed) (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
54-52-07-000-801	Aft Fairing Heat Shield Spring Seal Removal (P/B 401)
54-52-07-400-801	Aft Fairing Heat Shield Spring Seal Installation (P/B 401)

C. **Location Zones**

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

D. **Access Panels**

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

E. **Prepare for the Examination**

SUBTASK 54-52-04-040-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-04-010-003

- (2) To remove the applicable access panel from the aft fairing, do this task: Aft Fairing Access Panel Removal, TASK 54-52-06-000-801.

- (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

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F. Aft Fairing Examination

SUBTASK 54-52-04-210-001

(1) Do these steps to examine the aft fairing:

- (a) Examine the aft fairing structure for damage.
 - 1) Examine the aft fairing skin for cracks, separation of the bonded layers, and damage to the paint.
 - 2) Examine the frames, lower spar web and upper chords for cracks or worn areas, and for damage to the fillet and brush sealing around fastener heads, spar web and frames.
- (b) Examine the support fittings and the underwing fittings for cracks or damage.
 - 1) Make sure that the bushings and bearings have not moved in their bores.
 - 2) Look for damage or worn areas in the bushings and bearings.
- (c) Make sure the bolts which attach the aft fairing are correctly installed, and are not loose or missing (TASK 54-52-04-400-801).
- (d) Examine the seal between the top of the aft fairing and the bottom of the wing for damage.
- (e) Examine the drain lines for cracks or leaks.
 - 1) Examine the clamps and brackets to make sure the drain lines are correctly installed, and are not loose.
- (f) Examine the exterior of the heat shield skins for cracks or damage.

NOTE: No action is required for visible deformation damage. The heat shield is secondary structure and its function of protecting the aft fairing from excessive heat is not affected provided that no crack damage exists.

- (g) If it is installed, examine the leaf spring seal attached to the lower skin of the aft fairing heat shield, for cracks, excessive wear, or other damage.
 - 1) It is acceptable to continue the flights with the following conditions:
 - a) If there is a sharp edge in contact with the exhaust nozzle or within 0.25 in. (6.35 mm) of the exhaust nozzle then the damaged seal should be removed before continued flight.
 - <1> Sharp edges near or contacting the nozzle rub strip are acceptable.
 - b) As long as one entire row of the seal is intact or there is a total gap through both layers of the seal no larger than 1.25 in. (31.75 mm).
 - c) If there is a total gap through both layers of the seal larger than 1.25 in. (31.75 mm) it is acceptable to continue the flights with inspection of the aft pylon block seal and thrust reverser fire seal every 1500 flight hours.
 - <1> Replace the damaged portion of the seal at the next maintenance opportunity.
 - 2) If the damage of the leaf spring seal is more than acceptable limits, replace the leaf spring seal, do these tasks:
 - Aft Fairing Heat Shield Spring Seal Removal, TASK 54-52-07-000-801
 - Aft Fairing Heat Shield Spring Seal Installation, TASK 54-52-07-400-801.

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SUBTASK 54-52-04-410-003

- (2) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-52-04-220-003

- (3) Make sure that the aft fairings are in the aerodynamic smoothness limits (TASK 54-52-00-200-801).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-04-440-002

- (1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

TASK 54-52-04-200-802

3. Aft Fairing Frame Examination

A. General

- (1) This task has the steps to examine the frames in the aft fairing for possible cracks.

B. References

<u>Reference</u>	<u>Title</u>
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Location Zones

<u>Zone</u>	<u>Area</u>
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

E. Prepare for the Examination

SUBTASK 54-52-04-210-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-52-04-010-004

- (2) To remove the applicable access panel from the aft fairing, do this task: Aft Fairing Access Panel Removal, TASK 54-52-06-000-801.

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- (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

F. Aft Fairing Frame Examination

SUBTASK 54-52-04-210-003

- (1) Visually examine the frames in the aft fairing.

SUBTASK 54-52-04-210-004

- (2) If you find a crack, contact Boeing for corrective action.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-04-410-004

- (1) Close these access panels:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

SUBTASK 54-52-04-220-004

- (2) Make sure that the aft fairings are in the aerodynamic smoothness limits (TASK 54-52-00-200-801).

SUBTASK 54-52-04-440-004

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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AFT FAIRING ACCESS PANELS - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the aft fairing access panel
- (2) An installation of the aft fairing access panel.

TASK 54-52-06-000-801

2. **Aft Fairing Access Panel Removal**

(Figure 401)

A. General

- (1) This task gives the instructions to remove the access panels from the strut aft fairing.
- (2) Each strut has these access panels on the strut aft fairing:
 - (a) inboard side panel
 - (b) outboard side panel.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

D. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

E. Prepare for the Removal

SUBTASK 54-52-06-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

F. Aft Fairing Access Panel Removal

SUBTASK 54-52-06-000-001

- (1) Do these steps to remove the inboard side panel [1]:



CAUTION

INSTALL THE BONDING BOLTS IN THE SAME FASTENER HOLES THAT YOU REMOVED THEM FROM. BONDING BOLTS CAN HELP TO PREVENT LIGHTNING DAMAGE. LIGHTNING CAN CAUSE DAMAGE TO THE AIRPLANE.

- (a) Remove the 72 bolts [4] and two bonding bolts [3] that attach the inboard side panel [1] to the strut aft fairing.

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- (b) Remove the applicable access panel(s):

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-52-06-000-002

- (2) Do these steps to remove the outboard side panel [2]:



CAUTION

INSTALL THE BONDING BOLTS IN THE SAME FASTENER HOLES THAT YOU REMOVED THEM FROM. BONDING BOLTS CAN HELP TO PREVENT LIGHTNING DAMAGE. LIGHTNING CAN CAUSE DAMAGE TO THE AIRPLANE.

- (a) Remove the 47 bolts [4] and two bonding bolts [3] that attach the outboard side panel [2] to the strut aft fairing.
- (b) Remove the applicable access panel(s):

<u>Number</u>	<u>Name/Location</u>
434AL	Aft Strut Fairing, Left Panel, Strut 1
444AR	Aft Strut Fairing, Right Panel, Strut 2

————— **END OF TASK** —————

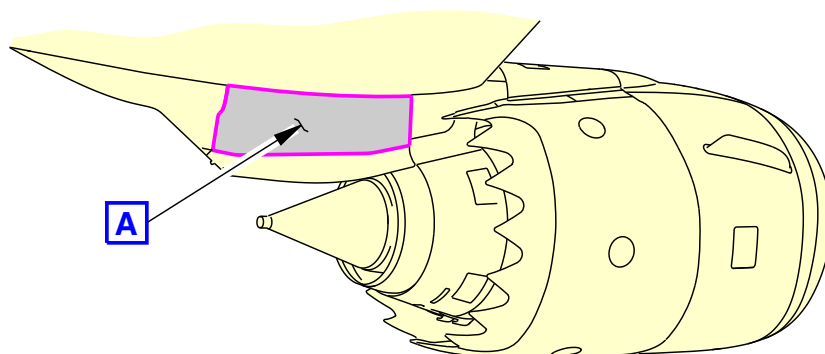
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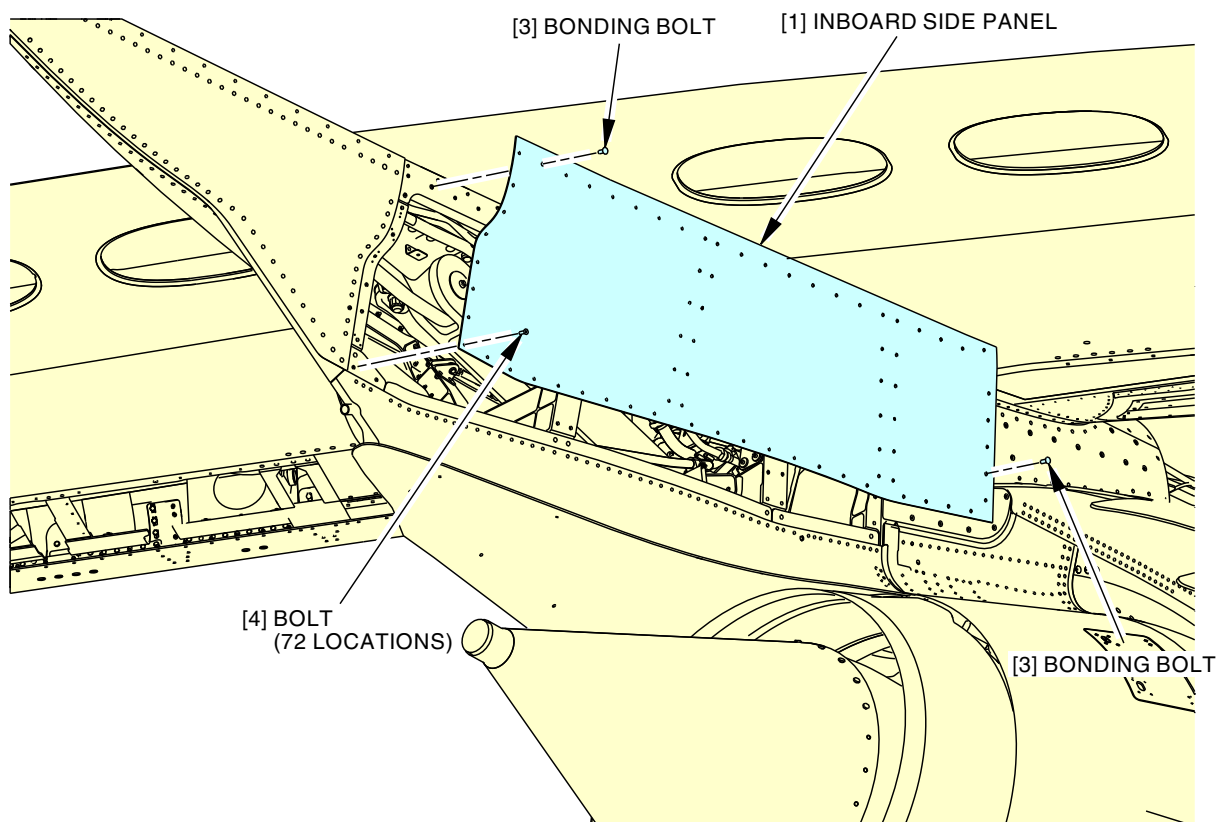
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**LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)**



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**Strut Aft Fairing Access Panels
Figure 401/54-52-06-990-801 (Sheet 1 of 2)**

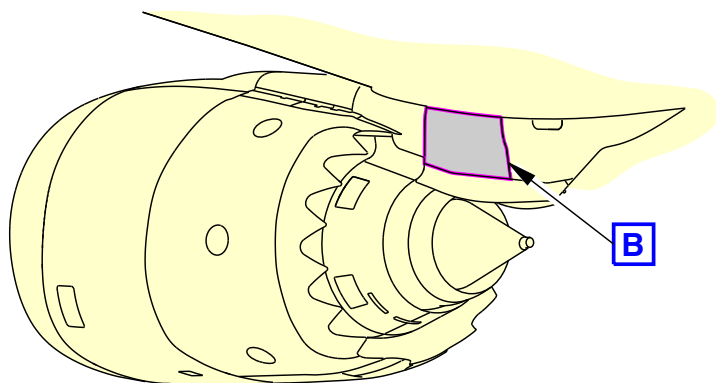
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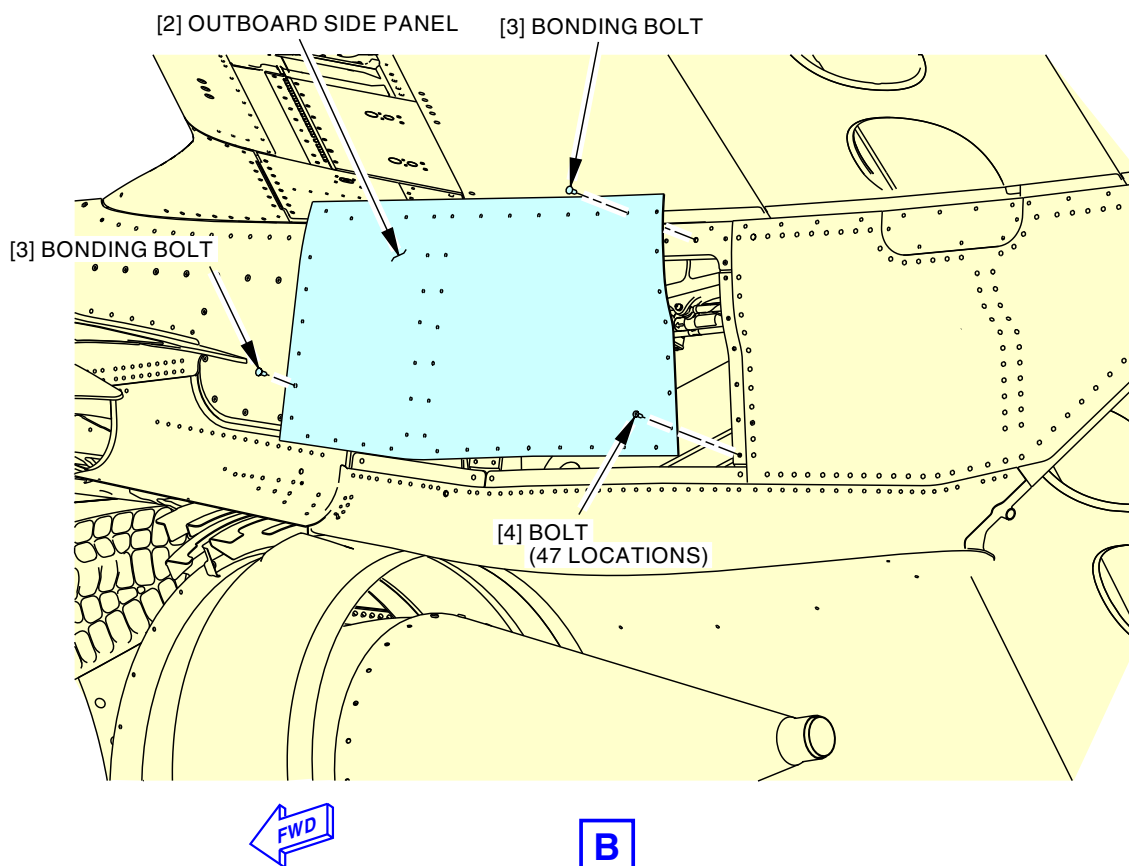
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**LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)**



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**Strut Aft Fairing Access Panels
Figure 401/54-52-06-990-801 (Sheet 2 of 2)**

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TASK 54-52-06-400-801

3. Aft Fairing Access Panel Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the access panels on the strut aft fairing.
- (2) Each strut has these access panels on the strut aft fairing:
 - (a) inboard side panel
 - (b) outboard side panel.

B. References

Reference	Title
51-21-99-300-801	Decorative Exterior Paint System Application (P/B 701)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

D. Consumable Materials

Reference	Description	Specification
C00767	Coating - Anti-Static Coating	BMS10-21 Type III
D50004	Compound - Antiseize	BMS3-28

E. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

F. Access Panels

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1

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(Continued)

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2
444AR	Aft Strut Fairing, Right Panel, Strut 2

G. Aft Fairing Access Panel Installation

SUBTASK 54-52-06-350-001



MAKE SURE THAT THERE IS AN ELECTRICAL CONNECTION BETWEEN THE BONDING BOLT HEAD AND THE COUNTERSUNK SURFACE. BONDING BOLTS HELP PREVENT DAMAGE BECAUSE OF LIGHTNING. DAMAGE TO THE AIRPLANE CAN OCCUR IF THE BONDING BOLTS ARE NOT INSTALLED CORRECTLY.

- (1) If the countersunk hole for a bonding bolt [3] does not have a complete layer of anti-static coating, C00767, in it, do these steps:

NOTE: See Figure 401 for bonding bolt locations on each panel.

- (a) Abrade the uncoated surface in the countersunk hole.
- (b) Apply anti-static coating, C00767, to the sanded surface of a countersunk hole.
 - 1) Make sure that the remaining layer of anti-static coating, C00767, touches the new layer of anti-static coating, C00767.
- (c) Let the anti-static coating, C00767, dry before you install the bonding bolt [3].

NOTE: A minimum of two hours is necessary to dry the anti-static coating, C00767.

NOTE: If the coating, C00767, is not dry, it will come off when the bonding bolt is removed.

- (d) For the areas around the countersunk holes that have missing paint, refer to Decorative Exterior Paint System Application, TASK 51-21-99-300-801, if it is necessary.

SUBTASK 54-52-06-400-001

- (2) Do these steps to install the outboard side panel [2]:

- (a) Install the applicable access panel(s):

Number	Name/Location
434AL	Aft Strut Fairing, Left Panel, Strut 1
444AR	Aft Strut Fairing, Right Panel, Strut 2

- (b) Apply compound, D50004, to the threads of the bolts [4].
- (c) Install the 47 bolts [4] that attach the outboard side panel [2] to the strut aft fairing.



INSTALL THE BONDING BOLTS IN THE SAME FASTENER HOLES THAT YOU REMOVED THEM FROM. BONDING BOLTS CAN HELP TO PREVENT LIGHTNING DAMAGE. LIGHTNING CAN CAUSE DAMAGE TO THE AIRPLANE.

- (d) Install the two bonding bolts [3] that attach the outboard side panel [2] to the strut aft fairing.
- (e) Measure the electrical bonding resistance between the bonding bolts [3] and structure (SWPM 20-20-00).
 - 1) Use a digital/analog multimeter, COM-1793.

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- 2) Make sure that the resistance is 300,000.00 ohms or less.

SUBTASK 54-52-06-400-002

- (3) Do these steps to install the inboard side panel [1]:

- (a) Install the applicable access panel(s):

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

- (b) Apply compound, D50004, to the threads of the bolts [4].
(c) Install the 72 bolts [4] that attach the inboard side panel [1] to the strut aft fairing.



CAUTION

INSTALL THE BONDING BOLTS IN THE SAME FASTENER HOLES THAT YOU REMOVED THEM FROM. BONDING BOLTS CAN HELP TO PREVENT LIGHTNING DAMAGE. LIGHTNING CAN CAUSE DAMAGE TO THE AIRPLANE.

- (d) Install the two bonding bolts [3] that attach the inboard side panel [1] to the strut aft fairing.
(e) Measure the electrical bonding resistance between the bonding bolts [3] and structure (SWPM 20-20-00).
1) Use a digital/analog multimeter, COM-1793.
2) Make sure that the resistance is 300,000.00 ohms or less.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-06-440-001

- (1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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AFT FAIRING HEAT SHIELD - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) A removal of the leaf spring seal
 - (2) An installation of the leaf spring seal.

TASK 54-52-07-000-801

2. **Aft Fairing Heat Shield Spring Seal Removal**

(Figure 401)

A. **General**

- (1) This task gives the instructions to remove the leaf spring seal.

B. **References**

Reference	Title
78-11-01-000-801-G00	Primary Nozzle Assembly Removal (P/B 401)
78-11-02-000-801-G00	Primary Plug Assembly Removal (P/B 401)
78-11-03-000-801-G00	Center Vent Tube Extension Removal (P/B 401)

C. **Location Zones**

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

D. **Prepare for the Removal**

SUBTASK 54-52-07-000-001

- (1) Do this task: Primary Nozzle Assembly Removal, TASK 78-11-01-000-801-G00.

SUBTASK 54-52-07-000-002

- (2) Do this task: Primary Plug Assembly Removal, TASK 78-11-02-000-801-G00.

SUBTASK 54-52-07-000-003

- (3) Do this task: Center Vent Tube Extension Removal, TASK 78-11-03-000-801-G00.

E. **Aft Fairing Heat Shield Spring Seal Removal**

SIA 001-014 PRE SB 737-54-1057

SUBTASK 54-52-07-020-001

- (1) Remove the top inboard spring seal [1] and bottom inboard spring seal [2], do these steps:
 - (a) Remove the rivet [11], rivet [12], and washer [10] that attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor and side skins.
 - (b) Remove the bolts [9], washers [8], and washers [7] that attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor skin.

SUBTASK 54-52-07-020-002

- (2) Remove the top outboard spring seal [3] and bottom outboard spring seal [4], do these steps:
 - (a) Remove the rivet [11], rivet [12], and washer [10] that attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor and side skins.
 - (b) Remove the bolts [9], washers [8], and washers [7] that attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor skin.

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SIA 001-014 PRE SB 737-54-1057 (Continued)

SUBTASK 54-52-07-020-003

- (3) Remove the top center spring seal [5] and bottom center spring seal [6], do these steps:
- (a) Remove the bolts [9], washers [8], and washers [7] that attach the top center spring seal [5] and bottom center spring seal [6] to the suppressor skin.
 - (b) If it is required, partially remove the adjacent top center spring seal [5] and bottom center spring seal [6].
 - 1) Remove the bolts [9], washers [8], and washers [7].
 - (c) If it is required, partially remove the top inboard spring seal [1] and bottom inboard spring seal [2], or top outboard spring seal [3] and bottom outboard spring seal [4].
 - 1) Remove the bolts [9], washers [8], and washers [7].

SIA 015-999; SIA 001-014 POST SB 737-54-1057

SUBTASK 54-52-07-020-004



WARNING

CAREFULLY LOOK FOR SPARKS DURING THE BLIND BOLTS REMOVAL. IF YOU SEE SIGNS OF SPARKS, IMMEDIATELY STOP THE REMOVAL. IF YOU DO NOT OBEY, INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do not remove the blind bolts [14] from the top inboard spring seal [1] and bottom inboard spring seal [2], or top outboard spring seal [3] and bottom outboard spring seal [4], if there are any signs of sparking.
- (a) If sparking continues, remove the fairing from the wing.

NOTE: It is acceptable for the stems of the blind bolts to remain in the heat shield cavity after removal.

SUBTASK 54-52-07-020-005

- (5) Remove the top inboard spring seal [1] and bottom inboard spring seal [2], do these steps:
- (a) Remove the rivets [16] and washers [15] that attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor and side skins.
 - (b) Remove the blind bolts [14] and washers [13] that attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor skin.

SUBTASK 54-52-07-020-006

- (6) Remove the top outboard spring seal [3] and bottom outboard spring seal [4], do these steps:
- (a) Remove the rivets [16] and washers [15] that attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor and side skins.
 - (b) Remove the blind bolts [14] and washers [13] that attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor skin.

SUBTASK 54-52-07-020-007

- (7) Remove the top center spring seal [5] and bottom center spring seal [6], do these steps:
- (a) Remove the blind bolts [14] and washers [13] that attach the top center spring seal [5] and bottom center spring seal [6] to the suppressor skin.
 - (b) If it is required, partially remove the adjacent top center spring seals [5] and top outboard spring seal [3].
 - 1) Remove the blind bolts [14] and washers [13].

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- (c) If it is required, partially remove the top inboard spring seal [1] and bottom inboard spring seal [2], or top outboard spring seal [3] and bottom outboard spring seal [4].
- 1) Remove the blind bolts [14] and washers [13]

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———— **END OF TASK** ————

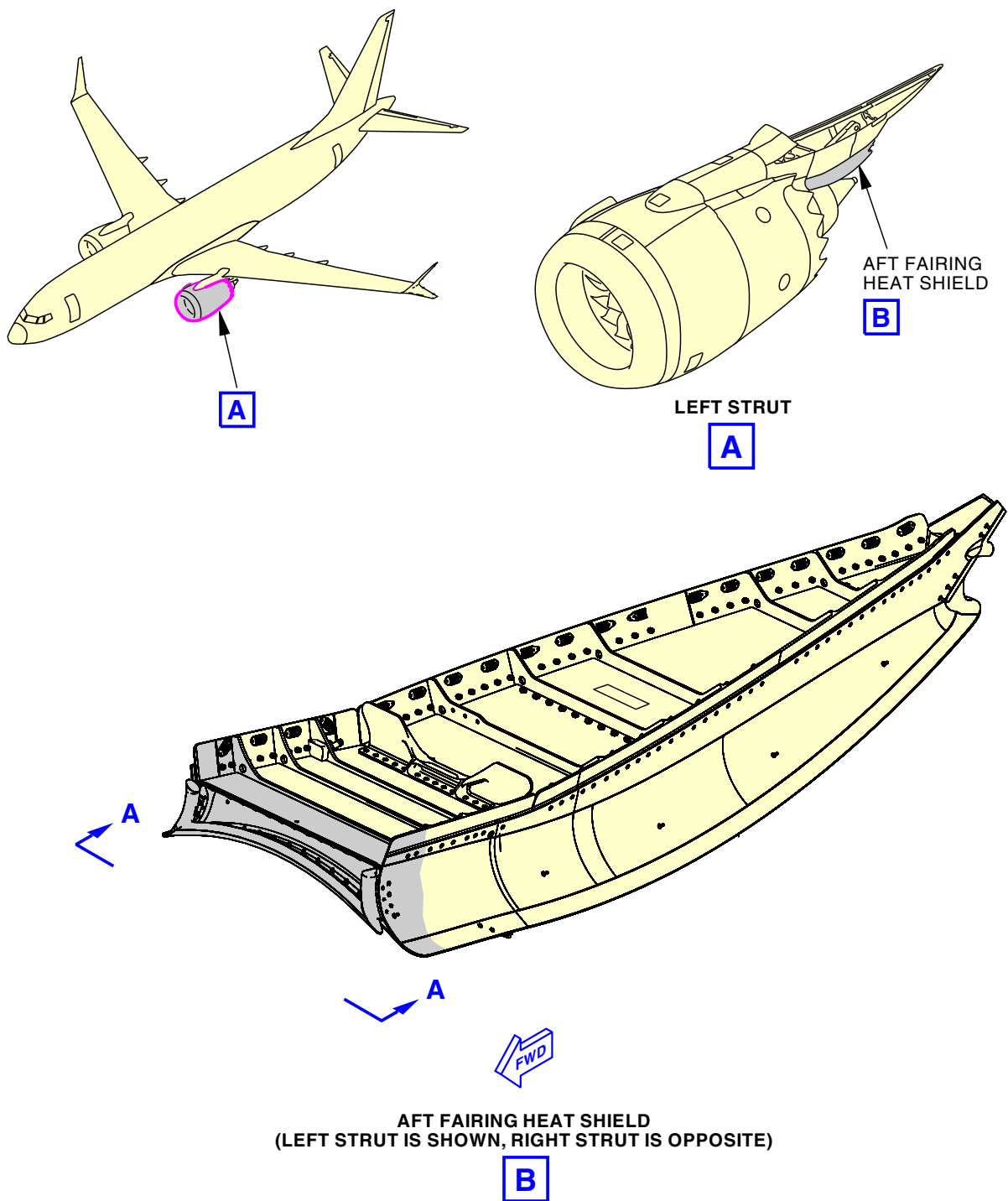
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Aft Fairing Heat Shield Spring Seal Installation
Figure 401/54-52-07-990-801 (Sheet 1 of 3)

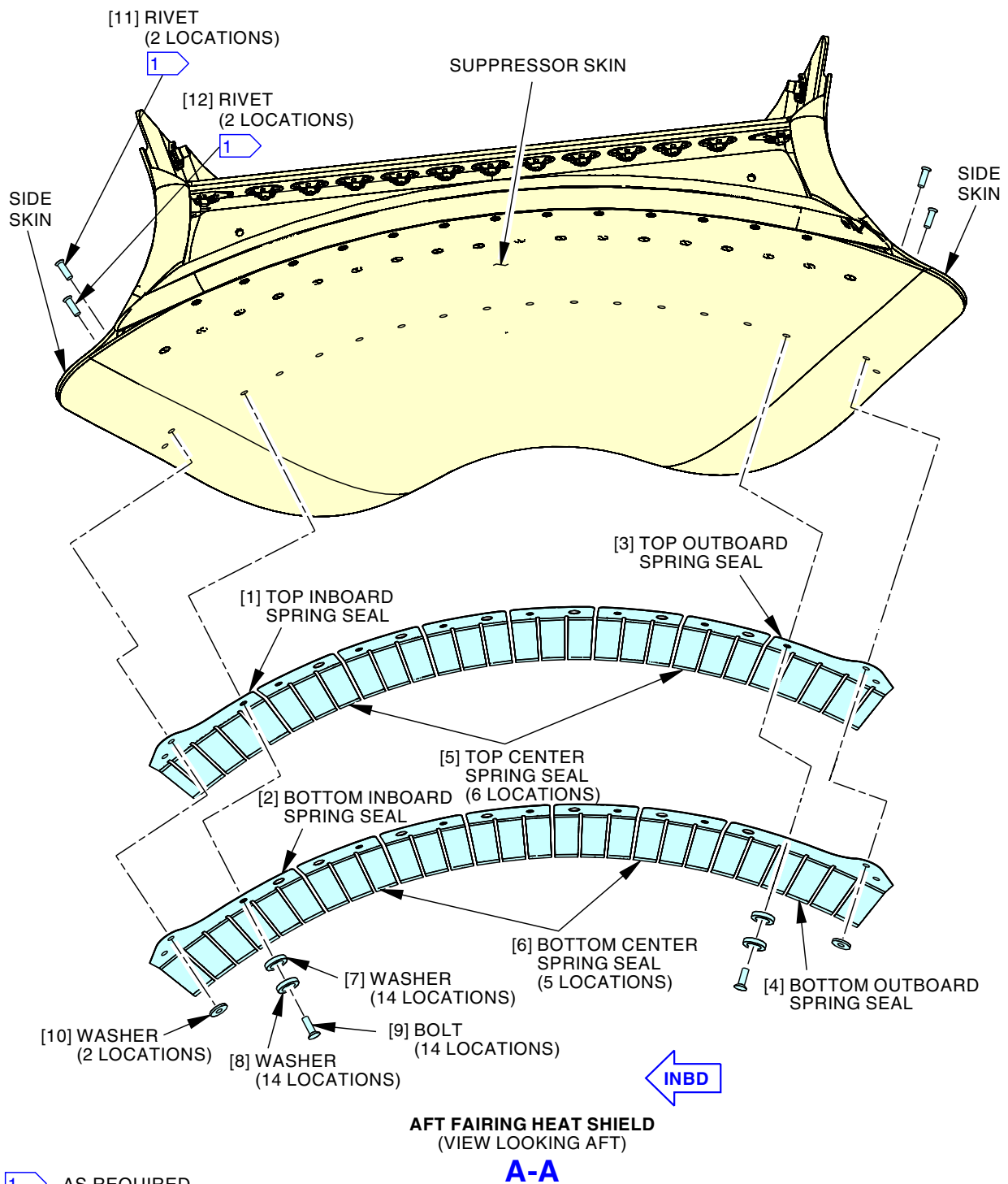
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Aft Fairing Heat Shield Spring Seal Installation
Figure 401/54-52-07-990-801 (Sheet 2 of 3)

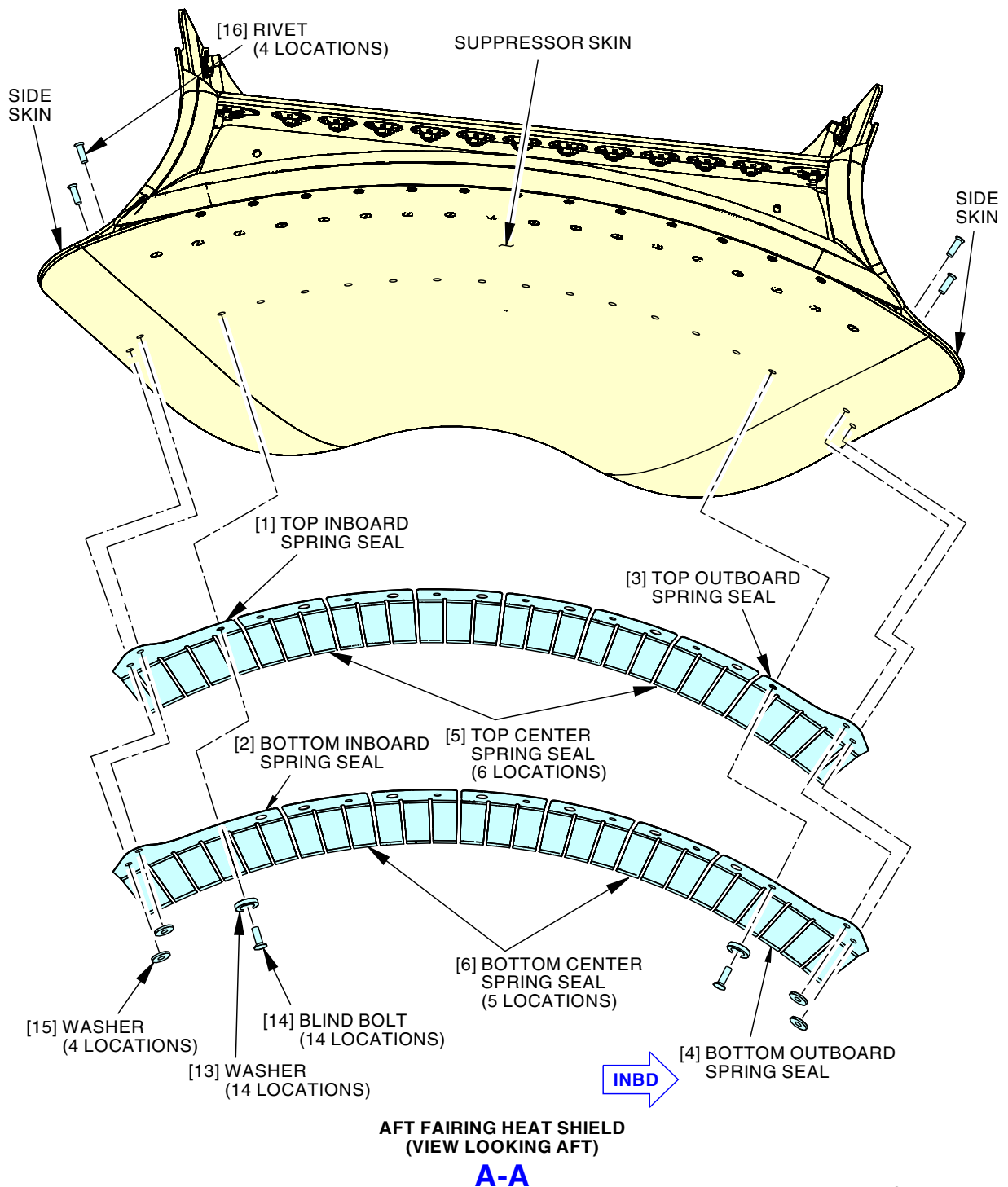
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Aft Fairing Heat Shield Spring Seal Installation
Figure 401/54-52-07-990-801 (Sheet 3 of 3)

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TASK 54-52-07-400-801

3. Aft Fairing Heat Shield Spring Seal Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the leaf spring seal.

B. References

Reference	Title
78-11-01-400-801-G00	Primary Nozzle Assembly Installation (P/B 401)
78-11-02-400-801-G00	Primary Plug Assembly Installation (P/B 401)
78-11-03-400-801-G00	Center Vent Tube Extension Installation (P/B 401)
SRM 51-40-02	FASTENER INSTALLATION AND REMOVAL

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Top inboard spring seal	54-52-08-01-245	SIA ALL
2	Bottom inboard spring seal	54-52-08-01-260	SIA ALL
3	Top outboard spring seal	54-52-08-01-240	SIA ALL
4	Bottom outboard spring seal	54-52-08-01-255	SIA ALL
5	Top center spring seal	54-52-08-01-250	SIA ALL
6	Bottom center spring seal	54-52-08-01-265	SIA ALL

E. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

F. Aft Fairing Heat Shield Spring Seal Installation

SIA 001-014 PRE SB 737-54-1057

SUBTASK 54-52-07-420-001

- (1) Install the new top inboard spring seal [1] and new bottom inboard spring seal [2], do these steps:
- (a) Make sure that the adjacent top center spring seals [5] are installed.
 - (b) Install the top inboard spring seal [1].
 - (c) Install the bottom inboard spring seal [2].
 - (d) Install the bolts [9], washers [8], and washers [7] to attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor skin.
 - (e) Install the rivets [11], rivets [12], and washers [10] to attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor and side skins.

SUBTASK 54-52-07-420-002

- (2) Install the new top outboard spring seal [3] and new bottom outboard spring seal [4], do these steps:
- (a) Make sure that the adjacent top center spring seals [5] are installed.

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SIA 001-014 PRE SB 737-54-1057 (Continued)

- (b) Install the top outboard spring seal [3].
- (c) Install the bottom outboard spring seal [4]
- (d) Install the bolts [9], washers [8], and washers [7] to attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor skin.
- (e) Install the rivets [11], rivets [12], and washers [10] to attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor and side skins.

SUBTASK 54-52-07-420-003

- (3) Install the new top center spring seal [5] and new bottom center spring seal [6], do these steps:
 - (a) If it was removed, install the adjacent top center spring seals [5] and bottom center spring seals [6].
 - 1) Install the bolts [9], washers [8], and washers [7].
 - (b) Install the top center spring seals [5].
 - (c) Install the bottom center spring seals [6].
 - (d) Install the bolts [9], washers [8], and washers [7].
 - (e) If it was removed, install the top inboard spring seal [1] and bottom inboard spring seal [2], or top outboard spring seal [3] and bottom outboard spring seal [4].
 - 1) Install the bolts [9], washers [8], and washers [7] to attach the top center spring seal [5] to the suppressor skin.

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SUBTASK 54-52-07-420-004

- (4) Temporarily install the top inboard spring seal [1] and top outboard spring seal [3].
 - (a) Match drill existing rivet holes through spring seals (2 places per seal).

SUBTASK 54-52-07-020-008

- (5) Remove the temporarily installed top inboard spring seal [1] and top outboard spring seal [3].
 - (a) Open holes match drilled holes to the final hole size of diameter 0.3140 in. (7.98 mm) - 0.3180 in. (8.08 mm).
 - (b) Make sure that there are no burrs or sharp edges.

SUBTASK 54-52-07-420-005

- (6) Install the new top inboard spring seal [1] and new bottom inboard spring seal [2], do these steps:
 - (a) Make sure that the adjacent top center spring seals [5] are installed.
 - (b) Apply sealant, A00160, to the gap between the suppression skin, top inboard spring seal [1] and bottom inboard spring seal [2].
 - (c) Install the top inboard spring seal [1].
 - (d) Install the bottom inboard spring seal [2].
 - (e) Install the blind bolts [14] and washers [13] to attach the top inboard spring seal [1] and bottom inboard spring seal [2] to the suppressor skin.
 - (f) Install the rivets [16] and washers [15] (SRM SUBJECT 51-40-02).
 - 1) Make sure to install washers [15] under the driven tail of the rivets [16].

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SUBTASK 54-52-07-420-006

- (7) Install the new top outboard spring seal [3] and new bottom outboard spring seal [4], do these steps:
- (a) Make sure that the adjacent top center spring seals [5] are installed.
 - (b) Install the top outboard spring seal [3].
 - (c) Install the bottom outboard spring seal [4].
 - (d) Install the blind bolts [14] and washers [13] to attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the suppressor skin.
 - (e) Install the rivets [16] and washers [15] to attach the top outboard spring seal [3] and bottom outboard spring seal [4] to the side skin.

SUBTASK 54-52-07-420-007

- (8) Install the new top center spring seal [5] and new bottom center spring seal [6], do these steps:
- (a) If it was removed, install the adjacent top center spring seals [5] and bottom center spring seals [6].
 - 1) Install the blind bolts [14] and washers [13].
 - (b) Install the top center spring seal [5].
 - (c) Install the bottom center spring seal [6].
 - (d) Install the blind bolts [14] and washers [13].
 - (e) If it was removed, install the top inboard spring seal [1] and bottom inboard spring seal [2], or top outboard spring seal [3] and bottom outboard spring seal [4].
 - 1) Install the blind bolts [14] and washers [13] to attach the top center spring seal [5] to the suppressor skin.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-07-400-002

- (1) Do this task: Center Vent Tube Extension Installation, TASK 78-11-03-400-801-G00.

SUBTASK 54-52-07-400-003

- (2) Do this task: Primary Plug Assembly Installation, TASK 78-11-02-400-801-G00.

SUBTASK 54-52-07-400-004

- (3) Do this task: Primary Nozzle Assembly Installation, TASK 78-11-01-400-801-G00.

————— **END OF TASK** —————

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AFT FAIRING THERMAL SEAL - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the aft fairing thermal seal
- (2) An installation of the aft fairing thermal seal.

TASK 54-52-08-000-801

2. **Aft Fairing Thermal Seal Removal**

(Figure 401)

A. **General**

- (1) This task gives the instructions to remove the aft fairing thermal seal.

B. **References**

Reference	Title
54-52-04-000-801	Aft Fairing Removal (Engine Removed) (P/B 401)
54-52-04-000-802	Aft Fairing Removal (Without Primary Nozzle and Plug) (P/B 401)

C. **Location Zones**

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

D. **Prepare for the Removal**

SUBTASK 54-52-08-110-001

- (1) Break sealant between the top of the thermal seal [1] and the adjacent strut fluid seal on both sides of the aft fairing.

SUBTASK 54-52-08-000-001

- (2) Do one of these tasks:
 - Aft Fairing Removal (Engine Removed), TASK 54-52-04-000-801
 - Aft Fairing Removal (Without Primary Nozzle and Plug), TASK 54-52-04-000-802.

E. **Aft Fairing Thermal Seal Removal**

SUBTASK 54-52-08-020-001

- (1) Do these steps to remove the thermal seal [1]:
 - (a) On both the sides of the heat shield, remove the nuts [6], washers [5], bolts [4], and seal retainers [2] that attach the thermal seal [1] to the frame.
 - (b) Remove the nuts [9], washers [8], bolts [7], and seal retainer [3] that attach the thermal seal [1] to the skin suppressor.
 - (c) Remove and discard the thermal seal [1].

SUBTASK 54-52-08-110-002

- (2) Remove any remaining sealant from the structure.

————— **END OF TASK** —————

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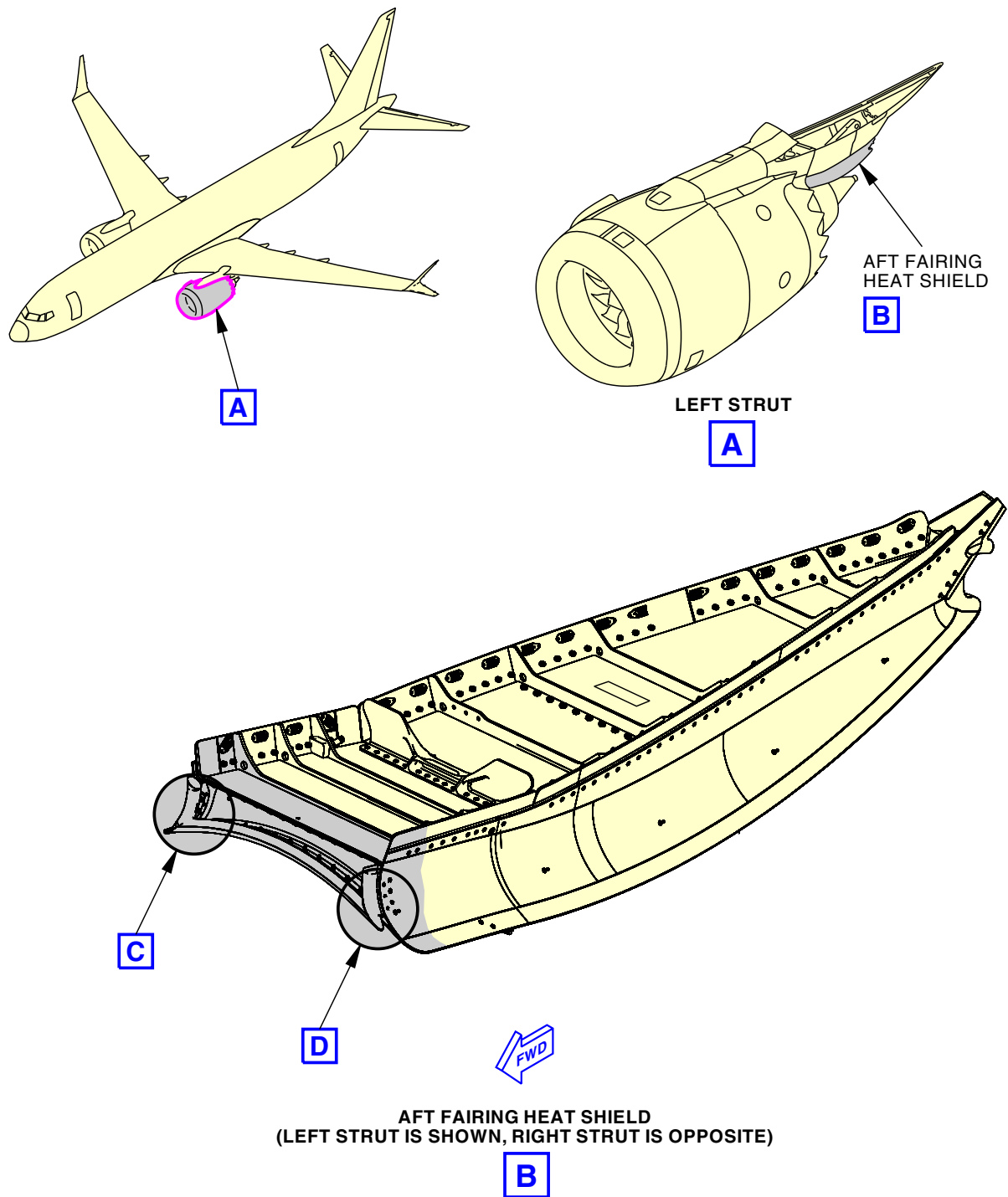
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Aft Fairing Thermal Seal Installation
Figure 401/54-52-08-990-801 (Sheet 1 of 2)

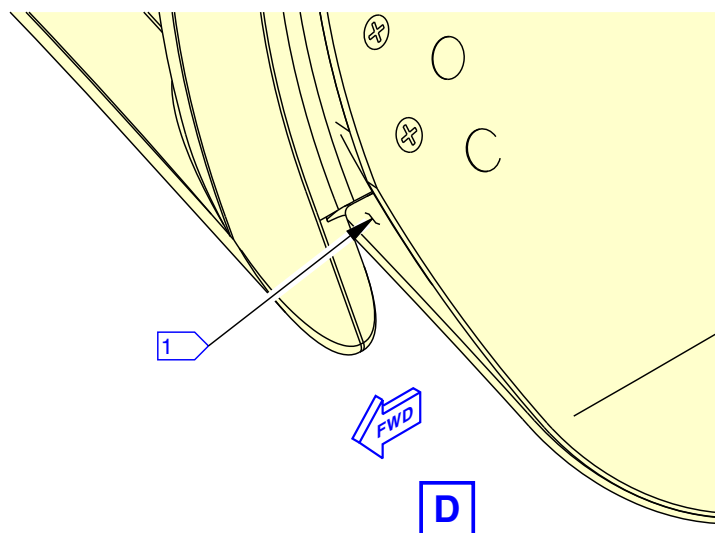
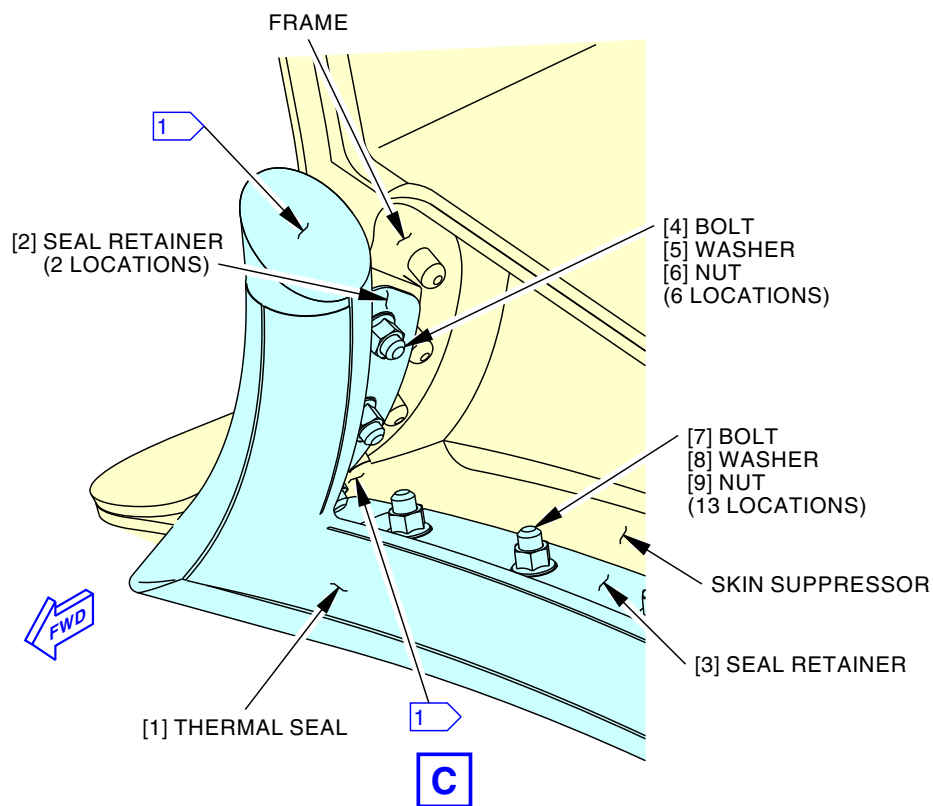
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 SEAL TO FILL ANY GAPS

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Aft Fairing Thermal Seal Installation
Figure 401/54-52-08-990-801 (Sheet 2 of 2)

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TASK 54-52-08-400-801

3. Aft Fairing Thermal Seal Installation

(Figure 401)

A. General

(1) This task gives the instructions to install the aft fairing thermal seal.

B. References

Reference	Title
54-52-04-400-801	Aft Fairing Installation (Engine Removed) (P/B 401)
54-52-04-400-802	Aft Fairing Installation (Without Primary Nozzle and Plug) (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00081	Adhesive - Silicone Rubber - RTV 106	BAC5010 Type 74
C00954	Primer - Adhesive Bonding - SS4004P RTV	BAC5010 Type 74

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Thermal seal	54-52-08-01-170	SIA ALL

E. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

F. Aft Fairing Thermal Seal Installation

SUBTASK 54-52-08-420-001

- (1) Do these steps to install the new thermal seal [1]:
- (a) Install the thermal seal [1] in its position.
 - (b) Install the seal retainer [3], bolts [7], washers [8], and nuts [9] that attach the thermal seal [1] to the skin suppressor.
 - (c) Install the seal retainers [2], bolts [4], washers [5], and nuts [6] that attach the thermal seal [1] to the frame.

SUBTASK 54-52-08-390-001

- (2) Apply RTV 106 adhesive, A00081, to fill the corner cavity and close any opening between thermal seal flanges on both inner and outer sides of the thermal seal [1].
- (a) Apply a thin layer of primer SS4004P RTV primer, C00954, onto the clean surfaces.
 - (b) Fill gaps with RTV 106 adhesive, A00081, on both sides of the heat shield between the flanges of the thermal seal [1] until sealant reaches the nut on the seal retainer [2] and at skin corners.

NOTE: Sealant in contact with the seal retainers, washers, nuts, bolts, rivets, frames, skins, and thermal seal is acceptable.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-08-400-001

- (1) Do one of these tasks:
- Aft Fairing Installation (Engine Removed), TASK 54-52-04-400-801

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- Aft Fairing Installation (Without Primary Nozzle and Plug), TASK 54-52-04-400-802.

SUBTASK 54-52-08-390-002

- (2) Apply RTV 106 adhesive, A00081, to the top corners of the thermal seal [1].
- (a) Apply a thin layer of primer SS4004P RTV primer, C00954, onto the clean surfaces.
- (b) Fill the gap with RTV 106 adhesive, A00081, between the thermal seal [1] and the strut seal on both sides of the heat shield.

———— **END OF TASK** ————

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LEADING EDGE GAP COVERS - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) Leading edge gap covers removal
 - (2) Leading edge gap covers installation.

TASK 54-52-09-000-801

2. **Leading Edge Gap Covers Removal**

(Figure 401)

A. General

- (1) This task gives the instructions to remove these gap covers:
 - (a) Inboard leading edge overwing fairing
 - (b) Outboard leading edge gap cover.
- (2) Each strut has one inboard leading edge overwing fairing and one outboard leading edge gap cover.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

D. Access Panels

Number	Name/Location
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

E. Prepare for the Removal

SUBTASK 54-52-09-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

F. Leading Edge Gap Covers Removal

SUBTASK 54-52-09-010-001

- (1) Remove the 10 bolts [3] and three bolts [4] from the overwing fairing [1], and do this step:
 - (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
511BT	Fairing
611BT	Fairing

SUBTASK 54-52-09-000-001

- (2) Remove the 19 bolts [5], 10 bolts [6] and 11 bolts [7] from the gap cover [2], and do this step:

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- (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
521AT	Outbd Leading Edge - Gap Cover Access
621AT	Outbd Leading Edge - Gap Cover Access

———— **END OF TASK** ————

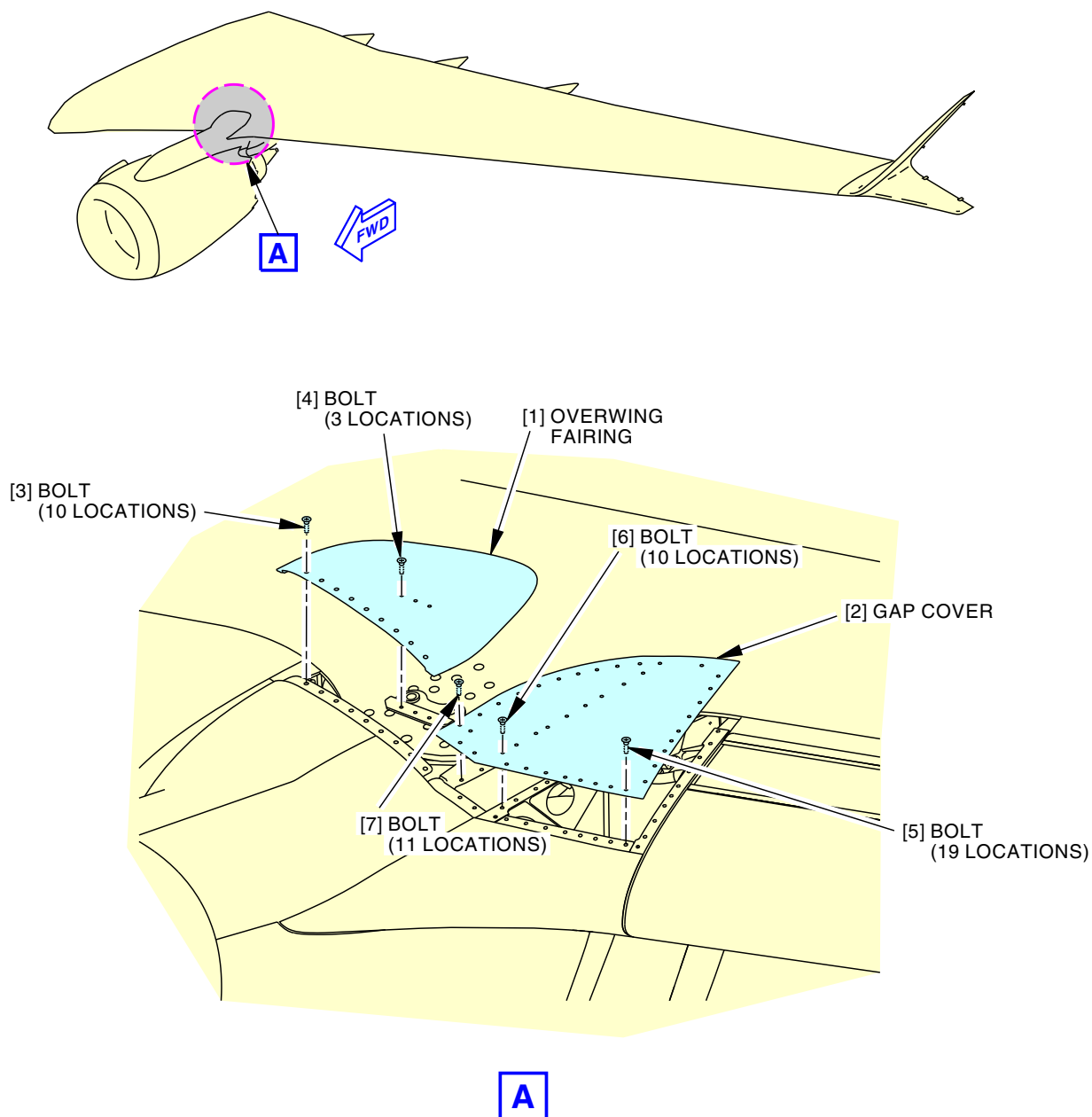
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Leading Edge Gap Covers Installation
Figure 401/54-52-09-990-801

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TASK 54-52-09-400-801

3. Leading Edge Gap Covers Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install these gap covers:
 - (a) Inboard leading edge overwing fairing
 - (b) Outboard leading edge gap cover.
- (2) Each strut has one inboard leading edge overwing fairing and one outboard leading edge gap cover.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)

C. Consumable Materials

Reference	Description	Specification
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Overwing fairing	57-40-51-05-060	SIA ALL
		57-40-51-05-065	SIA ALL
2	Gap cover	57-40-51-40-620	SIA ALL
		57-40-51-40-625	SIA ALL

E. Location Zones

Zone	Area
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

F. Access Panels

Number	Name/Location
511BT	Fairing
521AT	Outbd Leading Edge - Gap Cover Access
611BT	Fairing
621AT	Outbd Leading Edge - Gap Cover Access

G. Leading Edge Gap Covers Installation

SUBTASK 54-52-09-400-001

- (1) Install the gap cover [2]:
 - (a) Apply primer, C00259, to each countersunk hole for bolts [6] and bolts [7].
 - (b) Let the primer dry before you install the bolts.

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- (c) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
521AT	Outbd Leading Edge - Gap Cover Access
621AT	Outbd Leading Edge - Gap Cover Access

- (d) Do these steps to install the 19 bolts [5], 10 bolts [6] and 11 bolts [7] to the gap cover [2]:



USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COR-BAN 27L, G50237. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

- 1) Apply Cor-Ban 27L Compound, G50237, to each countersunk hole.
- 2) Immediately install each of the bolts [5], bolts [6] and bolts [7] after you apply the Cor-Ban 27L Compound, G50237.
 - a) Tighten the bolts [5], bolts [6] and bolts [7] to the dry bolt torque values.
- (e) Make sure that the fastener heads of bolts [5], bolts [6] and bolts [7] are flush to the adjacent skin within +0.002 in. (0.051 mm) / -0.010 in. (-0.254 mm).

SUBTASK 54-52-09-400-002

- (2) Install the overwing fairing [1]:

- (a) Apply primer, C00259, to each countersunk hole.
- (b) Let the primer dry before you install the bolts.
- (c) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
511BT	Fairing
611BT	Fairing

- (d) Do these steps to install the 10 bolts [3] and three bolts [4] to the overwing fairing [1]:



USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COR-BAN 27L, G50237. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

- 1) Apply Cor-Ban 27L Compound, G50237, to each countersunk hole.
- 2) Immediately install each of the bolts [3] and bolts [4] after you apply the Cor-Ban 27L Compound, G50237.
 - a) Tighten the bolts [3] to a torque tool set point of 30 in-lb (3.4 N·m).

H. Leading Edge Gap Covers Installation Test

SUBTASK 54-52-09-210-001

- (1) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-200-801.

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I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-09-440-001

(1) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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STRUT ACCESS PANELS - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Strut access panel removal
 - (2) Strut access panel installation.

TASK 54-53-01-000-801

2. Strut Access Panel Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove strut access panel.
- (2) Each strut has two access panels.
- (3) Each access panel has captive fasteners, but the fasteners can fall out if you loosen the attach bolts too much.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-03-000-801	Wing Junction Fairing Removal (P/B 401)
54-52-09-000-801	Leading Edge Gap Covers Removal (P/B 401)

C. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
433CT	Strut, Upper Spar Web, Strut 1
433DT	Strut, Upper Spar Web, Strut 1
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
443CT	Strut, Upper Spar Web, Strut 2
443DT	Strut, Upper Spar Web, Strut 2
521AT	Outbd Leading Edge - Gap Cover Access
621AT	Outbd Leading Edge - Gap Cover Access

E. Prepare for the Removal

SUBTASK 54-53-01-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-53-01-010-001

- (2) Do these steps to get access to the access panel [1] on the strut upper web:
 - (a) Open these access panels:

(TASK 54-52-03-000-801)

Number Name/Location

431CL Forward Strut Fairing, Left Overwing Fairing, Strut 1

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(Continued)

<u>Number</u>	<u>Name/Location</u>
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441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
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- (b) Open these access panels:

(TASK 54-52-09-000-801)

<u>Number</u>	<u>Name/Location</u>
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521AT	Outbd Leading Edge - Gap Cover Access
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621AT	Outbd Leading Edge - Gap Cover Access
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F. Strut Access Door Removal

SUBTASK 54-53-01-020-001

- (1) Do these steps to remove the applicable access panel [1] located on the strut upper web:



CAUTION

DO NOT USE POWER TOOLS TO DO THIS TASK. POWER TOOLS CAN CAUSE DAMAGE TO EQUIPMENT.

- (a) Loosen the four attach bolts [2] approximately 0.5 in. (12.7 mm).
- (b) Lift the access panel [1] and adjust the assembly until the channels are free from the cutout in the upper spar web.
- (c) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
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433CT	Strut, Upper Spar Web, Strut 1
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433DT	Strut, Upper Spar Web, Strut 1
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443CT	Strut, Upper Spar Web, Strut 2
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443DT	Strut, Upper Spar Web, Strut 2
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———— **END OF TASK** ————

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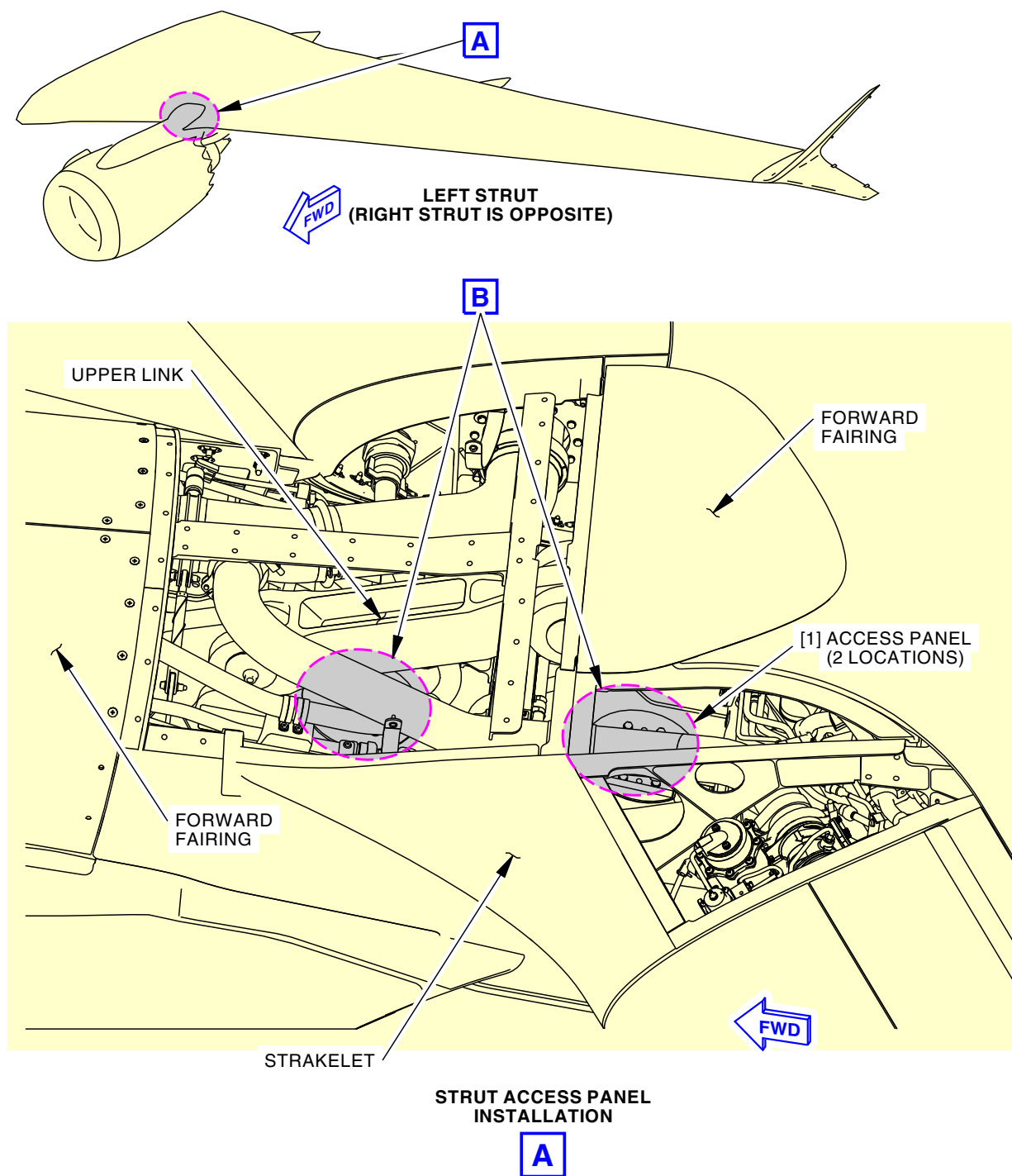
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Strut Access Panel Installation
Figure 401/54-53-01-990-801 (Sheet 1 of 2)

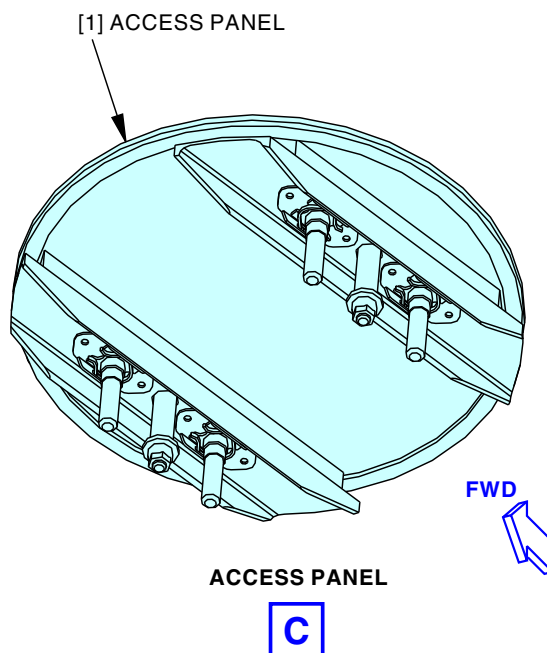
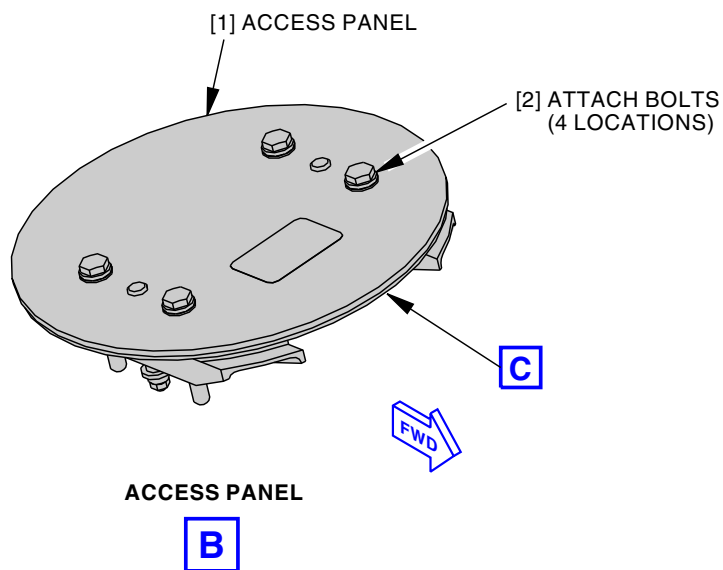
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Strut Access Panel Installation
Figure 401/54-53-01-990-801 (Sheet 2 of 2)

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TASK 54-53-01-400-801

3. Strut Access Panel Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the strut access panel.
- (2) Each strut has two access panels.
- (3) Each panel has captive fasteners, but the fasteners can fall out if you loosen the attach bolts too much.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-00-200-801	Aerodynamic Smoothness Requirements (P/B 201)
54-52-03-400-801	Wing Junction Fairing Installation (P/B 401)
54-52-09-400-801	Leading Edge Gap Covers Installation (P/B 401)
54-55-01-720-802	Strut Seal Plane Access Panels - Functional Test (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Access panel	54-53-01-01-080	SIA ALL

E. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
433CT	Strut, Upper Spar Web, Strut 1
433DT	Strut, Upper Spar Web, Strut 1
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
443CT	Strut, Upper Spar Web, Strut 2
443DT	Strut, Upper Spar Web, Strut 2
521AT	Outbd Leading Edge - Gap Cover Access
621AT	Outbd Leading Edge - Gap Cover Access

G. Strut Access Panel Installation

SUBTASK 54-53-01-420-001

 WARNING	MAKE SURE THAT YOU INSTALL THE ACCESS PANELS CORRECTLY. IF THERE IS A FLUID LEAK, INCORRECTLY INSTALLED ACCESS PANELS CAN LET FLAMMABLE FLUID INTO THE STRUT DRY BAY. FLAMMABLE FLUID IN THE STRUT DRY BAY CAN CAUSE A FIRE.
---	--

- (1) Do these steps to install the applicable access panel [1] located on the upper web:

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- (a) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
433CT	Strut, Upper Spar Web, Strut 1
433DT	Strut, Upper Spar Web, Strut 1
443CT	Strut, Upper Spar Web, Strut 2
443DT	Strut, Upper Spar Web, Strut 2

- (b) Loosen the four attach bolts [2] approximately 0.5 in. (12.7 mm).



CAUTION

DO NOT USE POWER TOOLS TO DO THIS TASK. POWER TOOLS CAN CAUSE DAMAGE TO EQUIPMENT.

- (c) Tighten the four attach bolts [2] with a hand tool to 50 in-lb (6 N·m) to 60 in-lb (7 N·m).
(d) Apply sealant, A00160, in a continuous fillet around the periphery of the installed fasteners.

H. Strut Access Panel Installation Test

SUBTASK 54-53-01-790-001

- (1) Make sure that the access panels do not leak (TASK 54-55-01-720-802).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-53-01-000-001

- (1) Close these access panels:

(TASK 54-52-03-400-801)

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

- (2) Close these access panels:

(TASK 54-52-09-400-801)

<u>Number</u>	<u>Name/Location</u>
521AT	Outbd Leading Edge - Gap Cover Access
621AT	Outbd Leading Edge - Gap Cover Access

SUBTASK 54-53-01-220-001

- (3) Make sure that the panels are in the aerodynamic smoothness limits (TASK 54-52-00-200-801).

SUBTASK 54-53-01-440-001

- (4) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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FORWARD STRUT FIRESEAL - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) Forward strut fireseal inspection
 - (2) Forward strut fireseal removal
 - (3) Forward strut fireseal installation.

TASK 54-54-00-200-801

2. Forward Strut Fireseal Inspection

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives the instructions to do the inspection of the forward strut fireseal.
- (2) The forward strut fireseal is located near the forward engine mount.
- (3) The forward strut fireseal is referred to as the fireproof seal in this procedure.

B. References

Reference	Title
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1315	Spatula - Plastic, Stiff

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Forward Strut Fireseal Inspection

SUBTASK 54-54-00-210-001

- (1) Do a visual check of the fireproof seal [1] condition.
 - (a) If it is necessary, remove the power plant (TASK 71-00-02-000-801-G00).
 - (b) Examine the fireproof seal [1] for any cuts or worn areas.

NOTE: The fireproof seal [1] is serviceable if there are no cuts, worn or damaged areas.

 - 1) If the fireproof seal [1] inspection shows cuts or worn areas, then replace the fireproof seal [1]. To replace the fire seal, do these tasks:
 - a) Forward Strut Fireseal Removal, TASK 54-54-00-000-801,
 - b) Forward Strut Fireseal Installation, TASK 54-54-00-400-801.
 - (c) Install the power plant, if it was removed (TASK 71-00-02-400-801-G00).
 - 1) When the engine is being raised, carefully examine the fireproof seal [1] to make sure that it is correctly seated on the edge of the engine fan case.

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- a) Lift the engine.
- b) Use a stiff plastic spatula, STD-1315, to push the last 3 in. (76 mm) to 4 in. (102 mm) long horizontal section of the seal forward over the edge of the engine fan case coaming.
- c) Continue to lift the engine.

————— END OF TASK —————

TASK 54-54-00-000-801

3. Forward Strut Fireseal Removal

(Figure 201)

A. General

- (1) This task gives the instructions to remove the forward strut fireseal.
- (2) The forward strut fireseal is located near the forward engine mount.
- (3) The forward strut fireseal is referred to as the fireproof seal in this task.

B. References

Reference	Title
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)
78-31-01-000-801-G00	Thrust Reverser Removal (P/B 401)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-54-00-020-001

- (1) If it is necessary, remove the power plant (TASK 71-00-02-000-801-G00).

SUBTASK 54-54-00-020-002

- (2) If it is necessary, remove the thrust reversers (TASK 78-31-01-000-801-G00).

NOTE: It is recommended to first attempt to remove the fireproof seal [1] without removal of the thrust reversers. If you cannot remove the fireproof seal [1] while the thrust reverser is in the open position, then remove the thrust reversers.

E. Forward Strut Fireseal Removal

SUBTASK 54-54-00-020-003

- (1) Remove the nuts [3], washers [4], washers [5], and bolts [6].

NOTE: This removes the fireproof seal [1] together with the retainer [2].

SUBTASK 54-54-00-110-001

- (2) Remove the sealant between the bulb seal and the top of the vertical arm for each side of the fireproof seal [1].

SUBTASK 54-54-00-020-004

- (3) Slide each vertical arm of the fireproof seal [1] out of the retainers [7] and keeper assemblies.

————— END OF TASK —————

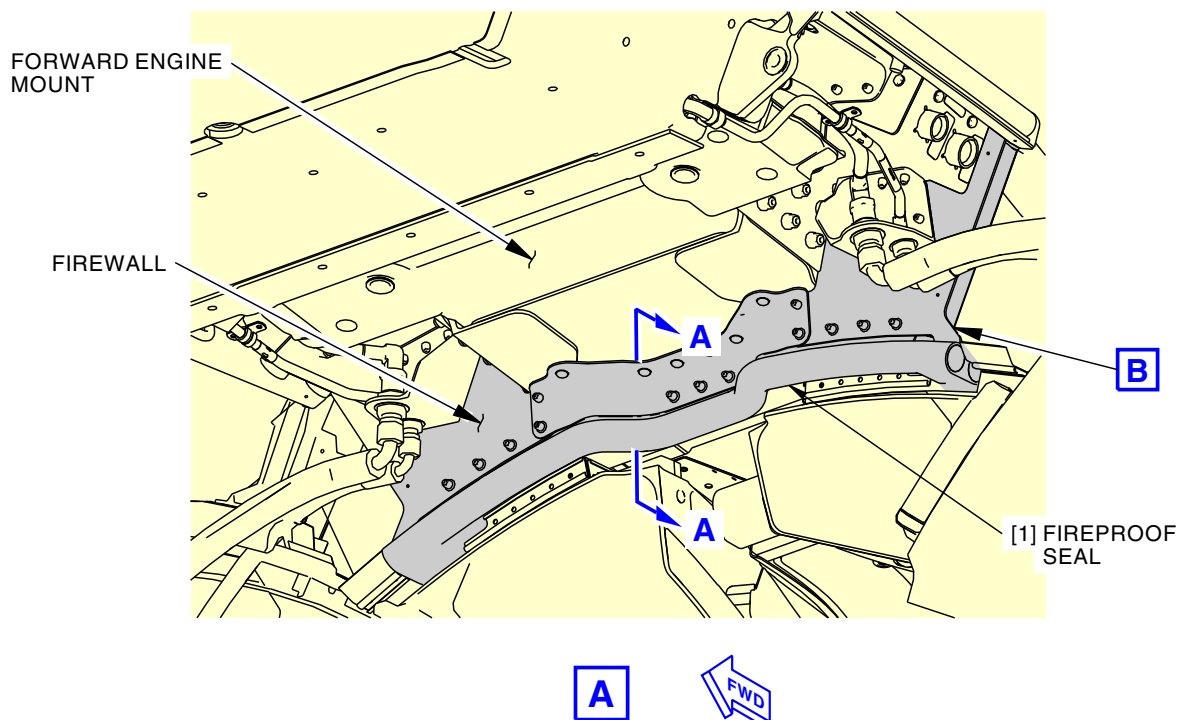
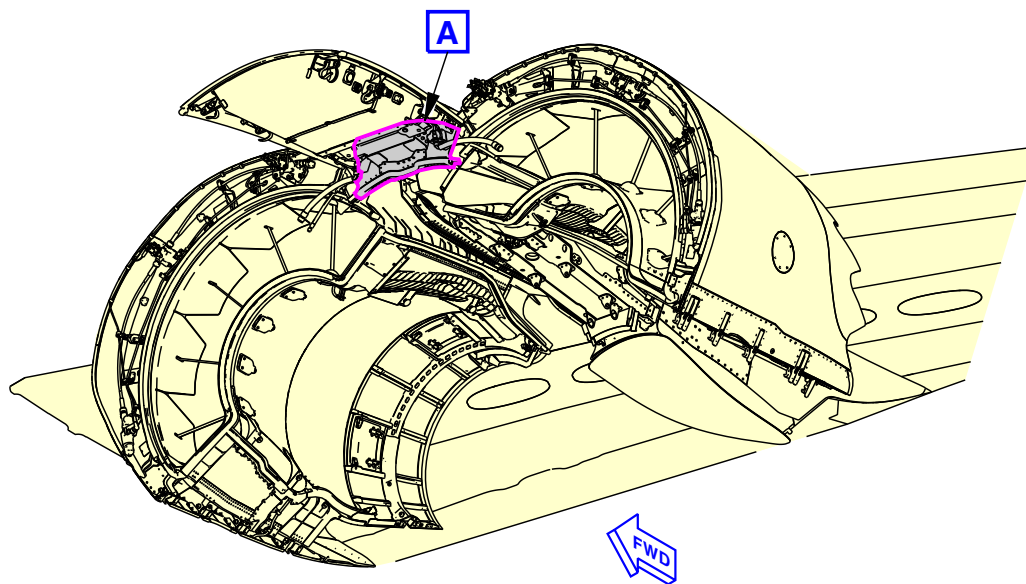
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Forward Strut Fire Seal Installation
Figure 201/54-54-00-990-801 (Sheet 1 of 3)

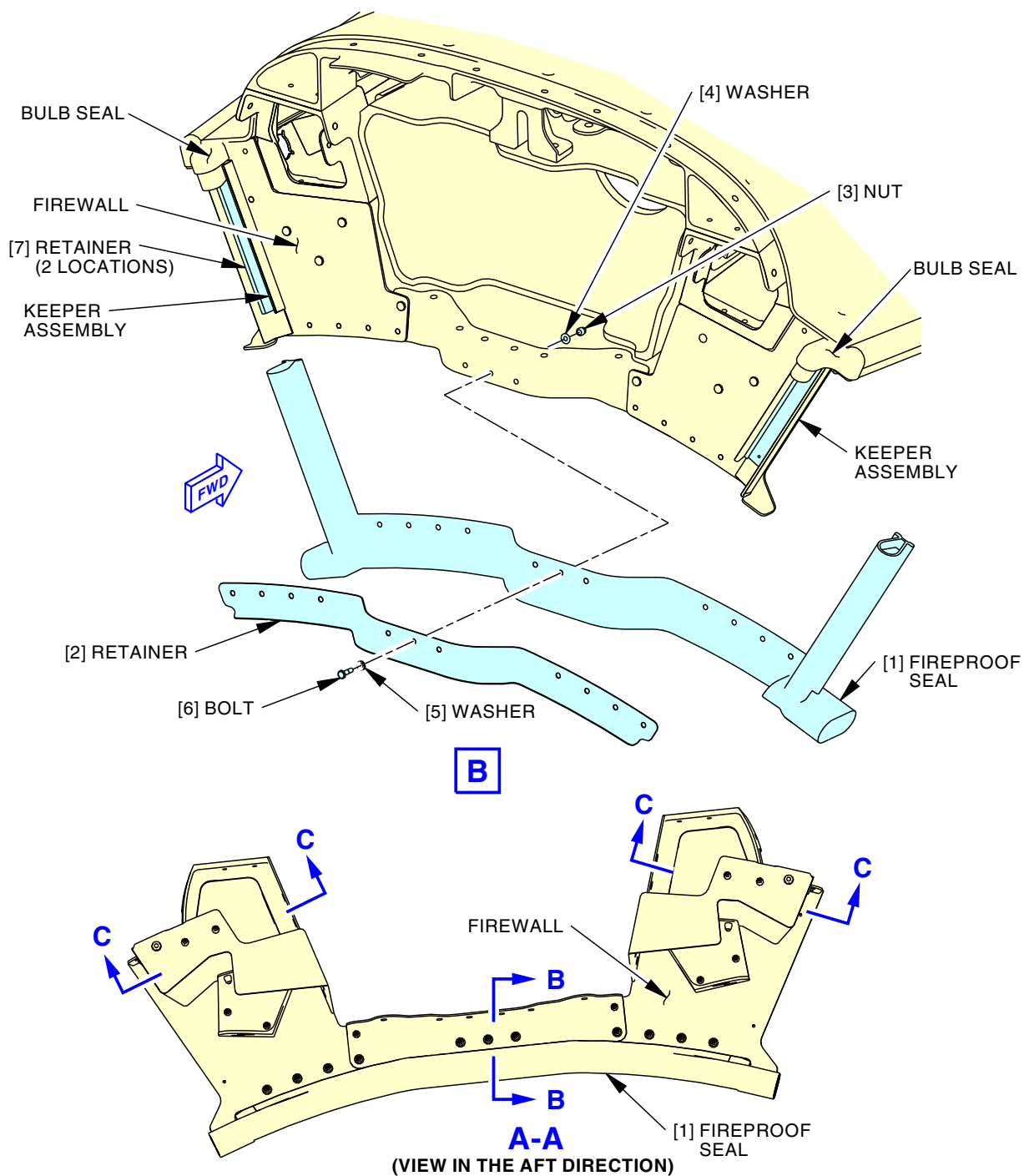
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Forward Strut Fire Seal Installation
Figure 201/54-54-00-990-801 (Sheet 2 of 3)

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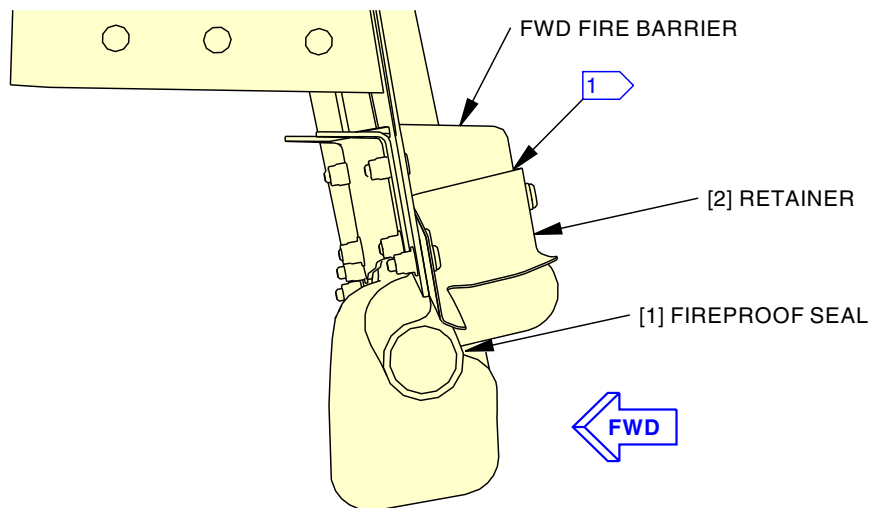
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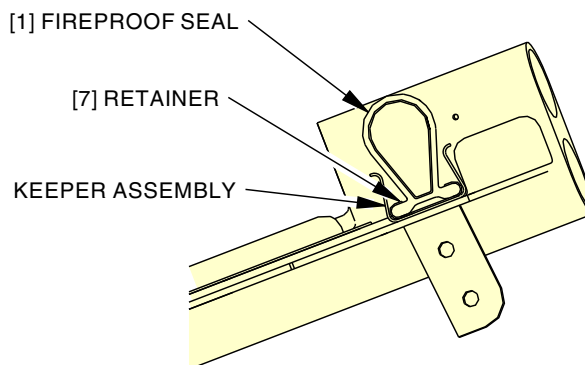
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B-B



C-C

1 FILLET SEAL TO FILL ANY GAPS

2488259 S0000585058_V1

Forward Strut Fire Seal Installation
Figure 201/54-54-00-990-801 (Sheet 3 of 3)

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TASK 54-54-00-400-801

4. **Forward Strut Fireseal Installation**

(Figure 201)

A. General

- (1) This task gives the instructions to install the forward strut fireseal.
- (2) The forward strut fireseal is located near the forward engine mount.
- (3) The forward strut fireseal is referred to as the fireproof seal in this task.

B. References

Reference	Title
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)
78-31-01-400-801-G00	Thrust Reverser Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1315	Spatula - Plastic, Stiff

D. Consumable Materials

Reference	Description	Specification
A00027	Adhesive - Silicone Rubber, 1 Part, RTV	BAC5010 Type 60
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Fireproof seal	54-55-51-01-030	SIA ALL
		54-55-51-01-035	SIA ALL

F. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

G. Forward Strut Fireseal Installation

SUBTASK 54-54-00-400-001

- (1) To install the fireproof seal [1], do these steps:
 - (a) Slide the vertical arms of the fireproof seal [1] into the retainers [7] in the keeper assemblies.
 - (b) Apply adhesive, A00027, to the bond area of the bulb seals and the vertical arms of the fireproof seal [1].
 - 1) Make sure that you apply sufficient adhesive to fill the gaps in the bond area.
 - 2) Remove unwanted adhesive.
 - 3) Make sure that the fireproof seal [1] is pushed up as high as possible.
 - (c) Apply sealant, A00160, to the bolts [6], washers [5], washers [4], and nuts [3].
 - (d) Put the retainer [2] in the correct position.
 - (e) Install the bolts [6], washers [5], washers [4], and nuts [3] that attach the fireproof seal [1] and retainer [2] to the bottom of the strut firewall.

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- 1) Make sure that the fireproof seal [1] is pushed up as high as possible.
- (f) Tighten the nuts [3] to 18 in-lb (2.0 N·m) - 22 in-lb (2.5 N·m).
- (g) Apply sealant, A00160, to make a fillet seal between the fireproof seal [1], retainer [2], and the firewall.

SUBTASK 54-54-00-020-005

- (2) Install the thrust reversers, if they were removed (TASK 78-31-01-400-801-G00).

SUBTASK 54-54-00-020-006

- (3) Install the power plant, if it was removed (TASK 71-00-02-400-801-G00).
 - (a) When the engine is being raised, carefully examine the fireproof seal [1] to make sure that it is correctly seated on the edge of the engine fan case.
 - 1) Lift the engine.
 - 2) Use a stiff plastic spatula, STD-1315, to push the last 3 in. (76 mm) to 4 in. (102 mm) long horizontal section of the seal forward over the edge of the engine fan case coaming.

NOTE: This step prevents the protrusion and pinching of the fireproof seal [1] corners into the bypass duct after the thrust reversers are closed.
 - 3) Continue to lift the engine.

———— **END OF TASK** ————

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STRUT FIRESEAL AND FIRESEAL DEPRESSOR - INSPECTION/CHECK

1. General

- A. This procedure has two tasks:
- (1) Strut Fireseal Depressor Inspection
 - (2) Forward Strut Fireseal Inspection.

TASK 54-54-00-200-802

2. Strut Fireseal Depressor Inspection

(Figure 601)

A. **General**

- (1) This task has the steps to examine the strut fireseal depressor.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Inspection**

SUBTASK 54-54-00-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-54-00-010-001

- (2) Open the applicable thrust reversers.
 - (a) To open the thrust reversers, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-G00.

E. **Strut Fireseal Depressor Inspection**

SUBTASK 54-54-00-210-002

- (1) Make sure that the fireseal depressor parts are not loose, damaged, or missing.

SUBTASK 54-54-00-210-003

- (2) Examine the firewall structure for cracks, nicks, dents, distortion, or other damage.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-00-100-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, DAMAGE TO THE STRUT CAN OCCUR.

- (1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-54-00-410-001

- (2) Close the applicable thrust reversers.
- (a) To close the thrust reversers, do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

SUBTASK 54-54-00-440-001

- (3) If you will do no more maintenance operations, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

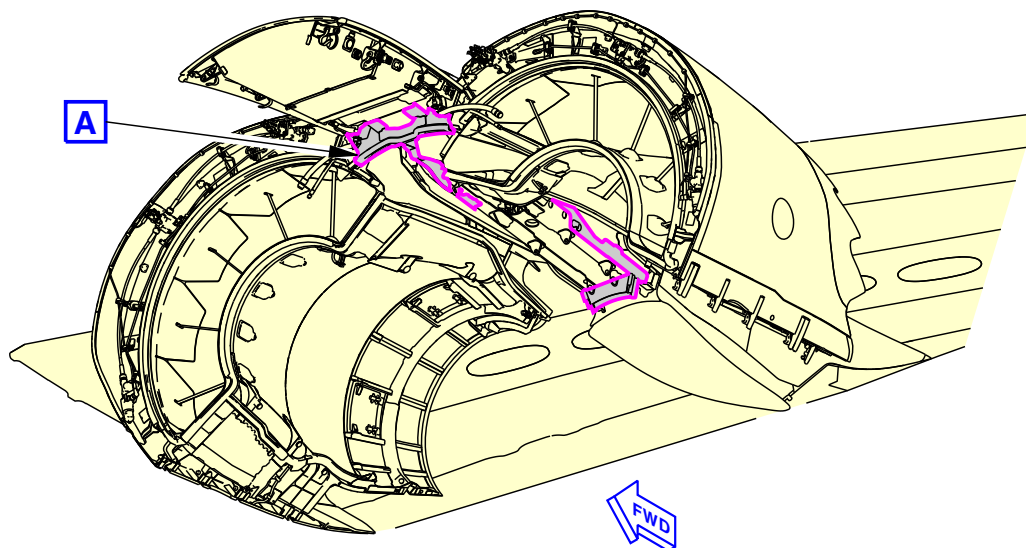
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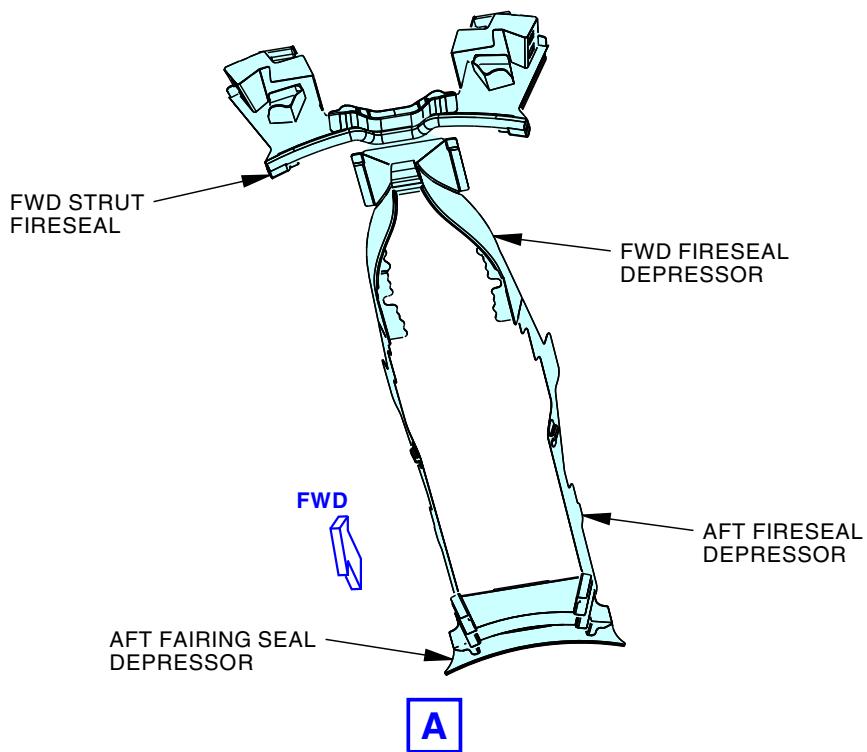
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LEFT STRUT IS SHOWN
(RIGHT STRUT IS OPPOSITE)
(ENGINE IS NOT SHOWN)



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Strut Fire Seal Depressor Inspection
Figure 601/54-54-00-990-802

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TASK 54-54-00-200-803

3. Forward Strut Fireseal Inspection

(Figure 601)

A. General

- (1) This task has the steps to examine the forward strut fireseal.

B. References

Reference	Title
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Forward Strut Fireseal Inspection

SUBTASK 54-54-00-210-004

- (1) Do these steps to examine the forward strut fireseal:
- (a) Look in the thrust reverser fan bypass to see if the forward strut fireseal protrudes.
 - (b) If the fireseal protrudes, do these steps:
 - 1) Open the applicable thrust reversers (TASK 78-31-00-010-801-G00).
 - 2) Measure the clearance between the fireseal retainer and the engine fan case.
 - a) Make sure that there is a minimum clearance of 0.10 in. (2.54 mm).

E. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-00-410-002

- (1) Close the thrust reversers (TASK 78-31-00-010-802-G00).

————— **END OF TASK** —————

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STRUT THERMAL BARRIERS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) Strut forward thermal barrier removal
- (2) Strut forward thermal barrier installation
- (3) Strut mid thermal barrier removal
- (4) Strut mid thermal barrier installation
- (5) Strut aft thermal barrier removal
- (6) Strut aft thermal barrier installation.

TASK 54-54-01-000-801

2. Strut Forward Thermal Barrier Removal

(Figure 401)

A. **General**

- (1) This task gives the instructions to remove the strut forward thermal barrier.
- (2) The strut forward thermal barriers are located near the forward engine mount.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
71-00-02-000-801-G00	Power Plant - Removal (P/B 401)

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Removal**

SUBTASK 54-54-01-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-54-01-860-001

- (2) For Engine 1;

Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	6	C01412	ENGINE 1 THRUST REVERSER INTLK
B	7	C01266	ENGINE 1 THRUST REVERSER SYNC LOCK

SUBTASK 54-54-01-860-002

- (3) For Engine 2;

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Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	5	C01267	ENGINE 2 THRUST REVERSER SYNC LOCK
C	6	C01413	ENGINE 2 THRUST REVERSER INTLK

SUBTASK 54-54-01-020-001

(4) Do this task: Power Plant - Removal, TASK 71-00-02-000-801-G00.

E. Strut Forward Thermal Barrier Removal

SUBTASK 54-54-01-000-001

(1) To remove the thermal barrier [2], do these steps (Figure 401, View B):

- (a) Remove the five nuts [3] and ten washers [4].
- (b) Remove the four bolts [10] and eight washers [4].
- (c) Remove the thermal barrier [2].

SUBTASK 54-54-01-020-002

(2) To remove the thermal barrier [1], do these steps (Figure 401, View A):

- (a) Remove the two nuts [6], four washers [7], and two spacers [8] from the forward side of the thermal barrier.
- (b) Remove the two nuts [3], four washers [4], and two spacers [5] from the forward side of the thermal barrier (Figure 401, View C).
- (c) Remove the six nuts [3], six lanyard tabs [9], and twelve washers [4] from the left and right sides of the thermal barrier (Figure 401, View D).
- (d) Remove the 12 nuts [3] and 24 washers [4] from the left and right sides of the thermal barrier.
- (e) Remove the 18 nuts [3] and 36 washers [4] from the bottom side of the thermal barrier.
- (f) Remove the thermal barrier [1].

———— **END OF TASK** ————

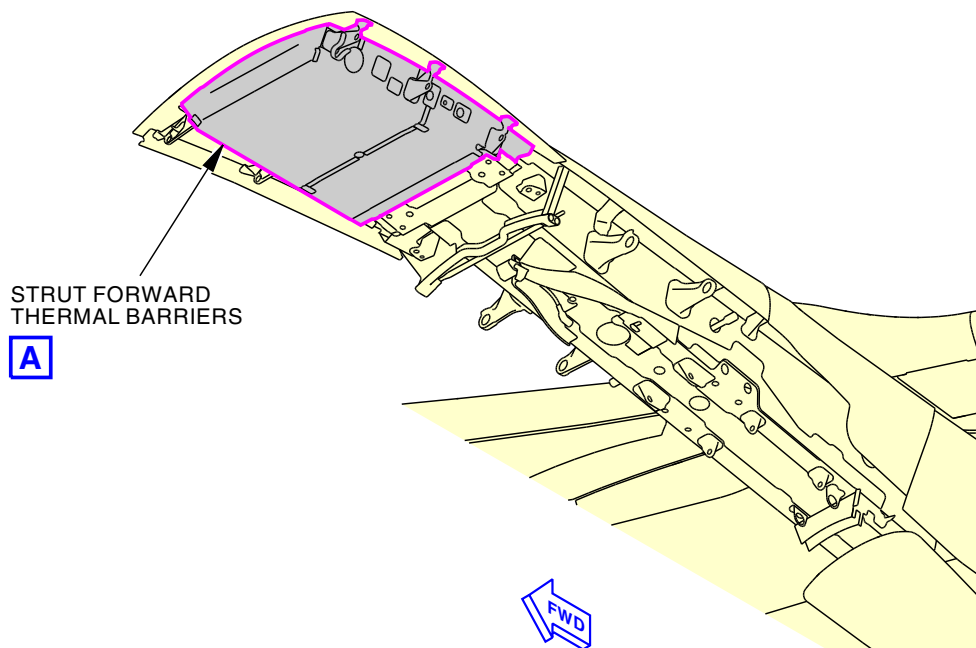
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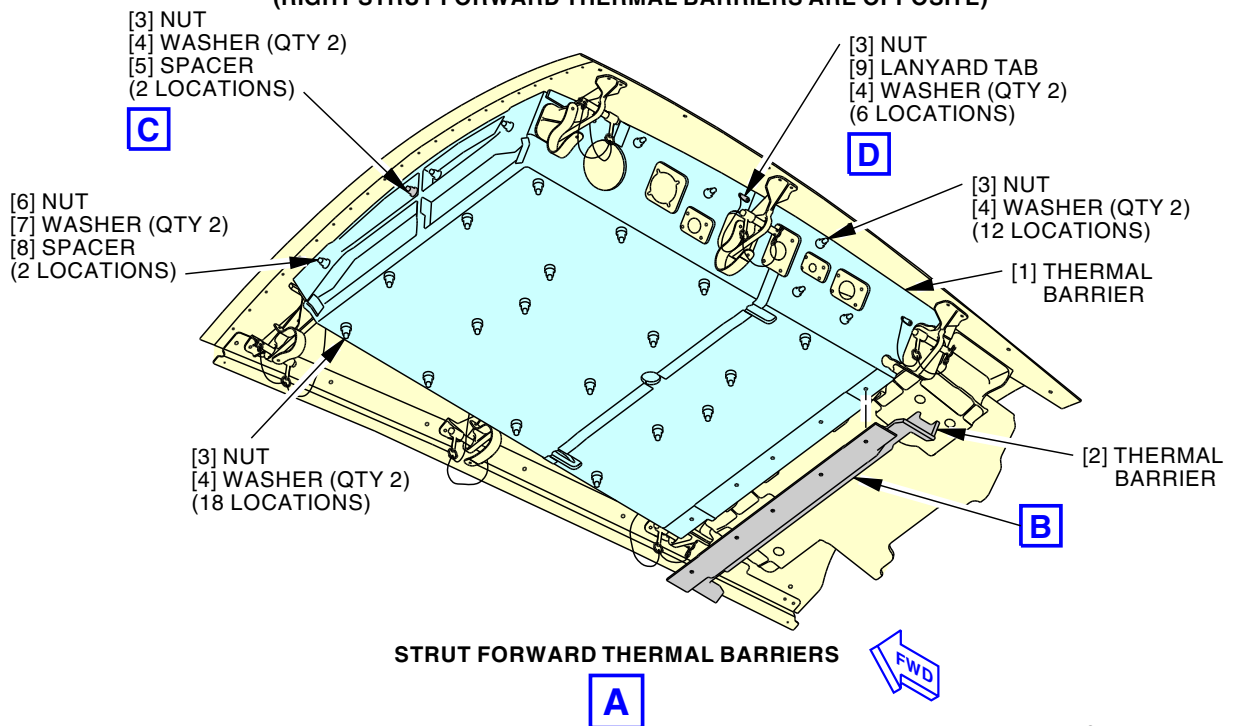
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**LEFT STRUT FORWARD THERMAL BARRIERS
(RIGHT STRUT FORWARD THERMAL BARRIERS ARE OPPOSITE)**



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**Strut Forward Thermal Barrier Installation
Figure 401/54-54-01-990-801 (Sheet 1 of 2)**

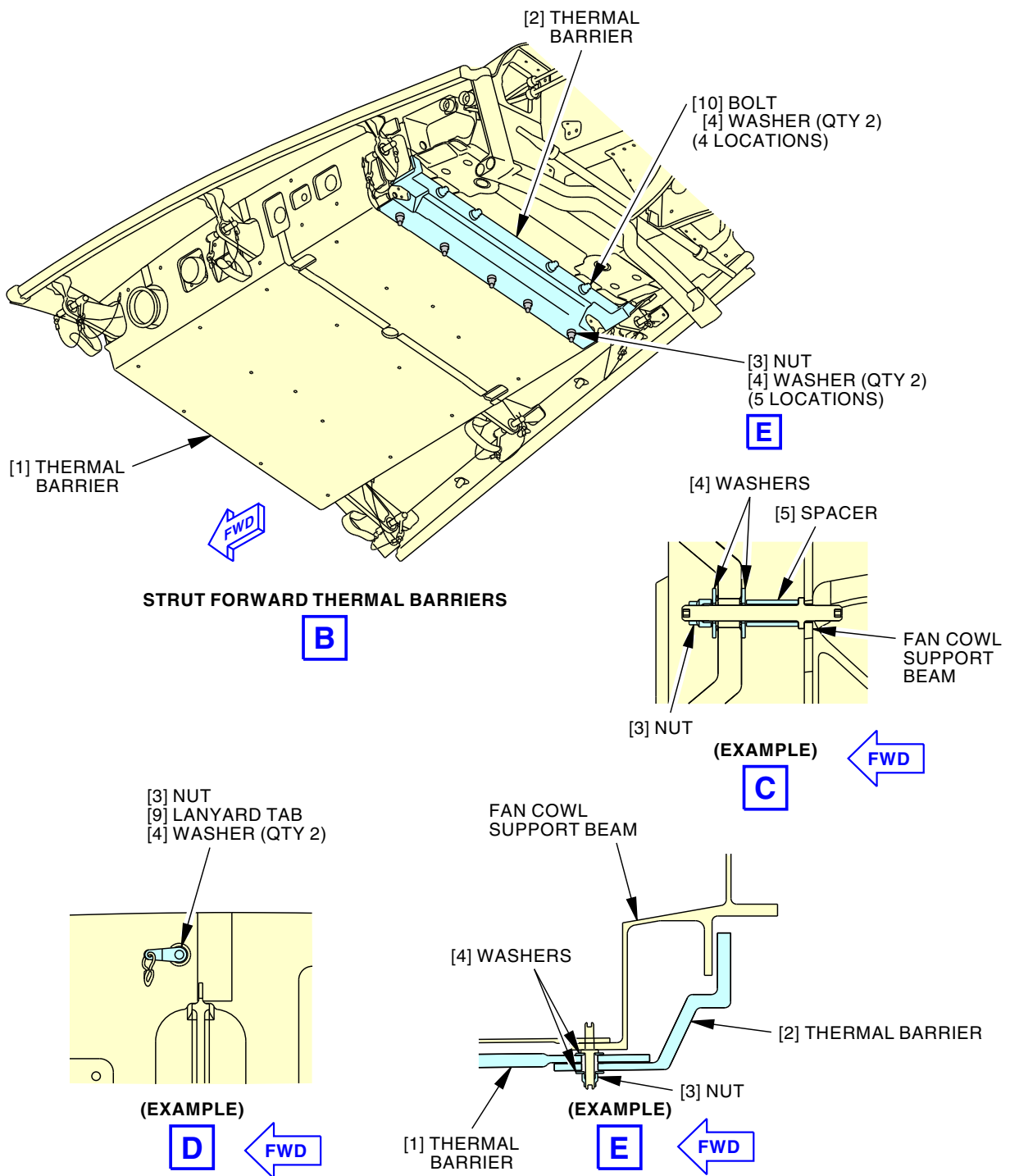
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Strut Forward Thermal Barrier Installation
Figure 401/54-54-01-990-801 (Sheet 2 of 2)

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TASK 54-54-01-400-801

3. **Strut Forward Thermal Barrier Installation**

(Figure 401)

A. General

- (1) This task gives the instructions to install the strut forward thermal barrier.
- (2) The strut forward thermal barriers are located near the forward engine mount.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
71-00-02-400-801-G00	Power Plant - Installation (P/B 401)
78-31-00-700-801-G00	Thrust Reverser Operational Test (Selection) (P/B 501)
78-31-00-700-805-G00	Thrust Reverser Proximity Sensors Operational Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Thermal barrier	54-54-01-01-075	SIA ALL
		54-54-01-02-075	SIA ALL
2	Thermal barrier	54-54-01-01-095	SIA ALL
		54-54-01-02-095	SIA ALL

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Strut Forward Thermal Barrier Installation

SUBTASK 54-54-01-000-002

- (1) To install the thermal barrier [1], do these steps (Figure 401, View A):
 - (a) Put the thermal barrier [1] in the correct position.
 - (b) Install the 18 nuts [3] and 36 washers [4] to the bottom side of the thermal barrier.
 - (c) Install the 12 nuts [3] and 24 washers [4] to the left and right sides of the thermal barrier.
 - (d) Install the six nuts [3], six lanyard tabs [9], and 12 washers [4] to the left and right sides of the thermal barrier.
 - 1) Make sure that the lanyard tabs point in the forward direction (Figure 401, View D).
 - (e) Install the two nuts [3], four washers [4], and two spacers [5] to the forward side of the thermal barrier (Figure 401, View C).
 - (f) Install the two nuts [6], four washers [7], and two spacers [8] to the forward side of the thermal barrier.

SUBTASK 54-54-01-020-003

- (2) To install the thermal barrier [2], do these steps (Figure 401, View B):
 - (a) Put the thermal barrier [2] in the correct position.
 - (b) Install the four bolts [10] and eight washers [4].
 - (c) Install the five nuts [3] and 10 washers [4] (Figure 401, View E).

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F. Put the Strut Back to Its Usual Condition

SUBTASK 54-54-01-020-004

- (1) Do this task: Power Plant - Installation, TASK 71-00-02-400-801-G00.

SUBTASK 54-54-01-860-003

- (2) For Engine 1;

Close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01412	ENGINE 1 THRUST REVERSER INTLK
B	7	C01266	ENGINE 1 THRUST REVERSER SYNC LOCK

SUBTASK 54-54-01-860-004

- (3) For Engine 2;

Close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	5	C01267	ENGINE 2 THRUST REVERSER SYNC LOCK
C	6	C01413	ENGINE 2 THRUST REVERSER INTLK

SUBTASK 54-54-01-040-002

- (4) Do this task: Thrust Reverser Operational Test (Selection), TASK 78-31-00-700-801-G00.

SUBTASK 54-54-01-040-003

- (5) Do this task: Thrust Reverser Proximity Sensors Operational Test, TASK 78-31-00-700-805-G00.

SUBTASK 54-54-01-040-004

- (6) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

TASK 54-54-01-000-802

4. Strut Mid Thermal Barrier Removal

(Figure 402)

A. General

- (1) This task gives the instructions to remove the strut mid thermal barrier.
- (2) The strut mid thermal barriers are located between the forward and aft engine mounts.
- (3) To get access to the strut mid thermal barriers, open the thrust reversers. If you remove the forward or aft thermal barriers, you can remove the power plant for easier access.
- (4) The strut aft thermal barriers are also referred to as insulation assemblies in this procedure.

B. References

<u>Reference</u>	<u>Title</u>
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

<u>Zone</u>	<u>Area</u>
410	Subzone - Engine 1

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(Continued)

Zone	Area
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-54-01-040-005

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-54-01-020-005



WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-G00.

E. Strut Mid Thermal Barrier Removal

SUBTASK 54-54-01-000-003

- (1) To remove the mid thermal barriers from engine position 1, do these steps (Figure 402, View A):
 - (a) Make sure that you remove the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [15], insulation assembly [14], insulation assembly [16], insulation assembly [13].
 - (b) Remove the five nuts [6] and ten washers [7] that attach the insulation assembly [15].
 - (c) Remove the insulation assembly [15].
 - (d) Remove the four nuts [6] and eight washers [7] that attach the insulation assembly [14].
 - (e) Remove the insulation assembly [14].
 - (f) Remove the two nuts [3] and four washers [4] that attach the insulation assembly [16].
 - (g) Remove the insulation assembly [16].
 - (h) Remove the nut [3], four washers [4], nut [17], and bushing [19] that attach the insulation assembly [13].
 - (i) Remove the insulation assembly [13].
 - (j) Remove the two nuts [6], four washers [7], three nuts [17], six washers [4], and three bushings [18] that attach the thermal barrier [11] (Figure 402, View C).
 - (k) Remove the thermal barrier [11].
 - (l) Remove the two nuts [6], four washers [7], three nuts [17], six washers [4], and three bushings [18] that attach the thermal barrier [12] (Figure 402, View C).
 - (m) Remove the thermal barrier [12].

SUBTASK 54-54-01-020-006

- (2) To remove the mid thermal barriers from engine position 2, do these steps (Figure 402, View B):

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- (a) Make sure that you remove the insulation assemblies in the correct sequence.

NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [24], insulation assembly [23], insulation assembly [25], insulation assembly [22].

- (b) Remove the five nuts [6] and ten washers [7] that attach the insulation assembly [24].
- (c) Remove the insulation assembly [24].
- (d) Remove the four nuts [6] and eight washers [7] that attach the insulation assembly [23].
- (e) Remove the insulation assembly [23].
- (f) Remove the nut [3], four washers [4], nut [17], and bushing [19] that attach the insulation assembly [25].
- (g) Remove the insulation assembly [25].
- (h) Remove the two nuts [3] and four washers [4] that attach the insulation assembly [22].
- (i) Remove the insulation assembly [22].
- (j) Remove the two nuts [6], four washers [7], three nuts [17], six washers [4], and bushings [18] that attach the thermal barrier [20] (Figure 402, View C).
- (k) Remove the thermal barrier [20].
- (l) Remove the two nuts [6], four washers [7], three nuts [17], six washers [4], and three bushings [18] that attach the thermal barrier [21] (Figure 402, View C).
- (m) Remove the thermal barrier [21].

———— **END OF TASK** ————

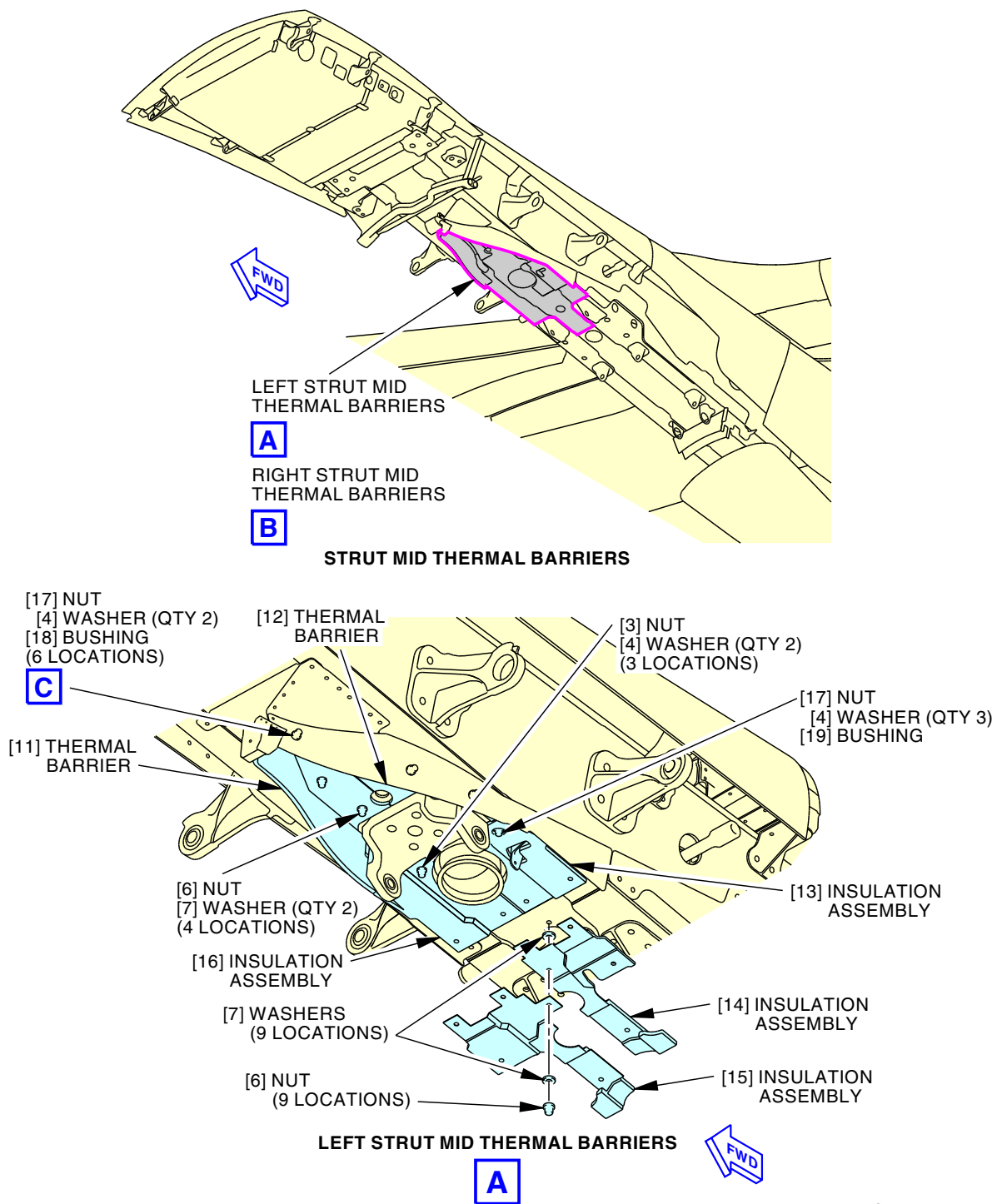
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Strut Mid Thermal Barrier Installation
Figure 402/54-54-01-990-802 (Sheet 1 of 2)

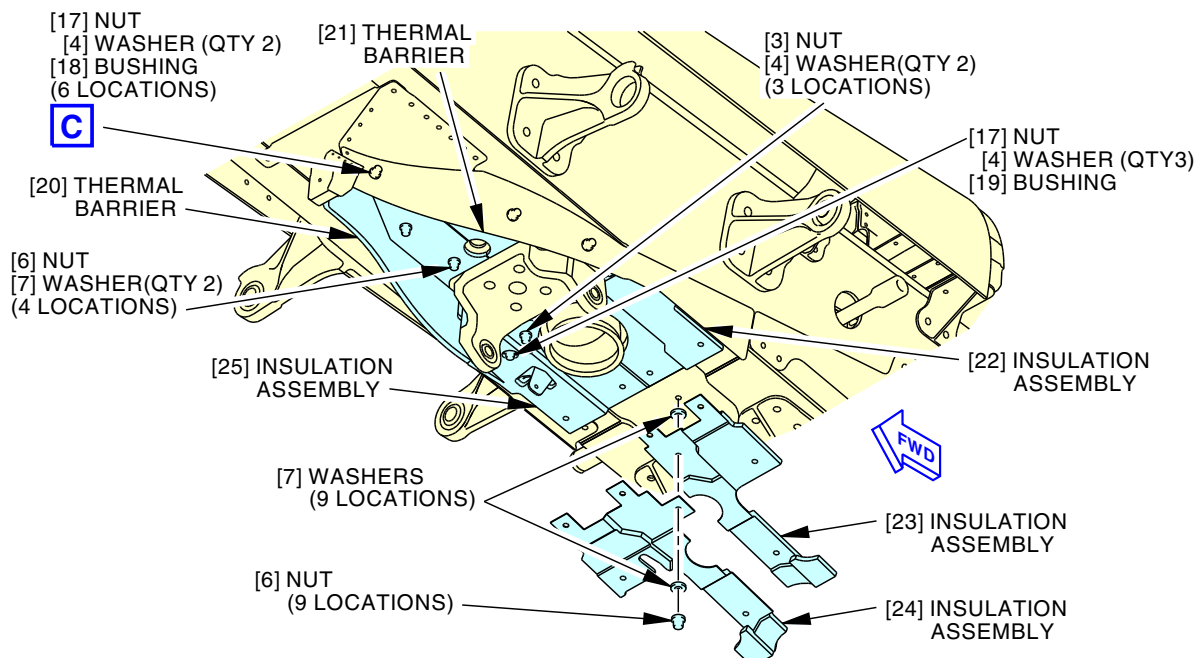
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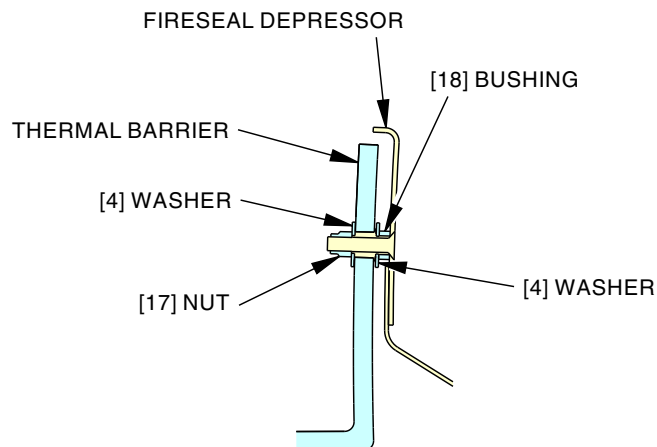
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RIGHT STRUT MID THERMAL BARRIERS

C



(EXAMPLE)

C

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Strut Mid Thermal Barrier Installation
Figure 402/54-54-01-990-802 (Sheet 2 of 2)

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TASK 54-54-01-400-802

5. Strut Mid Thermal Barrier Installation

(Figure 402)

A. General

- (1) This task gives the instructions to install the strut mid thermal barrier.
- (2) The strut mid thermal barriers are located between the forward and aft engine mounts.
- (3) The strut mid thermal barriers must be installed in the sequence indicated in the procedure.
- (4) The strut aft thermal barriers are also referred to as insulation assemblies in this procedure.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
11	Thermal barrier	54-54-01-01-210	SIA ALL
12	Thermal barrier	54-54-01-01-205	SIA ALL
13	Insulation assembly	54-54-01-01-215	SIA ALL
14	Insulation assembly	54-54-01-01-225	SIA ALL
15	Insulation assembly	54-54-01-01-230	SIA ALL
16	Insulation assembly	54-54-01-01-220	SIA ALL
20	Thermal barrier	54-54-01-02-210	SIA ALL
21	Thermal barrier	54-54-01-02-205	SIA ALL
22	Insulation assembly	54-54-01-02-215	SIA ALL
23	Insulation assembly	54-54-01-02-225	SIA ALL
24	Insulation assembly	54-54-01-02-230	SIA ALL
25	Insulation assembly	54-54-01-02-220	SIA ALL

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Strut Mid Thermal Barrier Installation

SUBTASK 54-54-01-000-004

- (1) To install the mid thermal barriers on engine position 2, do these steps (Figure 402, View B):
 - (a) Put the thermal barrier [21] in the correct position.
 - (b) Install the four washers [7], two nuts [6], six washers [4], three bushings [18] and three nuts [17] that attach the thermal barrier [21] (Figure 402, View C).
 - (c) Put the thermal barrier [20] in the correct position.
 - (d) Install the four washers [7], two nuts [6], six washers [4], three bushings [18] and three nuts [17] that attach the thermal barrier [20] (Figure 402, View C).

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MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (e) Make sure that you install the insulation assemblies in the correct sequence.

NOTE: The correct sequence to install the insulation assemblies from first to last is as follows: insulation assembly [22], insulation assembly [25], insulation assembly [23], insulation assembly [24].

- (f) Put the insulation assembly [22] in the correct position.
(g) Install the four washers [4] and two nuts [3] that attach the insulation assembly [22].
(h) Put the insulation assembly [25] in the correct position.
(i) Install the four washers [4], nut [3], bushing [19], and nut [17] that attach the insulation assembly [25].
(j) Put the insulation assembly [23] in the correct position.
(k) Install the eight washers [7] and four nuts [6] that attach the insulation assembly [23].
(l) Put the insulation assembly [24] in the correct position.
(m) Install the ten washers [7] and five nuts [6] that attach the insulation assembly [24].

SUBTASK 54-54-01-420-001

- (2) To install the mid thermal barriers on engine position 1, do these steps (Figure 402, View A):
- (a) Put the thermal barrier [12] in the correct position.
(b) Install the four washers [7], two nuts [6], six washers [4], three bushings [18], and three nuts [17] that attach the thermal barrier [12] (Figure 402, View C).
(c) Put the thermal barrier [11] in the correct position.
(d) Install the four washers [7], two nuts [6], six washers [4], three bushings [18] and three nuts [17] that attach the thermal barrier [11] (Figure 402, View C).



MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (e) Make sure that you install the insulation assemblies in the correct sequence.

NOTE: The correct sequence to install the insulation assemblies from first to last is as follows: insulation assembly [13], insulation assembly [16], insulation assembly [14], insulation assembly [15].

- (f) Put the insulation assembly [13] in the correct position.
(g) Install the four washers [4], nut [3], bushing [19], and nut [17] that attach the insulation assembly [13].
(h) Put the insulation assembly [16] in the correct position.
(i) Install the four washers [4] and two nuts [3] that attach the insulation assembly [16].
(j) Put the insulation assembly [14] in the correct position.
(k) Install the eight washers [7] and four nuts [6] that attach the insulation assembly [14].
(l) Put the insulation assembly [15] in the correct position.
(m) Install the ten washers [7] and five nuts [6] that attach the insulation assembly [15].

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F. Put the Strut Back to its Usual Condition

SUBTASK 54-54-01-020-007

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

SUBTASK 54-54-01-040-006

(2) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

TASK 54-54-01-000-803

6. Strut Aft Thermal Barrier Removal

(Figure 403)

A. General

- (1) This task gives the instructions to remove the strut aft thermal barrier.
- (2) The strut aft thermal barriers are located aft of the aft engine mount.
- (3) The strut aft thermal barriers are also referred to as insulation assemblies in this procedure.

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
78-11-01-000-801-G00	Primary Nozzle Assembly Removal (P/B 401)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-54-01-040-007

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-54-01-010-001

(2) Do this task: Primary Nozzle Assembly Removal, TASK 78-11-01-000-801-G00.

E. Strut Aft Thermal Barrier Removal

SUBTASK 54-54-01-020-008

- (1) To remove the aft insulation assemblies from engine position 1, do these steps (Figure 403, View A):
 - (a) Make sure that you remove the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [30], insulation assembly [29].
 - (b) Remove the two nuts [6], four washers [7], and bushing [38] that attach the insulation assembly [30].
 - (c) Remove the nut [3], two washers [4], washer [37], and bolt [36] that attach the insulation assembly [30] (Figure 403, View E).
 - (d) Remove the insulation assembly [30].
 - (e) Remove the two nuts [6], four washers [7], and bushing [38] that attach the insulation assembly [29].

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- (f) Remove the nut [3], two washers [4], washer [37], and bolt [36] that attach the insulation assembly [29] (Figure 403, View E).
- (g) Remove the insulation assembly [29].
- (h) Make sure that you remove the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [31], insulation assembly [28], insulation assembly [26], insulation assembly [27].
- (i) Remove the nut [33], five nuts [6], twelve washers [7], bushing [34], and bushing [35] that attach the insulation assembly [31] (Figure 403, View D).
- (j) Remove the insulation assembly [31].
- (k) Remove the nut [33], four nuts [6], ten washers [7], bushing [34], and bushing [35] that attach the insulation assembly [28] (Figure 403, View D).
- (l) Remove the insulation assembly [28].
- (m) Remove the three nuts [6] and six washers [7] that attach the insulation assembly [26].
- (n) Remove the screw [32] and washer [4] that attach the insulation assembly [26] (Figure 403, View C).
- (o) Remove the insulation assembly [26].
- (p) Remove the three nuts [6] and six washers [7] that attach the insulation assembly [27].
- (q) Remove the screw [32] and washer [4] that attach the insulation assembly [27] (Figure 403, View C).
- (r) Remove the insulation assembly [27].

SUBTASK 54-54-01-020-009

- (2) To remove the aft insulation assemblies from engine position 2, do these steps (Figure 403, View B):
 - (a) Make sure that you remove the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [43], insulation assembly [42].
 - (b) Remove the two nuts [6], four washers [7] and bushing [38] that attach the insulation assembly [43].
 - (c) Remove the nut [3], two washers [4], washer [37], and bolt [36] that attach the insulation assembly [43] (Figure 403, View E).
 - (d) Remove the insulation assembly [43].
 - (e) Remove the two nuts [6], four washers [7], and bushing [38] that attach the insulation assembly [42].
 - (f) Remove the nut [3], two washers [4], washer [37], and bolt [36] that attach the insulation assembly [42] (Figure 403, View E).
 - (g) Remove the insulation assembly [42].
 - (h) Make sure that you remove the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [44], insulation assembly [41], insulation assembly [39], insulation assembly [40].
 - (i) Remove the nut [33], five nuts [6], twelve washers [7], bushing [34], and bushing [35] that attach the insulation assembly [44] (Figure 403, View D).

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- (j) Remove the insulation assembly [44].
- (k) Remove the nut [33], four nuts [6], ten washers [7], bushing [34], and bushing [35] that attach the insulation assembly [41] (Figure 403, View D).
- (l) Remove the insulation assembly [41].
- (m) Remove the three nuts [6] and six washers [7] that attach the insulation assembly [39].
- (n) Remove the screw [32] and washer [4] that attach the insulation assembly [39] (Figure 403, View C).
- (o) Remove the insulation assembly [39].
- (p) Remove the three nuts [6] and six washers [7] that attach the insulation assembly [40].
- (q) Remove the screw [32] and washer [4] that attach the insulation assembly [40] (Figure 403, View C).
- (r) Remove the insulation assembly [40].

———— **END OF TASK** ————

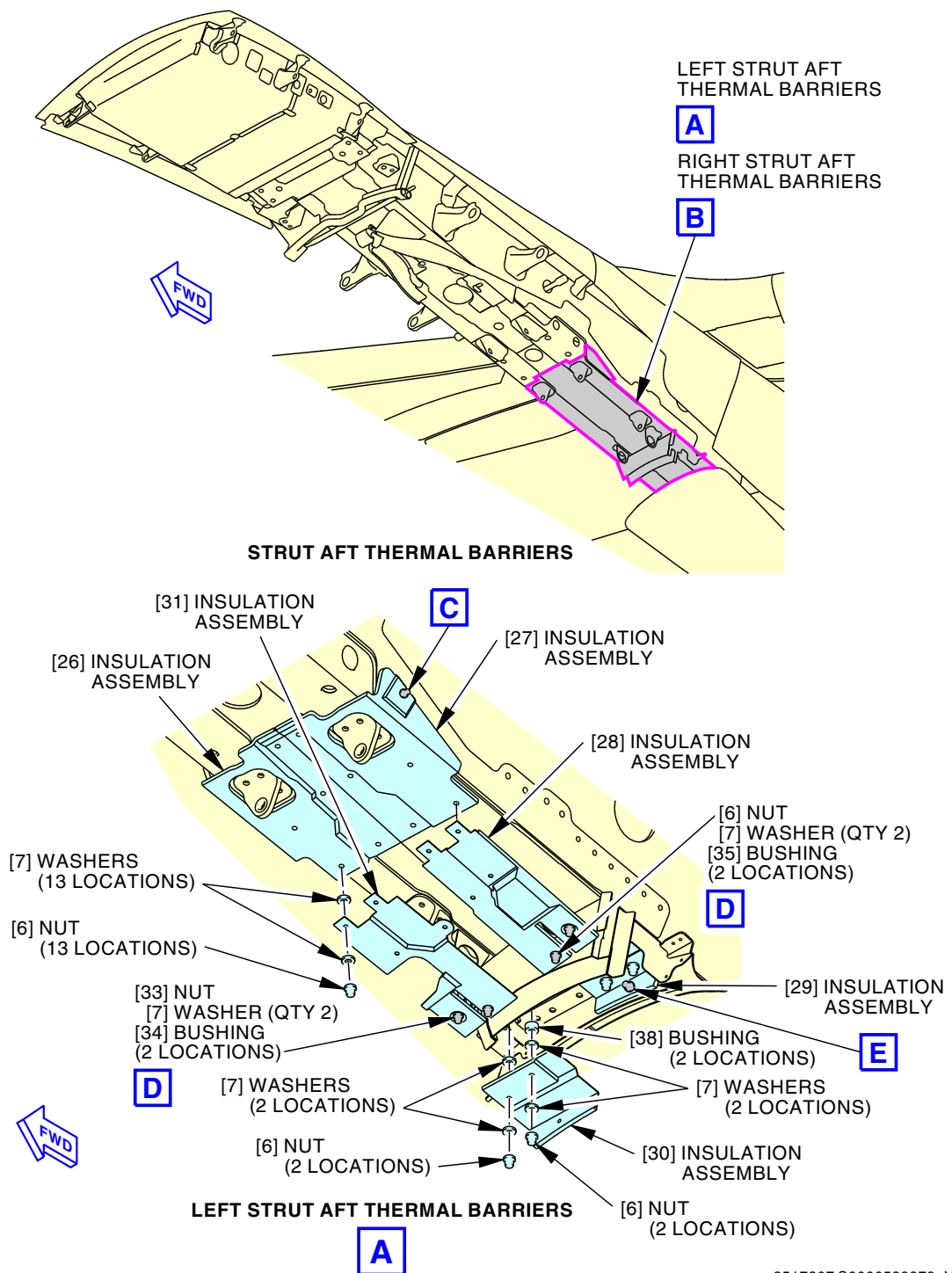
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Strut Aft Thermal Barrier Installation
Figure 403/54-54-01-990-803 (Sheet 1 of 2)

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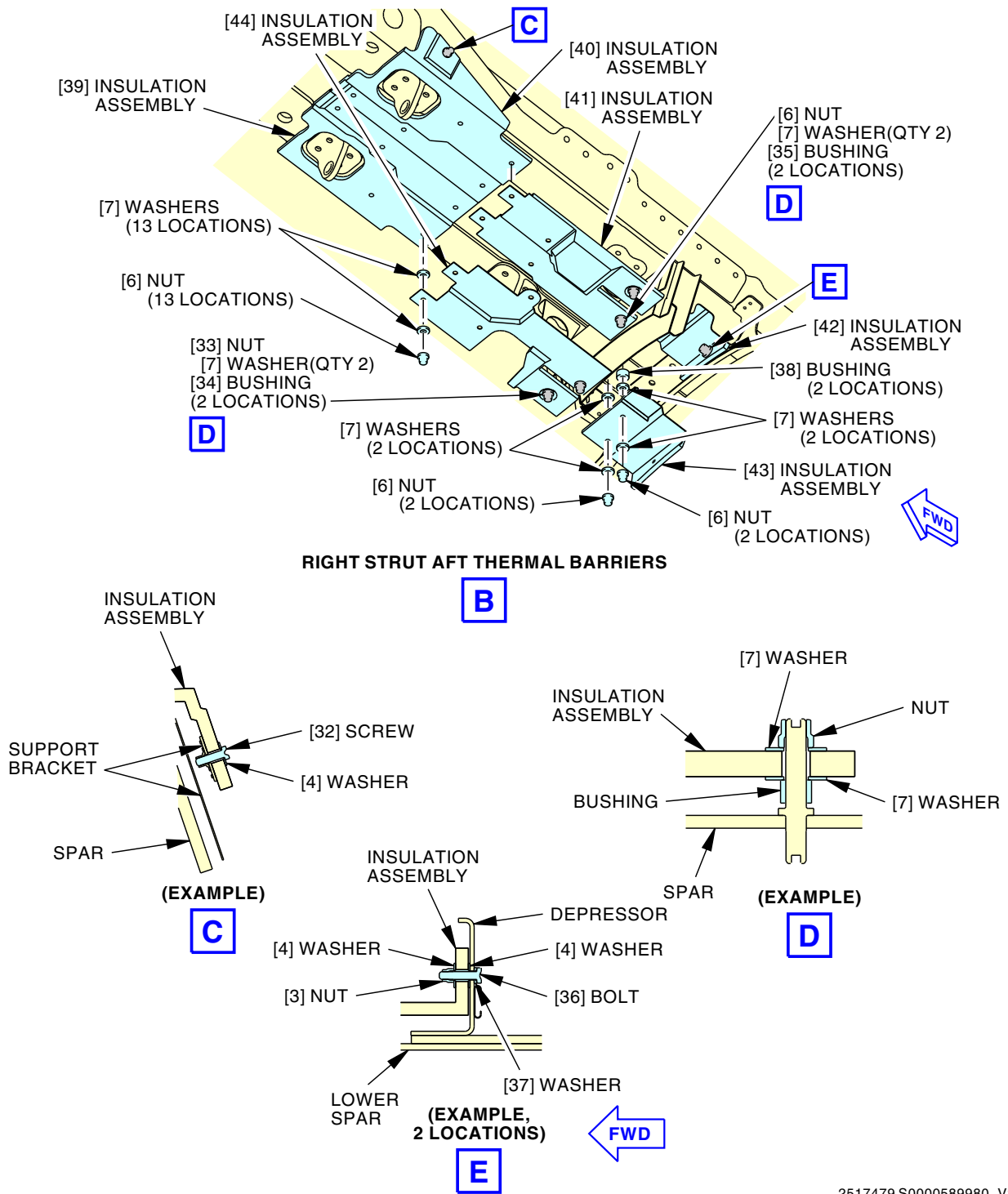
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Strut Aft Thermal Barrier Installation
Figure 403/54-54-01-990-803 (Sheet 2 of 2)

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TASK 54-54-01-400-803

7. Strut Aft Thermal Barrier Installation

(Figure 403)

A. General

- (1) This task gives the instructions to install the strut aft thermal barriers.
- (2) The strut aft thermal barriers are located aft of the aft engine mount.
- (3) The strut aft thermal barriers are also referred to as insulation assemblies in this procedure.
- (4) The strut aft insulation assemblies must be installed in the sequence indicated in the procedure.

B. References

Reference	Title
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
78-11-01-400-801-G00	Primary Nozzle Assembly Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
26	Insulation assembly	54-54-01-01-240	SIA ALL
27	Insulation assembly	54-54-01-01-235	SIA ALL
28	Insulation assembly	54-54-01-01-245	SIA ALL
29	Insulation assembly	54-54-01-01-255	SIA ALL
30	Insulation assembly	54-54-01-01-260	SIA ALL
31	Insulation assembly	54-54-01-01-250	SIA ALL
39	Insulation assembly	54-54-01-02-240	SIA ALL
40	Insulation assembly	54-54-01-02-235	SIA ALL
41	Insulation assembly	54-54-01-02-245	SIA ALL
42	Insulation assembly	54-54-01-02-255	SIA ALL
43	Insulation assembly	54-54-01-02-260	SIA ALL
44	Insulation assembly	54-54-01-02-250	SIA ALL

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Strut Aft Thermal Barrier Installation

SUBTASK 54-54-01-420-002

- (1) To install the aft insulation assemblies at engine position 2, do these steps (Figure 403, View B):

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CAUTION

MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (a) Make sure that you install the insulation assemblies in the correct sequence.
NOTE: The correct sequence to install the insulation assemblies from first to last is as follows: insulation assembly [40], insulation assembly [39], insulation assembly [41], insulation assembly [44].
- (b) Put the insulation assembly [40] in the correct position.
- (c) Install the washers [7] and nuts [6] that attach the insulation assembly [40].
- (d) Install the screw [32] and washer [4] that attach the insulation assembly [40] (Figure 403, View C).
- (e) Put the insulation assembly [39] in the correct position.
- (f) Install the washers [7] and nuts [6] that attach the insulation assembly [39].
- (g) Install the screw [32] and washer [4] that attach the insulation assembly [39] (Figure 403, View C).
- (h) Put the insulation assembly [41] in the correct position.
- (i) Install the washers [7] and nuts [6] that attach the insulation assembly [41].
- (j) Install the washers [7], bushing [34], nut [33], bushing [35], and nut [6] that attach the insulation assembly [41] (Figure 403, View D).
- (k) Put the insulation assembly [44] in the correct position.
- (l) Install the washers [7] and nuts [6] that attach the insulation assembly [44].
- (m) Install the washers [7], bushing [34], nut [33], bushing [35], and nut [6] that attach the insulation assembly [44] (Figure 403, View D).



CAUTION

MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (n) Make sure that you install the insulation assemblies in the correct sequence.
NOTE: The correct sequence to install the insulation assemblies from first to last is as follows: insulation assembly [42], insulation assembly [43].
- (o) Put the insulation assembly [42] in the correct position.
- (p) Install the washers [7], bushing [38], and nuts [6] that attach the insulation assembly [42].
- (q) Install the bolt [36], washer [37], washers [4], and nut [3] that attach the insulation assembly [42] (Figure 403, View E).
- (r) Put the insulation assembly [43] in the correct position.
- (s) Install the washers [7], bushing [38], and nuts [6] that attach the insulation assembly [43].
- (t) Install the bolt [36], washer [37], washers [4], and nut [3] that attach the insulation assembly [43] (Figure 403, View E).

SUBTASK 54-54-01-420-003

- (2) To install the aft insulation assemblies at engine position 1, do these steps (Figure 403, View A):

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CAUTION

MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (a) Make sure that you install the insulation assemblies in the correct sequence.
NOTE: The correct sequence to install the insulation assemblies from first to last is as follows: insulation assembly [27], insulation assembly [26], insulation assembly [28], insulation assembly [31].
- (b) Put the insulation assembly [27] in the correct position.
- (c) Install the washers [7] and nuts [6] that attach the insulation assembly [27].
- (d) Install the screw [32] and washer [4] that attach the insulation assembly [27] (Figure 403, View C).
- (e) Put the insulation assembly [26] in the correct position.
- (f) Install the washers [7] and nuts [6] that attach the insulation assembly [26].
- (g) Install the screw [32] and washer [4] that attach the insulation assembly [26] (Figure 403, View C).
- (h) Put the insulation assembly [28] in the correct position.
- (i) Install the washers [7] and nuts [6] that attach the insulation assembly [28].
- (j) Install the washers [7], bushing [34], nut [33], bushing [35], and nut [6] that attach the insulation assembly [28] (Figure 403, View D).
- (k) Put the insulation assembly [31] in the correct position.
- (l) Install the washers [7] and nuts [6] that attach the insulation assembly [31].
- (m) Install the washers [7], bushing [34], nut [33], bushing [35], and nut [6] that attach the insulation assembly [31] (Figure 403, View D).



CAUTION

MAKE SURE THAT YOU INSTALL THE INSULATION ASSEMBLIES IN THE CORRECT SEQUENCE. IF YOU INSTALL THE INSULATION ASSEMBLIES INCORRECTLY, HEAT FROM THE ENGINE CAN CAUSE DAMAGE TO THE STRUT.

- (n) Make sure that you install the insulation assemblies in the correct sequence.
NOTE: The correct sequence to remove the insulation assemblies from first to last is as follows: insulation assembly [29], insulation assembly [30].
- (o) Put the insulation assembly [29] in the correct position.
- (p) Install the washers [7], bushing [38], and nuts [6] that attach the insulation assembly [29].
- (q) Install the bolt [36], washer [37], washers [4], and nut [3] that attach the insulation assembly [29] (Figure 403, View E).
- (r) Put the insulation assembly [30] in the correct position.
- (s) Install the washers [7], bushing [38], and nuts [6] that attach the insulation assembly [30].
- (t) Install the bolt [36], washer [37], washers [4], and nut [3] that attach the insulation assembly [30] (Figure 403, View E).

F. Put the Strut Back to its Usual Condition

SUBTASK 54-54-01-410-001

- (1) Do this task: Primary Nozzle Assembly Installation, TASK 78-11-01-400-801-G00.

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SUBTASK 54-54-01-440-001

(2) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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STRUT THERMAL BARRIERS - INSPECTION/CHECK

1. General

- A. This procedure has this task:
(1) Strut thermal barriers inspection.

TASK 54-54-01-200-801

2. Strut Thermal Barriers Inspection

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. **General**

- (1) This task has the steps to inspect the strut thermal barriers.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-54-01 P/B 401	STRUT THERMAL BARRIERS - REMOVAL/INSTALLATION

C. **Location Zones**

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. **Prepare for the Inspection**

SUBTASK 54-54-01-040-008

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

E. **Strut Thermal Barriers Inspection**

SUBTASK 54-54-01-210-001

- (1) Make sure that the soft thermal barriers [1] and hard thermal barriers [2] are not damaged or missing.

SUBTASK 54-54-01-960-001

- (2) Replace all strut thermal barriers that are damaged or missing. (STRUT THERMAL BARRIERS - REMOVAL/INSTALLATION, PAGEBLOCK 54-54-01/401)

F. **Put the Airplane Back to Its Usual Condition**

SUBTASK 54-54-01-440-002

- (1) If no additional maintenance operations are necessary, do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

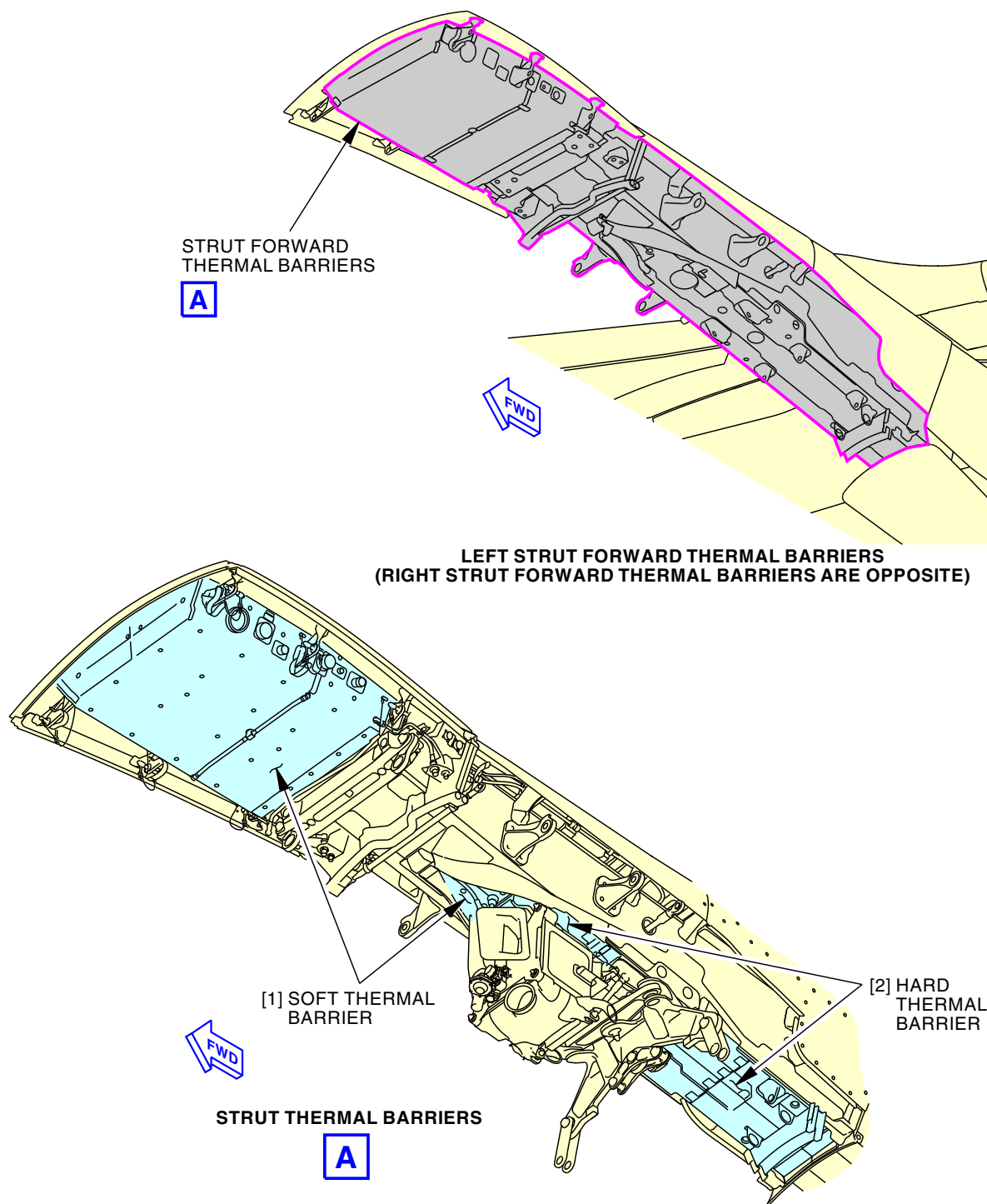
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Strut Thermal Barriers - Inspection
Figure 601/54-54-01-990-806

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STRUT THERMAL BARRIERS - REPAIRS

1. General

A. This procedure has these tasks:

- (1) Strut thermal barrier repair on-aircraft
- (2) Strut thermal barrier repair off-aircraft.

TASK 54-54-01-300-801

2. Strut Thermal Barrier Repair On-Aircraft

A. General

- (1) Punctures, creases, tears, cracks and scores sustained by dimpled foil skins on strut thermal barriers are temporary repaired by sealing with RTV material when on the airframe.
- (2) This task is a temporary procedure.
 - (a) Strut thermal barriers repaired with this method must be permanently repaired within 500 hours, do this task: Strut Thermal Barrier Repair Off-Aircraft, TASK 54-54-01-300-802.

B. Consumable Materials

Reference	Description	Specification
A00081	Adhesive - Silicone Rubber - RTV 106	BAC5010 Type 74
A00281	Adhesive - Dow Corning 3145 RTV	MIL-A-46146 (BAC5010 Type 79)
A50154	Silcoset 152 - cold cure, white, silicone compound	
B50118	Solvent - General	BAC5750
C00954	Primer - Adhesive Bonding - SS4004P RTV	BAC5010 Type 74
G00834	Cloth - Lint-free Cotton	

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Repair

SUBTASK 54-54-01-940-001

- (1) If the damage is within these limits, the strut thermal barrier can be repaired:
 - (a) A hole in the hot or cold face sheet is 0.25 in. (6.35 mm) or less in diameter.
 - (b) A gash in the hot or cold face sheet is 4 in. (102 mm) or less in length.
 - (c) There is a minimum surface distance that is not damaged of 0.5 in. (12.7 mm) or more around each damaged area in all directions.
 - (d) The damaged area is 0.5 in. (12.7 mm) or more from a grommet, sharp bend, attaching part or edge.

SUBTASK 54-54-01-210-002

- (2) Visually examine the insulation material to make sure that there are no voids in the damaged area and no signs of fluid ingress.

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- (a) If there is evidence of voids or fluid ingress within the insulation material, the CRES blanket must be replaced.

SUBTASK 54-54-01-110-001

- (3) Carefully clean and degrease around the damaged area with general solvent, B50118, on a clean lint-free cloth, G00834.
 - (a) Make sure that the solvent does not get into the insulation material.

SUBTASK 54-54-01-370-001

- (4) Prime the metallic surface with SS4004P RTV primer, C00954.

SUBTASK 54-54-01-350-001

- (5) Use one of these RTV materials to bond a layer of CRES foil to the damaged area:
 - (a) RTV 106 adhesive, A00081
 - (b) Dow Corning 3145 RTV adhesive, A00281
 - (c) Silcoset 152 adhesive, A50154.

SUBTASK 54-54-01-350-002

- (6) Apply the RTV material to the damaged skin in enough quantity to make sure all holes in the skin are covered.
 - (a) Smooth over with a suitable spatula to make sure that the RTV material overlaps the edge of the damaged skin by approximately ½ in. (13 mm) and to a maximum depth of approximately ⅛ in. (3 mm).

SUBTASK 54-54-01-350-003

- (7) Push a CRES patch, which is primed and overlaps the damaged area by ½ in. (13 mm), into the RTV material and hold in position until the RTV material cures and the CRES patch is bonded in position.

SUBTASK 54-54-01-940-002

- (8) As soon as the strut thermal barrier is removed from the aircraft, the RTV material should be removed and a metallic patch welded within 500 hours (TASK 54-54-01-300-802).

NOTE: This is considered a temporary repair.

———— **END OF TASK** ————

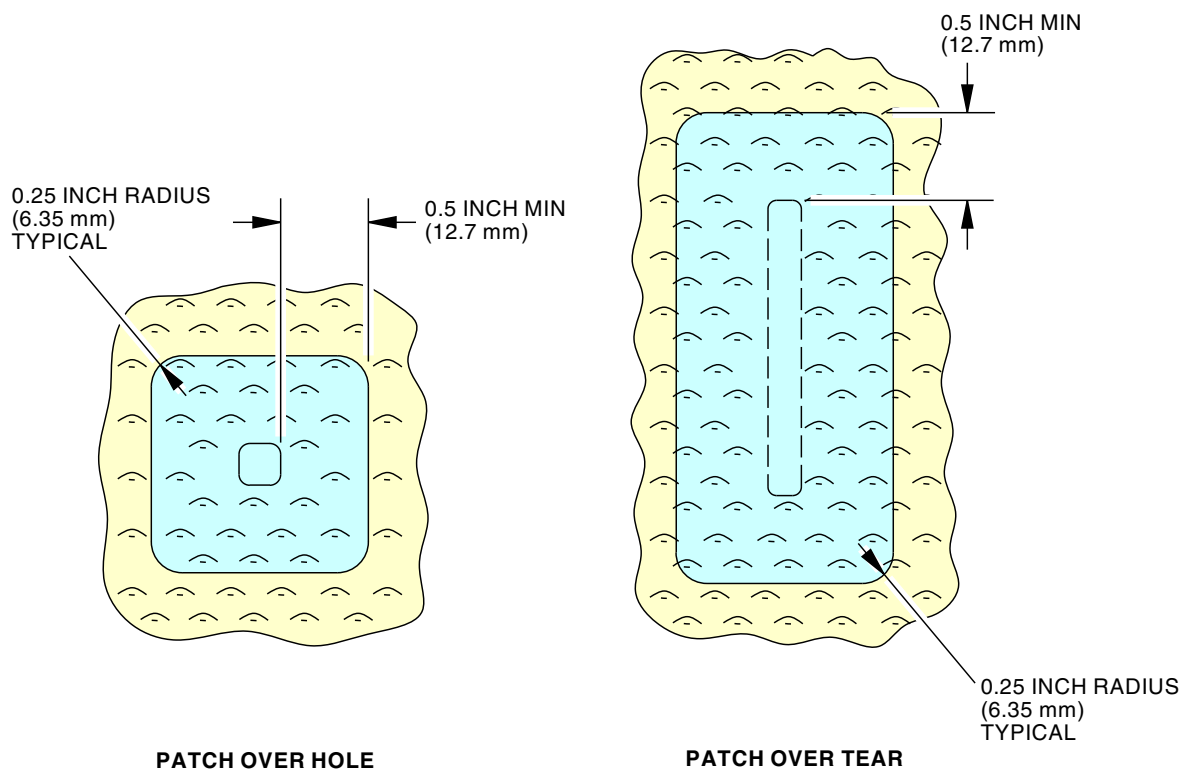
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Thermal Barrier Repair Patch
Figure 801/54-54-01-990-804

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TASK 54-54-01-300-802

3. **Strut Thermal Barrier Repair Off-Aircraft**

A. General

- (1) Punctures, creases, tears, cracks and scores sustained by dimpled foil skins on the strut thermal barriers are permanently repaired by covering the area with a patch of dimpled foil which is resistance welded to the dimpled foil skin when the strut thermal barrier is off the airframe.
- (2) This repair is a permanent repair.

B. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
G00834	Cloth - Lint-free Cotton	

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Repair

SUBTASK 54-54-01-210-003

- (1) If the damage is within these limits, the thermal barriers can be repaired.
 - (a) A hole in the hot or cold face sheet is $\frac{1}{4}$ in. (6 mm) or less in diameter.
 - (b) A gash in the hot or cold face sheet is 4 in. (102 mm) or less in length.
 - (c) There is a minimum surface distance that is not damaged of $\frac{1}{2}$ in. (13 mm) or more around each damaged area in all directions.
 - (d) The damaged area is $\frac{1}{2}$ in. (13 mm) or more from a grommet, sharp bend, attaching part or edge.

SUBTASK 54-54-01-350-004

- (2) Trim dimpled foil skin around the area of damage to remove ragged edges.
 - (a) For a clean crack or gash, use a sharp object and pierce two stop holes approximately $\frac{1}{16}$ in. (2 mm) in diameter at each end, approximately $\frac{1}{16}$ in. (2 mm) from each end of the crack, to prevent spreading.

SUBTASK 54-54-01-210-004

- (3) Visually examine the insulation material to make sure there are no voids in the damaged area and no signs of fluid ingress.
 - (a) If there is evidence of voids or fluid ingress within the insulation, the CRES blanket must be replaced.

E. Strut Thermal Barrier Repair Off-Aircraft

SUBTASK 54-54-01-350-005

- (1) Cut a patch from the clean dimpled foil of sufficient size to overlap area of damage by $\frac{1}{2}$ in. (13 mm) (Figure 801).

NOTE: Patches should not overlap.

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SUBTASK 54-54-01-110-002

- (2) Clean the area of damage with general solvent, B50118, on a clean lint-free cloth, G00834.
 - (a) Make sure that the solvent does not get into the insulation material.

SUBTASK 54-54-01-940-003

- (3) Set the welding machine with scrap foil.
 - (a) Sandwich two foils between the electrode and earth plate with enough force to push the foils into contact.

SUBTASK 54-54-01-310-001

- (4) Operate the gun, then do a check of the weld by pulling the two foils apart.

NOTE: A good weld should put a hole in either of the two foils.

 - (a) If this does not occur, or the electrode sticks to the foils, the set should be adjusted in accordance with the manufacturers instructions.

SUBTASK 54-54-01-940-004

- (5) Put the patch in position.
 - (a) Temporarily hold the patch in position with adhesive tape if it is necessary.

SUBTASK 54-54-01-310-002

- (6) Tack the patch to the skin by holding earth on skin adjacent to patch and welding on patch approximately 0.040 in. (1 mm) in from the edge (use the same technique as used when setting machine) repeat at approximately 1 in. (25 mm) pitch around edge of patch (Figure 802).

SUBTASK 54-54-01-310-003

- (7) Fully weld the patch to the skin by welding at approximately 0.040 in. (1 mm) pitch around the edge of the patch.

SUBTASK 54-54-01-350-006

- (8) Use a blunt tool and smooth down all protruding edges.

———— **END OF TASK** ————

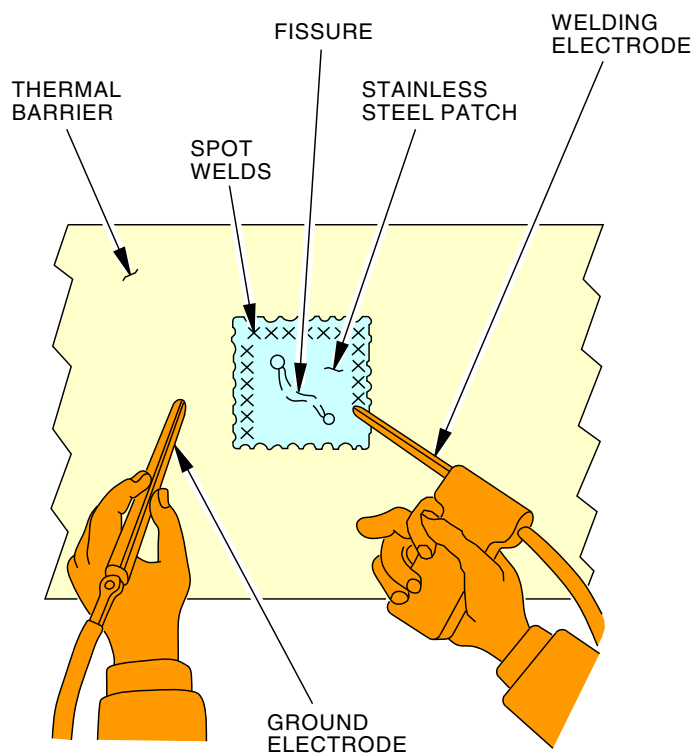
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Thermal Barrier Repair Welding Method
Figure 802/54-54-01-990-805

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AFT PYLON SEAL REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the aft pylon seal
 - (2) An installation of the aft pylon seal.

TASK 54-54-02-000-801

2. Aft Pylon Seal Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove the aft pylon seals.

B. References

Reference	Title
71-11-04-010-801-G00	Open the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-801-G00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-54-02-010-001

- (1) To get access to the seal [1] or seal [2], do these tasks:
 - Open the Fan Cowl Panels (Selection), TASK 71-11-04-010-801-G00
 - Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-G00.

E. Aft Pylon Seal Removal

SUBTASK 54-54-02-020-001

- (1) Do these steps to remove the seal [1] or seal [2]:
 - (a) Remove sealant from the seal [1] or seal [2] above the heads of the screws [3].
 - (b) Break sealant between the seal [1] or seal [2] and structure.
 - (c) Remove the nuts [5], washers [4], and screws [3] that attach the seal [1] or seal [2] to the fireseal depressor.
 - (d) Remove and discard the seal [1] or seal [2].

SUBTASK 54-54-02-110-001

- (2) Remove any remaining sealant from the structure.

———— **END OF TASK** ————

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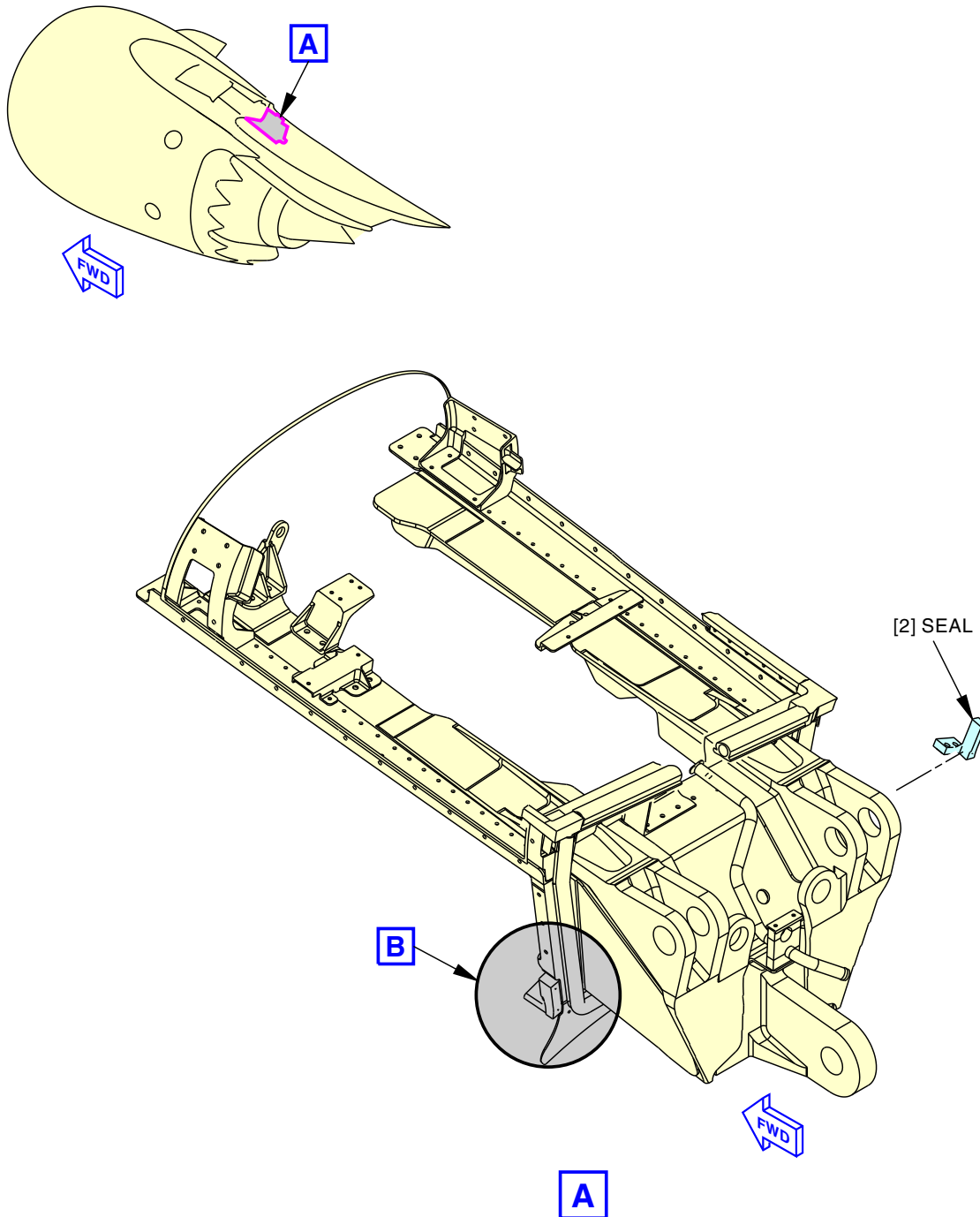
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Aft Pylon Seal Installation
Figure 401/54-54-02-990-801 (Sheet 1 of 2)

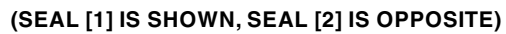
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TASK 54-54-02-400-801

3. **Aft Pylon Seal Installation**

(Figure 401)

A. General

(1) This task gives the instructions to install the aft pylon seals.

B. References

Reference	Title
71-11-04-410-801-G00	Close the Fan Cowl Panels (Selection) (P/B 201)
78-31-00-010-802-G00	Close the Thrust Reverser (Selection) (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A00803	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63 Type I

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Seal	54-55-51-01-125	SIA ALL
2	Seal	54-55-51-01-130	SIA ALL

E. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Aft Pylon Seal Installation

SUBTASK 54-54-02-390-001

(1) Apply a thin continuous coat of sealant, A00160, to one or both bonding surfaces of the new seal [1] or new seal [2] and strut fairing (View A-A, Figure 401).

SUBTASK 54-54-02-420-001

(2) Install the seal [1] or seal [2] on the fireseal depressor.

(a) Mate the mating surfaces of the seal [1] or seal [2] and aft fairing and apply sufficient pressure to force out at inclusions.

1) Hold in place without applying clamping pressure.

2) Let sealant cure under contact pressure.

a) If sealant, A00803, is used, let sealant cure for 24 hours at 60°F (16°C) - 80°F (27°C) temperature.

NOTE: The cure time may be accelerated by curing under contact pressure at up to 120 F for 4 hours minimum.

SUBTASK 54-54-02-420-002

(3) Install the screws [3], washers [4], and nuts [5] that attach the seal [1] or seal [2] to the fireseal depressor.

SUBTASK 54-54-02-390-002

(4) Apply sealant, A00160, as follows (View B, Figure 401):

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- (a) Injection seal voids between the seal [1] or seal [2] and fireseal depressor.
- (b) Apply a fillet seal to the joint where the seal [1] or seal [2] is attached to the structure.
- (c) Seal the void flush above the heads of the screws [3].

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-02-410-001

- (1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-802-G00.

SUBTASK 54-54-02-410-002

- (2) Do this task: Close the Fan Cowl Panels (Selection), TASK 71-11-04-410-801-G00.

———— **END OF TASK** ————

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STRUT DRAINS - MAINTENANCE PRACTICES

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) Condensate drain cleaning
 - (2) Operational test of the strut fan cowl support beam drain
 - (3) Functional test of the strut drain
 - (4) Functional test of the strut seal plane access panels.

TASK 54-55-01-100-801

2. Condensate Drain Cleaning

(Figure 201)

A. General

- (1) This task has the steps to clean the condensate drains of any blockages.
- (2) This procedure is for rigid drain tubes only. If soft rubber drain tubes are found to be coked, damaged or blocked, replace the drain tube assembly.
- (3) Each strut has two condensate drain outlets. A single drain outlet is located below each aft fairing side access panel (also called, strut access panel).

B. References

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1059	Platform - Engine and Strut Access
STD-1174	Drain Snake

D. Location Zones

Zone	Area
410	Subzone - Engine 1
420	Subzone - Engine 2
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

E. Prepare to Clean the Drains

SUBTASK 54-55-01-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-01-480-001

- (2) Put the platform, STD-1059, in position.

F. Condensate Drain Cleaning

SUBTASK 54-55-01-210-001

- (1) Use Figure 201 to find the condensate drain tube(s) that you will clean.

SUBTASK 54-55-01-160-001

- (2) To make sure that no blockages exist, do these steps:

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- (a) Insert a pipe cleaning brush or a drain snake, STD-1174, into the outlet to remove all possible or known blockages.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-160-002

- (1) Make sure that the work area is clean, and remove all tools and other items.

SUBTASK 54-55-01-080-001

- (2) Remove the platform, STD-1059.

SUBTASK 54-55-01-440-001

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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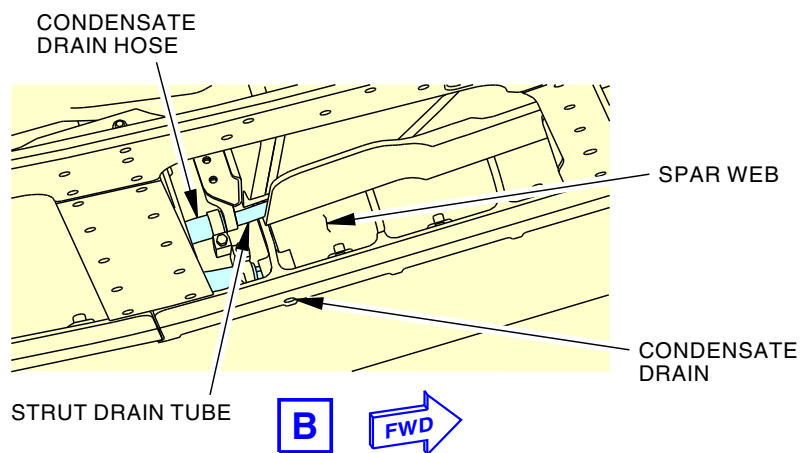
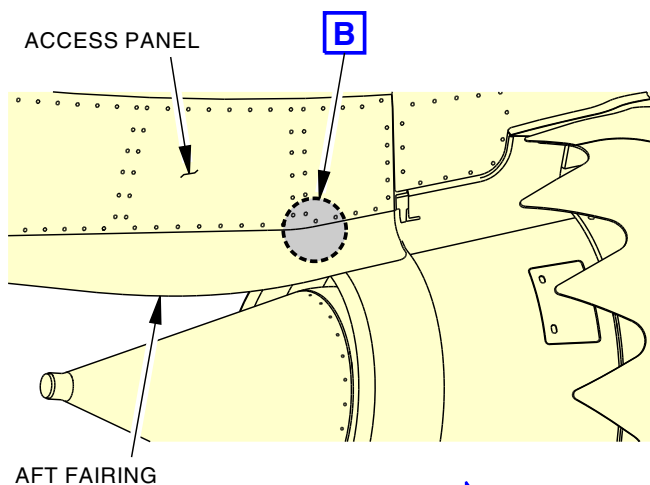
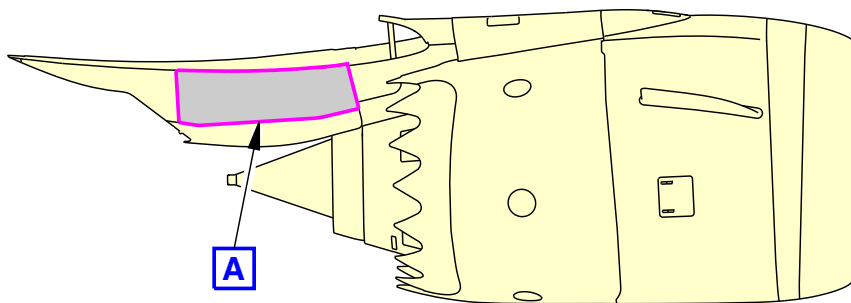
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Condensate Drain Maintenance
Figure 201/54-55-01-990-801

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TASK 54-55-01-200-801

3. **Strut Fan Cowl Support Beam Drain - Operational Test**

Figure 202

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives steps to do an operational test of the fan cowl support beam drain.

B. Tools/Equipment

Reference	Description
STD-1280	Source - Air, Regulated, Dry Filtered, 0-30 PSIG
STD-5497	Plug/Cap - To block each port

C. Location Zones

Zone	Area
400	Powerplant and Nacelle Struts

D. Access Panels

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

E. Prepare for the Operational Test

SUBTASK 54-55-01-010-001

- (1) Open these access panels:

Number	Name/Location
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

F. Strut Fan Cowl Support Beam Drain Operational Test

SUBTASK 54-55-01-210-002

- (1) Make sure that the fan cowl support beam and drain inlets are free of unwanted material.

SUBTASK 54-55-01-710-001

- (2) Use a Plug/Cap, STD-5497, to plug one drain inlet.

SUBTASK 54-55-01-710-002



BEFORE YOU USE COMPRESSED AIR, PUT ON GOGGLES FOR EYE PROTECTION. DO NOT POINT THE NOZZLE AT OTHER PERSONNEL. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.

- (3) Use a 0-30 psig dry filtered regulated air source, STD-1280, to blow into the top of the applicable drain inlet.

SUBTASK 54-55-01-710-003

- (4) Make sure that the air flows freely through the drain line.

SUBTASK 54-55-01-710-004

- (5) Remove the Plug/Cap, STD-5497.

SUBTASK 54-55-01-710-005

- (6) Use a Plug/Cap, STD-5497, to plug the other drain inlet.

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SUBTASK 54-55-01-710-006



WARNING

BEFORE YOU USE COMPRESSED AIR, PUT ON GOGGLES FOR EYE PROTECTION. DO NOT POINT THE NOZZLE AT OTHER PERSONNEL. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.

- (7) Use a 0-30 psig dry filtered regulated air source, STD-1280, to blow into the top of the applicable drain inlet.

SUBTASK 54-55-01-710-007

- (8) Make sure that the air flows freely through the drain line.

SUBTASK 54-55-01-710-008

- (9) Remove the Plug/Cap, STD-5497.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-410-001

- (1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2

————— **END OF TASK** —————

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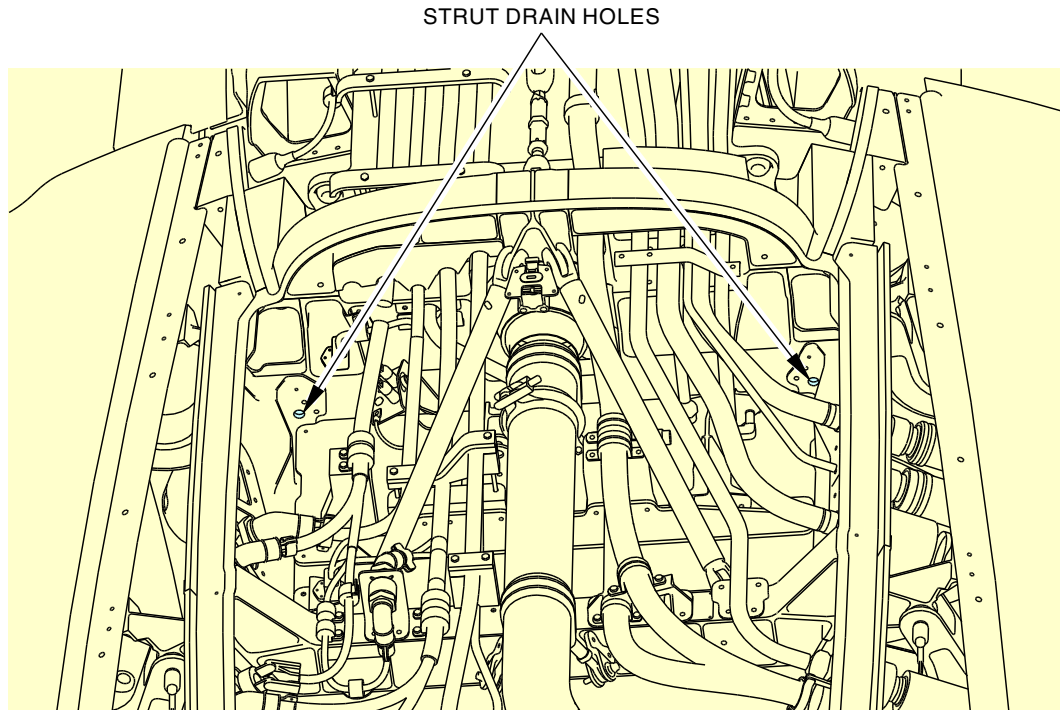
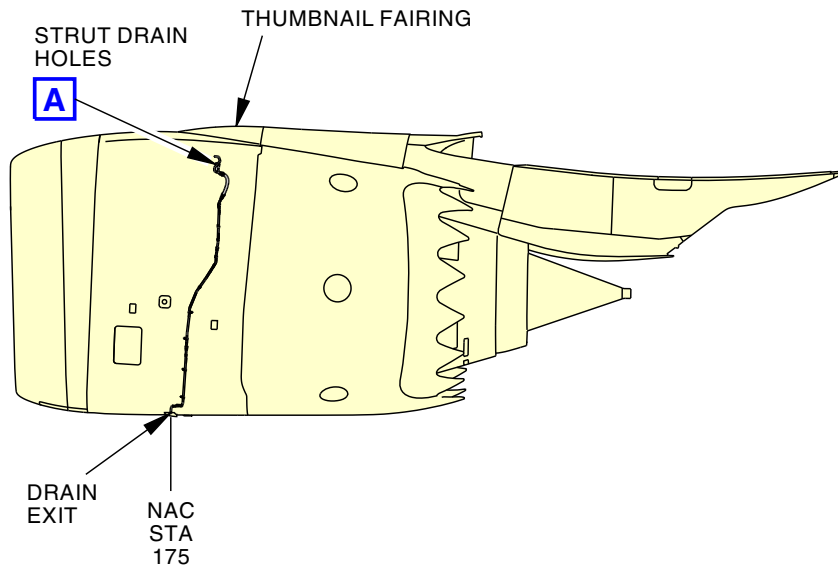
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NOTE:
SOME SYSTEMS NOT SHOWN
FOR CLARITY.

STRUT DRAIN HOLES
(EXAMPLE)



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Fan Cowl Support Beam - Drain
Figure 202/54-55-01-990-802

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TASK 54-55-01-720-801

4. Strut Drain - Functional Test

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives the instructions to do a functional test of the strut drain.

B. References

Reference	Title
24-22-00-860-802	Remove Electrical Power (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
54-55-02-220-801	Aft Fairing Drain Clearance Check (P/B 601)

C. Tools/Equipment

Reference	Description
STD-77	Air Source, Regulated - Dry Filtered, 0-50 psig
STD-1155	Funnel - Long Neck
STD-1280	Source - Air, Regulated, Dry Filtered, 0-30 PSIG
STD-13465	Bucket - 2.5 Gallon Capacity
STD-13870	.75 inch O.D., clear vinyl hose

D. Consumable Materials

Reference	Description	Specification
G50316	Cloth - Clean, Dry, Lint-free, White, Cotton	

E. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
434AR	Aft Strut Fairing, Right Panel, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2
444AL	Aft Strut Fairing, Left Panel, Strut 2

G. Prepare for the Functional Test

SUBTASK 54-55-01-010-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-01-040-002

(2) Remove electrical power (TASK 24-22-00-860-802).

SUBTASK 54-55-01-010-003

(3) Remove these aft fairing access panels, refer to Aft Fairing Access Panel Removal, TASK 54-52-06-000-801:

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- (a) Remove these access panels:

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-55-01-010-005

- (4) Remove these FWD (Forward) fairing access panels:

- (a) Remove these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-55-01-210-003

- (5) Make sure that the internal surface of the strut and drain inlet is free of material that can cause a blockage in the drain.

SUBTASK 54-55-01-840-001

- (6) Put a bucket, STD-13465, or equivalent container, below the aft drain.

SUBTASK 54-55-01-480-002

- (7) Put a .75 inch O.D. hose, STD-13870, on the drain tube to point the water into the bucket, STD-13465.

H. Strut Drain Functional Test

SUBTASK 54-55-01-200-001

- (1) Use a long neck funnel, STD-1155, to pour 1 gallon (128 fl-oz (3.8 l)) of clean water along the aft end of the internal floor of the strut spar.

NOTE: Pour the water as close to the drain as possible.

- (a) Make sure that the water flows freely from the aft drain.

SUBTASK 54-55-01-200-002

- (2) After 3 minutes, make sure that you collect 122 fl-oz (3.6 l) or more of water from the drain.

SUBTASK 54-55-01-720-001

- (3) Use a 0-30 psig dry filtered regulated air source, STD-1280, at the strut drain inlet to blow all remaining water out of the strut drain, into the bucket, STD-13465.

SUBTASK 54-55-01-210-004

- (4) Make sure that there are no leaks at the strut drain hose to strut drain line fitting.

SUBTASK 54-55-01-910-001

- (5) Remove remaining water from the strut with a cotton cloth, G50316.

SUBTASK 54-55-01-910-002

- (6) Use a regulated air source, STD-77 or (0-345 kPa), to dry the internal surfaces of the strut.

SUBTASK 54-55-01-220-001

- (7) Do this task: Aft Fairing Drain Clearance Check, TASK 54-55-02-220-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-410-002

- (1) Install these aft fairing access panels, refer to Aft Fairing Access Panel Installation, TASK 54-52-06-400-801:

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- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-55-01-410-004

- (2) Install these FWD fairing access panels:

- (a) Install these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-55-01-440-002

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

TASK 54-55-01-720-802

5. Strut Seal Plane Access Panels - Functional Test

A. General

- (1) This task has the steps to do a functional test of the strut seal plane access panels.

B. References

<u>Reference</u>	<u>Title</u>
08-20-02-580-801	Level the Airplane With a Plumb Bob and Inclinometers (P/B 201)
08-20-03-580-801	Level the Airplane With a Attitude Gage (P/B 201)
24-22-00-860-802	Remove Electrical Power (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)

C. Tools/Equipment

<u>Reference</u>	<u>Description</u>
STD-77	Air Source, Regulated - Dry Filtered, 0-50 psig
STD-1154	Container - 5 Gallon (19 Liter)
STD-3926	Water Source - Cold, Regulated, 0 to 60 PSIG
STD-13870	.75 inch O.D., clear vinyl hose

D. Consumable Materials

<u>Reference</u>	<u>Description</u>	<u>Specification</u>
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)
G50151	Tissue - Lens (or equivalent), Dry Towelette	

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E. Location Zones

Zone	Area
430	Subzone - Engine 1, Nacelle Strut
440	Subzone - Engine 2, Nacelle Strut

F. Access Panels

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

G. Prepare for the Functional Test

SUBTASK 54-55-01-840-002

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-01-860-001

- (2) Remove electrical power (TASK 24-22-00-860-802).

SUBTASK 54-55-01-860-002

- (3) Level the airplane, ± 0.5 degrees (TASK 08-20-02-580-801 or TASK 08-20-03-580-801).

SUBTASK 54-55-01-010-004

- (4) Open these access panels:

Number	Name/Location
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-55-01-210-005

- (5) Make sure that the internal surface of the strut is free of material that can cause a blockage in the drain.

SUBTASK 54-55-01-210-006

- (6) Make sure that the condensate drains are clear.

- (a) If the condensate drains are not clear, do this task: Condensate Drain Cleaning, TASK 54-55-01-100-801.

SUBTASK 54-55-01-480-003

- (7) Put a 5 gallon (19 liter) container, STD-1154, or equivalent container, below the aft drain.

SUBTASK 54-55-01-480-004

- (8) Put a .75 inch O.D. hose, STD-13870, or equivalent, on the drain tube to point the water into the 5 gallon (19 liter) container, STD-1154.

SUBTASK 54-55-01-480-005

- (9) Put tissue, G50151, under access panels 433CT, 433DT, 443CT, 443DT for the applicable strut, one per panel.

NOTE: Paper towel can be placed prior to panel installation or inserted through side access panels.

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H. Functional Test

SUBTASK 54-55-01-200-003

- (1) At a rate of 0.5 gal (1.89 l) per minute, spray each access panel for the applicable strut (433CT, 433DT, 443CT, 443DT) in turn for one minute, for a total of 16 minutes, with a 0 to 60 PSIG regulated cold water source, STD-3926.

NOTE: Spray each access panel for a total of 4 minutes (four 1 minute intervals).

- (a) Make sure that you wet all of the top surface of the strut upper spar access panels and their edges.
- (b) Make sure that the water flows freely from the aft drain.
- (c) Stop the procedure to drain the 5 gallon (19 liter) container, STD-1154, when it is necessary.

SUBTASK 54-55-01-200-004

- (2) Make sure that no water comes out of the condensate drains.

NOTE: If water comes out of the condensate drain, then there is a leak at one of the access panels.

SUBTASK 54-55-01-200-005

- (3) Retrieve tissue, G50151, from the inside of the torque box reaching through side access holes.

- (a) Make sure that all paper towels are removed from strut support prior to closing side access panels.

NOTE: If either of the paper towels is wet, then there is a leak at one of the access panels.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-910-003

- (1) Remove remaining water from the strut with cotton wiper, G00034.

SUBTASK 54-55-01-910-004

- (2) Use a regulated air source, STD-77, or (0-345 kPa), to dry the internal surfaces of the strut.

SUBTASK 54-55-01-410-003

- (3) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431CL	Forward Strut Fairing, Left Overwing Fairing, Strut 1
431CR	Forward Strut Fairing, Right Overwing Fairing, Strut 1
441CL	Forward Strut Fairing, Left Overwing Fairing, Strut 2
441CR	Forward Strut Fairing, Right Overwing Fairing, Strut 2

SUBTASK 54-55-01-440-003

- (4) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— END OF TASK —————

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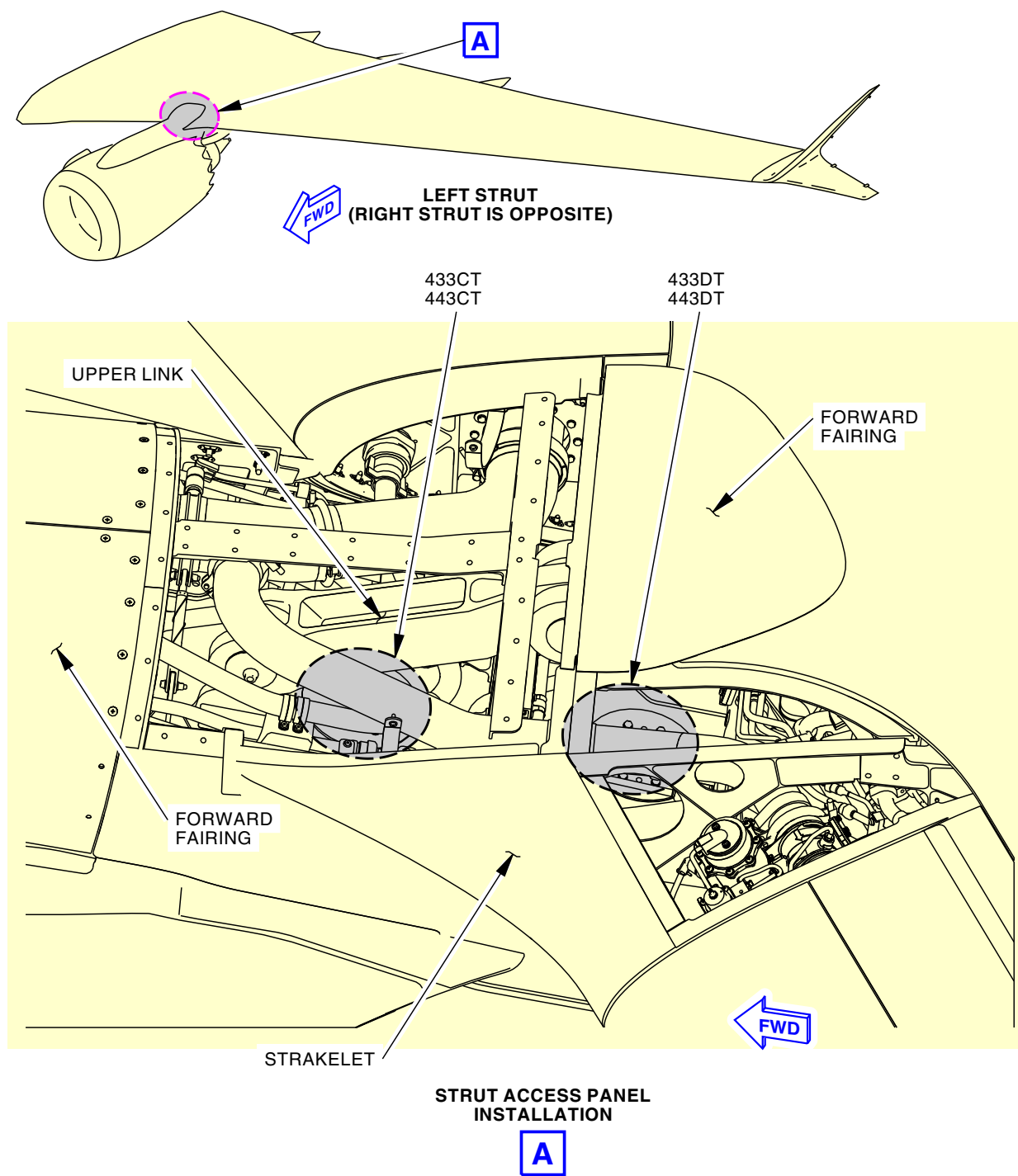
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Strut Seal Plane Access Panels- Functional Test
Figure 203/54-55-01-990-803

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AFT FAIRING STRUT DRAINS - MAINTENANCE PRACTICES

1. **General**

- A. This procedure gives instructions on how to clean the aft fairing drain tubes and drain fitting if they become clogged.
- B. This procedure has this task:
 - (1) Aft fairing drain tube and drain fitting cleaning.
- C. The drain tubes carry fluid leakage (fuel, oil, hydraulic fluid, or water) away from a possible leak source to remove it from the nacelle strut compartment.

TASK 54-55-02-100-801

2. **Aft Fairing Drain Tube and Drain Fitting Cleaning**

A. **General**

- (1) This procedure is for rigid drain tubes only. If soft rubber drain tubes are coked, damaged or blocked, replace the drain tube assembly.
- (2) Do this task for the aft fairing drain tube when there is a possible blockage.
- (3) The aft fairing drain tube has one inlet, and one outlet.

B. **References**

Reference	Title
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. **Tools/Equipment**

Reference	Description
STD-77	Air Source, Regulated - Dry Filtered, 0-50 psig
STD-1059	Platform - Engine and Strut Access
STD-1174	Drain Snake
STD-7388	Brush - Tube

D. **Location Zones**

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

E. **Access Panels**

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

F. **Prepare to Clean the Aft Fairing Drain Tube and Drain Fitting**

SUBTASK 54-55-02-040-001

- (1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-02-480-001

- (2) Put the platform, STD-1059, in its position.

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SUBTASK 54-55-02-010-001

(3) To open the applicable aft fairing access panels, do this task: Aft Fairing Access Panel Removal, TASK 54-52-06-000-801.

(a) Open the applicable access panels:

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

G. Aft Fairing Drain Tube Cleaning

SUBTASK 54-55-02-160-001

(1) Do these steps to make sure that there is no blockage in the aft fairing drain tube:

- Disconnect the strut drain hose from the forward end of the aft fairing drain tube (Figure 201).
- Use a regulated air source, STD-77, to supply 35 $\pm$ 5 psig (241 $\pm$ 35 kPa) air pressure to the aft fairing drain tube inlet.
- Make sure that there is airflow through the aft fairing drain tube from the inlet to the outlet.
- Remove the air pressure.

SUBTASK 54-55-02-160-002

(2) If there is decreased airflow, do these steps to remove the blockage:

- Remove the blockage as much as possible with a drain snake, STD-1174.
- Use a regulated air source, STD-77, to supply 35 $\pm$ 5 psig (241 $\pm$ 35 kPa) air pressure to the aft fairing drain tube inlet.
- Make sure that there is airflow through the aft fairing drain tube from the inlet to the outlet.
- Remove the air pressure.
- Follow the above steps again until airflow is present.
- Put a funnel into the inlet of the aft fairing drain tube.
- Pour hot, soapy water into the funnel to remove remaining blockage.
- Pour hot, clean water into the funnel to flush out the aft fairing drain tube.
- Remove the funnel from the inlet end of the aft fairing drain tube.
- If the subsequent maintenance steps will not be done on the aft fairing drain fitting, reconnect the strut drain hose to the inlet end of the aft fairing drain tube.

H. Aft Fairing Drain Fitting Cleaning

SUBTASK 54-55-02-100-001

(1) To remove blockage and clean the aft fairing drain fitting, do these steps (Figure 202):

- Install a plug into the forward end of the aft fairing drain tube.
- Remove blockage in the aft fairing drain inlet with a tube brush, STD-7388.

NOTE: Blockage will usually occur near the inlet end of the drain where the aft fairing drain tube goes in, but also make sure that the bottom-side of the aft fairing drain is clean.

- Pour hot, soapy water into the drain fitting inlet to remove remaining loose particles.
- Flush the drain with hot, clean water.

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- (e) Remove the plug from the forward end of the aft fairing drain tube.
- (f) Reconnect the strut drain hose to the forward end of the aft fairing drain tube (Figure 201).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-02-160-003



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, DAMAGE TO THE STRUT CAN OCCUR.

- (1) Make sure that the work area is clean and remove all tools and other items.

SUBTASK 54-55-02-410-001

- (2) To close the aft fairing access door, do this task: Aft Fairing Access Panel Installation, TASK 54-52-06-400-801.

- (a) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-55-02-080-001

- (3) Remove the platform, STD-1059.

SUBTASK 54-55-02-440-001

- (4) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

———— **END OF TASK** ————

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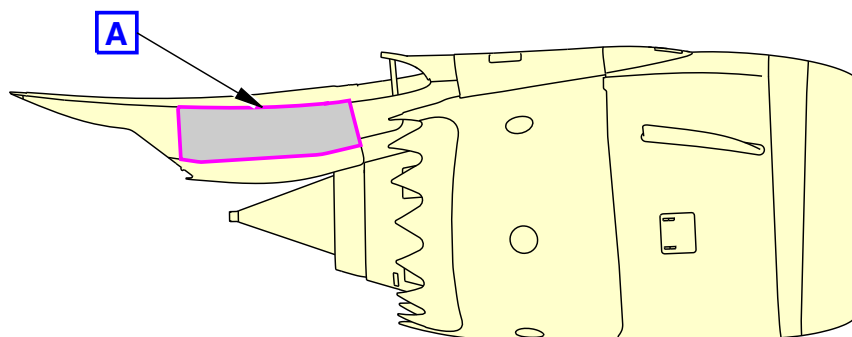
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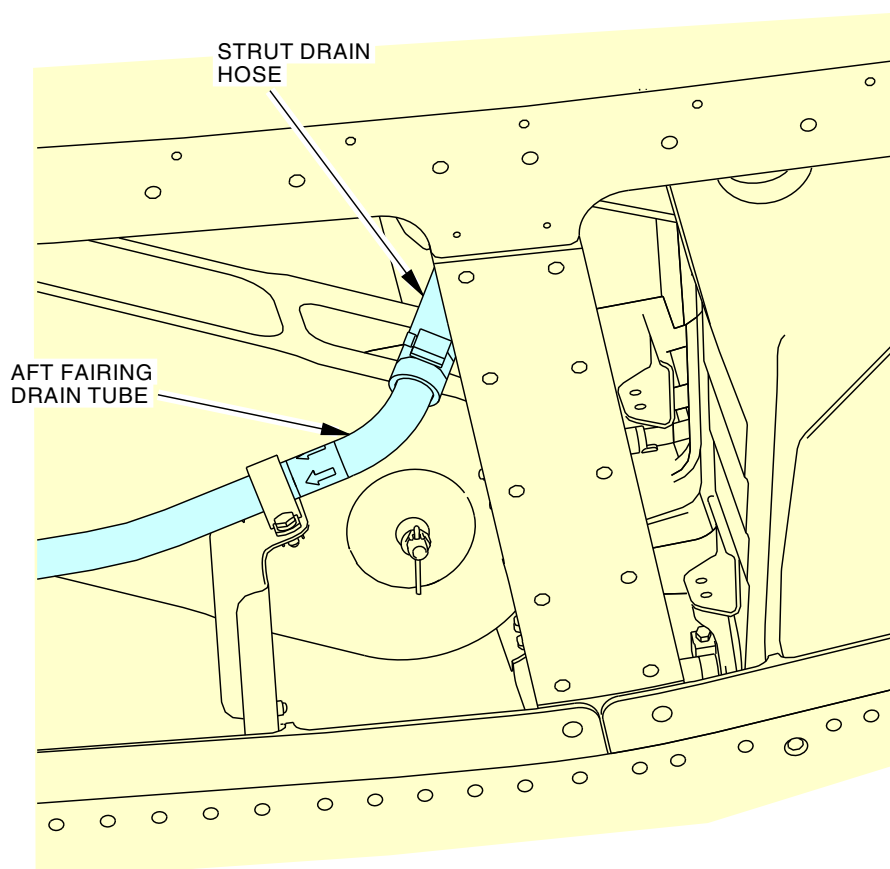
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LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)



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Aft Fairing Drain Tube - Maintenance Practices
Figure 201/54-55-02-990-801

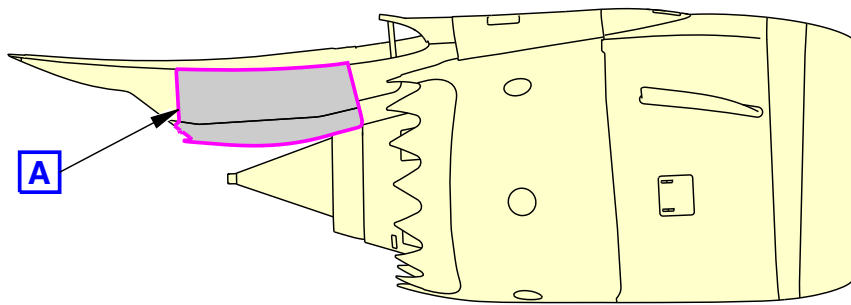
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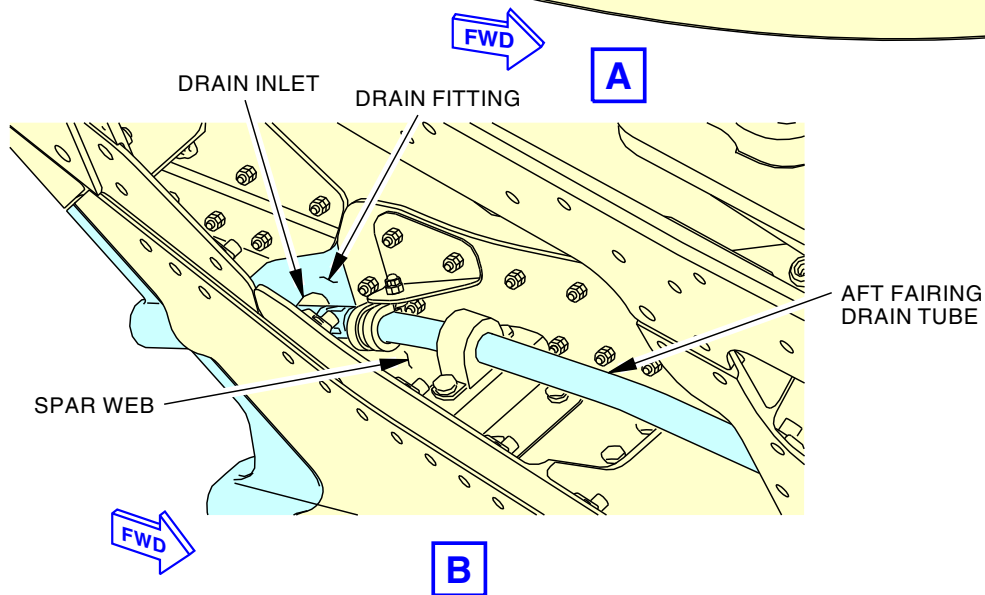
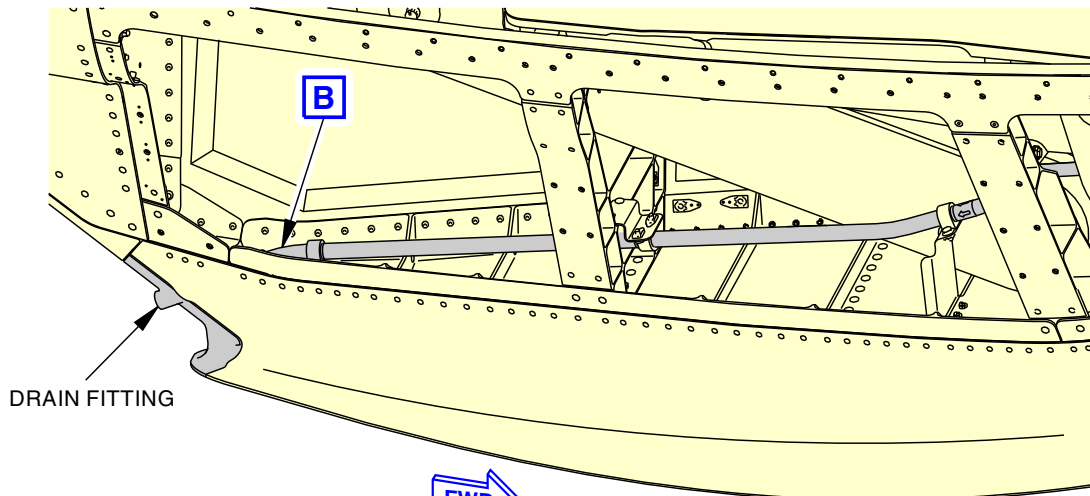
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LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)



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Aft Fairing Drain Fitting - Maintenance Practices
Figure 202/54-55-02-990-802

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AFT FAIRING STRUT DRAINS - INSPECTION/CHECK

1. **General**

- A. This procedure has these tasks:
- (1) Aft Fairing Frain Inspection
 - (2) Aft Fairing Drain Clearance Check.
- B. The aft fairing drain will carry fluid leakage (fuel, oil, hydraulic fluid, or water) away from a possible leak source to remove it from the nacelle strut compartment.

TASK 54-55-02-100-802

2. **Aft Fairing Drain Inspection**

A. **General**

- (1) Do this task to examine the aft fairing drain when there is a possible blockage.

B. **References**

Reference	Title
08-20-02-580-801	Level the Airplane With a Plumb Bob and Inclinometers (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. **Tools/Equipment**

Reference	Description
STD-77	Air Source, Regulated - Dry Filtered, 0-50 psig
STD-3910	Container - Plastic

D. **Location Zones**

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

E. **Access Panels**

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

F. **Prepare for the Inspection**

SUBTASK 54-55-02-040-002

- (1) Do this task: Level the Airplane With a Plumb Bob and Inclinometers, TASK 08-20-02-580-801.

SUBTASK 54-55-02-040-003

- (2) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-02-010-002

- (3) Open the applicable aft fairing access panels:

(TASK 54-52-06-000-801)

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1

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(Continued)

<u>Number</u>	<u>Name/Location</u>
444AL	Aft Strut Fairing, Left Panel, Strut 2

G. Aft Fairing Drain Inspection

SUBTASK 54-55-02-200-001

- (1) Put a dry container, STD-3910, below the aft fairing drain fitting.

NOTE: The container should hold a minimum of 2 gal (7.6 l).

- (a) Make sure that the internal surface of the aft fairing does not have unwanted material.

SUBTASK 54-55-02-160-004

- (2) Pour 256 ± 1 fl-oz (7.57 ± 0.03 l) of clean water along the forward end to the aft end of the internal floor of the aft fairing.

NOTE: Pour water on all internal surfaces.

- (a) After three minutes, make sure 244 fl-oz (7.2 l) or more of water is collected into the container below the aft fairing drain.
 - (b) Visually make sure that there are no leaks through the bulb seal at the forward end of the aft fairing.
 - (c) Use a syringe to make sure that no single puddle of water is larger than 0.5 fl-oz (0.902 in^3), except at the FWD side of the aft fairing frame 3.
 - 1) A puddle of water no larger than 1.0 fl-oz (1.805 in^3) is permitted at the FWD side of aft fairing frame 3.

SUBTASK 54-55-02-160-005

- (3) Remove the remaining water from the aft fairing.

SUBTASK 54-55-02-160-006

- (4) Use a regulated air source, STD-77, to dry the internal surfaces of the aft fairing.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-02-160-007



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, DAMAGE TO THE STRUT CAN OCCUR.

- (1) Make sure that the work area is clean and remove all tools and other items.

SUBTASK 54-55-02-410-002

- (2) Close the aft fairing access doors:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-55-02-440-002

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

————— **END OF TASK** —————

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TASK 54-55-02-220-801

3. Aft Fairing Drain Clearance Check

(Figure 601)

A. General

- (1) This task gives the instructions to do a check of the clearance between the aft fairing drain tube and drain fitting.

B. References

Reference	Title
08-20-02-580-801	Level the Airplane With a Plumb Bob and Inclinometers (P/B 201)
54-51-01-040-801	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-801	Put the Strut Back to Its Usual Condition (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
B50118	Solvent - General	BAC5750
G50140	Gloves - Protective, Latex or Nitrile	

D. Location Zones

Zone	Area
434	Engine 1 - Aft Strut Fairing
444	Engine 2 - Aft Strut Fairing

E. Access Panels

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

F. Prepare for the Inspection

SUBTASK 54-55-02-840-001

- (1) Do this task: Level the Airplane With a Plumb Bob and Inclinometers, TASK 08-20-02-580-801.

SUBTASK 54-55-02-840-002

- (2) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-801.

SUBTASK 54-55-02-010-003

- (3) Open the applicable aft fairing access panels:
(TASK 54-52-06-000-801)

Number	Name/Location
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

G. Aft Fairing Drain Clearance Check

SUBTASK 54-55-02-220-001

- (1) Measure the clearance between the aft fairing drain tube and drain fitting.
- (a) Make sure that there is a minimum of 0.050 in. (1.27 mm) radial clearance around the periphery of the aft fairing drain tube.

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- (b) If the clearance is less than 0.050 in. (1.27 mm), do these steps:
- 1) Loosen the clamps that attach the aft fairing drain tube to the structure.
 - 2) If it is necessary, loosen the B-nuts on the aft fairing drain tube.
 - 3) If it is necessary, loosen the clamp that attaches the strut drain hose to the aft fairing drain tube.
 - a) Wear the protective gloves, G50140, to prevent silicone contamination on your hands and airplane surfaces from the strut drain hose.
 - <1> Make sure that you do not get silicone contamination on the airplane surfaces.
 - <2> Discard the protective gloves, G50140.
 - 4) Adjust the aft fairing drain tube to get 0.050 in. (1.27 mm) radial clearance.
 - 5) Re-tighten the clamp that attaches the strut drain hose to the aft fairing drain tube.
 - a) Wear the protective gloves, G50140, to prevent silicone contamination on your hands and airplane surfaces from the strut drain hose.
 - <1> Make sure that you do not get silicone contamination on the airplane surfaces.
 - <2> Discard the protective gloves, G50140.
 - 6) Re-tighten the B-nuts on the aft fairing drain tube.
 - 7) Re-tighten the clamps that attach the aft fairing drain tube to the structure.
 - 8) If it is necessary, remove the silicone contamination with general solvent, B50118.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-02-940-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, DAMAGE TO THE STRUT CAN OCCUR.

- (1) Make sure that the work area is clean and remove all tools and other items.

SUBTASK 54-55-02-410-003

- (2) Close the aft fairing access doors:

(TASK 54-52-06-400-801)

<u>Number</u>	<u>Name/Location</u>
434AR	Aft Strut Fairing, Right Panel, Strut 1
444AL	Aft Strut Fairing, Left Panel, Strut 2

SUBTASK 54-55-02-840-003

- (3) Do this task: Put the Strut Back to Its Usual Condition, TASK 54-51-01-440-801.

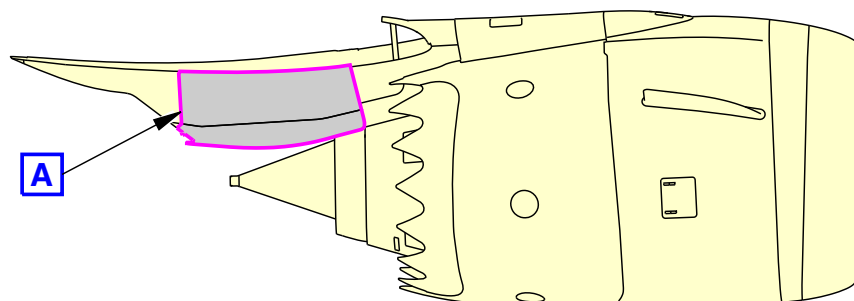
———— **END OF TASK** ————

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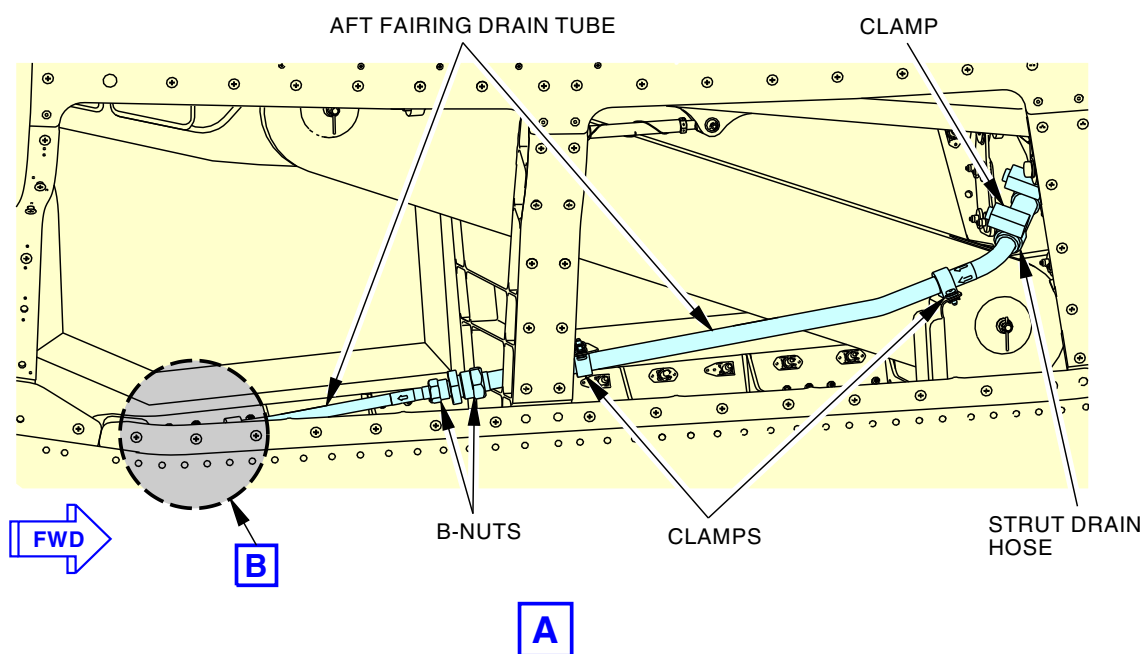
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LEFT AFT FAIRING
(RIGHT AFT FAIRING IS OPPOSITE)



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Aft Fairing Drain Clearance Check
Figure 601/54-55-02-990-803 (Sheet 1 of 2)

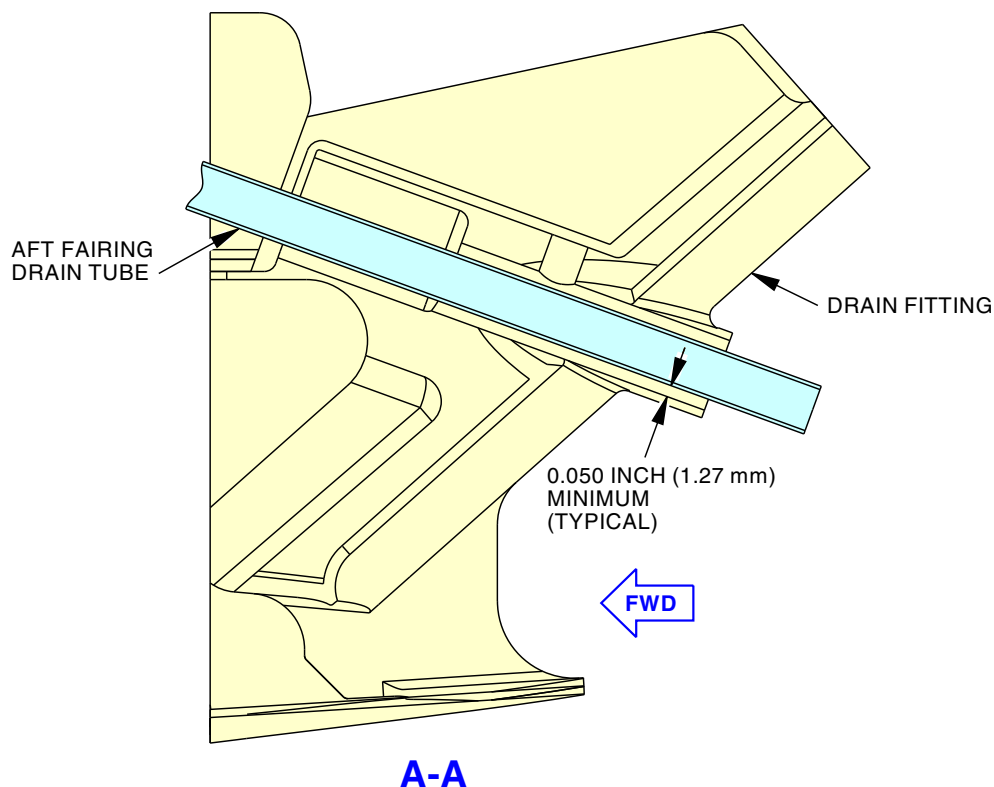
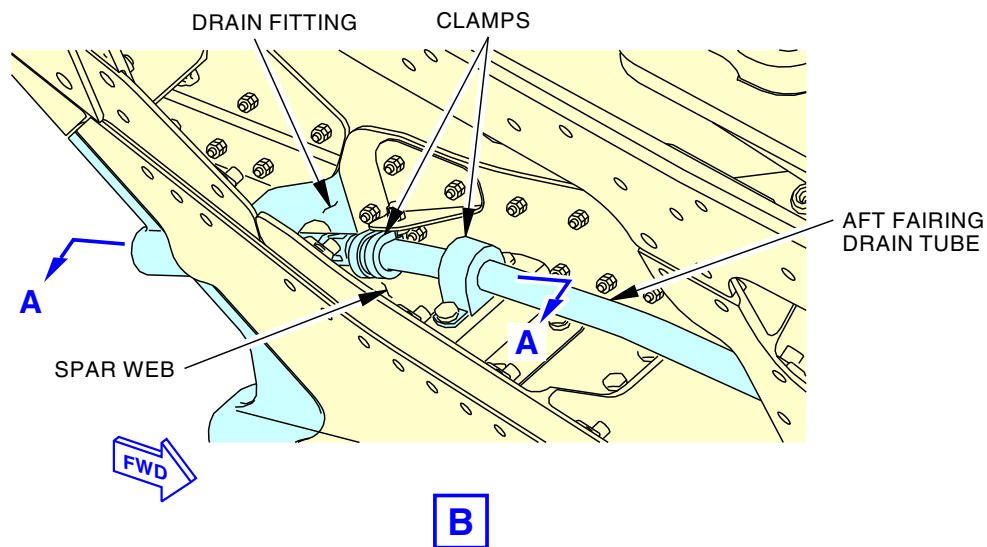
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Aft Fairing Drain Clearance Check
Figure 601/54-55-02-990-803 (Sheet 2 of 2)

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