CHAPTER

78

EXHAUST

CHAPTER 78
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A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

78-EFFECTIVE PAGES

CHAPTER 78
EXHAUST

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
78-130-01-01	SYS							
1	Oct 15/2015							
2	Feb 15/2015							
3	Jun 15/2015							
4	Oct 15/2014							
5	Oct 15/2014							
6	Oct 15/2015							
78-130-02-01	SYS							
1	Oct 15/2015							
2	Feb 15/2015							
3	Jun 15/2015							
4	Oct 15/2014							
5	Oct 15/2014							
6	Oct 15/2015							

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

78-EFFECTIVE PAGES

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE EXHAUST NOZZLE			78-011-01-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	1.1	ENG CNG		AIRPLANE: ALL NOTE; ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		NOTE			417

Detailed inspection of the left engine exhaust plug drain pan and tube for condition and security.

Note: This task is intended for on-aircraft use or if the short exhaust plug is still installed on the engine. Refer to CMM 78-11-40 for off-aircraft use or if the short exhaust plug has been removed from the engine.

AIRPLANE NOTE: Applicable to airplanes with exhaust plugs equipped with drain pan and tube system installed.

ACCESS NOTE: Engine exhaust plug removal required.

A. References

Reference	Title
AMM 78-11-01-000-802-F00	Primary Nozzle Assembly Removal (P/B 401)
AMM 78-11-02-000-802-F00	Primary Plug Assembly Removal (P/B 401)
AMM 78-11-02-400-802-F00	Primary Plug Assembly Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008

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
STD-13412	Auger - Drain pipe (25 inch minimum length, 0.32 +/- .05 inch diameter)
STD-1399	Borescope - Flexible, 6mm, Direct View
STD-14360	Flashlight
STD-600	Mirror - Inspection
STD-77	Air Source - Regulated, Dry Filtered, 0-50 psig

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-01-01

MECH | INSP

TASK 78-11-00-210-803-F00

1. Exhaust Plug Drain Pan and Drain Tube - Inspection/Check

A. General

(1) This task does a visual inspection of the engine exhaust plug drain pan and tube for condition and security while the exhaust sleeve assembly and primary plug assembly are installed on the engine.

(2) For access to the drain pan and drain tube, you must remove the aft exhaust plug.

(3) It is not necessary to remove the forward exhaust plug or the primary nozzle assembly.

(4) There are two methods to inspect the drain tube for blockage. Either may be used.

(a) Borescope option

(b) Drain Tube Removal option

B. Prepare for the Inspection/Check

SUBTASK 78-11-00-860-001-F00

(1) For Engine 1, open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	8	C01103	ENGINE 1 START VALVE

SUBTASK 78-11-00-010-003-F00

(2) For Engine 2, open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	4	C00154	ENGINE 2 START VALVE

SUBTASK 78-11-00-010-004-F00

(3) Do these steps to remove the aft exhaust plug [3] (Figure 1):

(a) Remove the 24 bolts [2] that attach the aft exhaust plug [3] to the forward exhaust plug [1].

1) Make sure that the aft exhaust plug [3] is satisfactorily held before you remove the last bolt [2].

NOTE: The aft plug weighs approximately 14 lb (6 kg).

(b) Remove the aft exhaust plug [3].

C. Drain Pan Inspection/Check

SUBTASK 78-11-00-210-010-F00

(1) Use a flashlight, STD-14360, and inspection mirror, STD-600, to inspect the interior and exterior surface of the drain pan for cracks, holes, and punctures.

(a) If any cracks, holes, or punctures are found, remove the exhaust sleeve and forward exhaust plug.

1) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-011-01-01

MECH	INSP

2) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

D. Drain Tube Inspection/Check - Borescope Method

SUBTASK 78-11-00-290-001-F00

(1) Insert a 6 mm direct view flexible borescope, STD-1399, through the aft end of the drain tube [5] toward the drain pan.

(a) No blockage is permitted in the drain tube [5] or at the drain pan fitting connection.

1) If blockage is found in the drain tube, remove the drain tube [5] for cleaning or replacement.

2) If blockage is found at the drain pan fitting connection, remove the exhaust sleeve and forward exhaust plug for cleaning.

a) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

b) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

E. Drain Tube Inspection/Check - Drain Tube Removal Method

(Figure 1)

SUBTASK 78-11-00-020-001-F00

(1) Remove the drain tube [5].

(a) Remove the four clamp bolts [6], washers [7] and clamps [8].

(b) Disconnect the nut [4].

(c) Remove the drain tube [5] from the drain pan fitting connection.

(d) Use a flashlight, STD-14360, and inspection mirror, STD-600, to inspect the drain pan fitting connection for blockage.

1) If blockage is found at the drain pan fitting connection, remove the exhaust sleeve and forward exhaust plug for cleaning.

a) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

b) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

SUBTASK 78-11-00-140-002-F00

(2) Do a check of the drain tube for blockage.

(a) Insert a drain pipe auger, STD-13412, completely through the drain tube [5] until it can be seen at the opposite end.

(b) If significant resistance is felt, repeat the process until the blockage is removed and little or no resistance is felt.

(c) If the blockage is too great to be removed by the auger or the auger cannot be fully inserted into the drain tube, use a 0-50 psig dry filtered regulated air source, STD-77, to supply 30 psi (207 kPa) to 40 psi (276 kPa) air pressure through the drain tube.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-011-01-01

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(d) If the blockage is too great to be removed by the auger or air pressure, replace the drain tube [5].

SUBTASK 78-11-00-420-001-F00

(3) If the drain tube is not blocked, install the drain tube.

(a) Attach the drain tube [5] to the brackets with the bolts [6], washers [7] and clamps [8].

1) Tighten the bolts [6] to 78 in-lb (8.8 N·m) to 82 in-lb (9.3 N·m).

(b) Connect the drain tube [5] to the drain pan fitting connection.

1) Apply Never-Seez NSBT compound, D00006 to the drain tube where it joins the drain pan fitting connection.

2) Hold the drain pan fitting connection with a wrench while you tighten the nut [4] to 250 in-lb (28 N·m) to 300 in-lb (34 N·m).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 78-11-00-410-003-F00

(1) Do these steps to install the aft exhaust plug [3] (AMM TASK 78-11-02-400-802-F00):

NOTE: The forward plug and aft plug are a matched set.

(a) Apply Never-Seez NSBT compound, D00006, to the threads of the bolts [2].

(b) Align the alignment notch with the locating rivet at the 12:00 o'clock position on the forward exhaust plug [1].

(c) Move the aft exhaust plug [3] forward and over the attach flange of the forward exhaust plug [1].

(d) Install the 24 bolts [2] to attach the aft exhaust plug [3].

1) Tighten the bolts [2] to 68 in-lb (7.7 N·m) to 82 in-lb (9.3 N·m).

SUBTASK 78-11-00-860-002-F00

(2) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	8	C01103	ENGINE 1 START VALVE

SUBTASK 78-11-00-860-003-F00

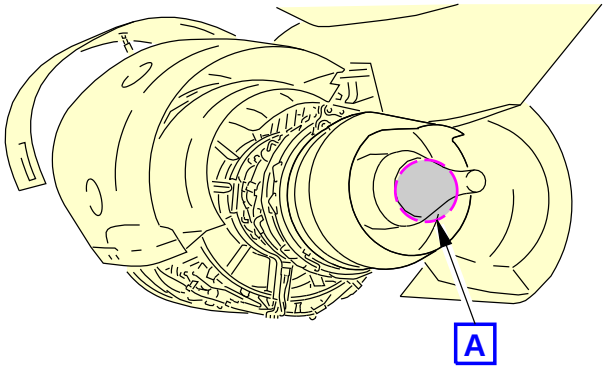
(3) Remove the safety tag and close this circuit breaker:

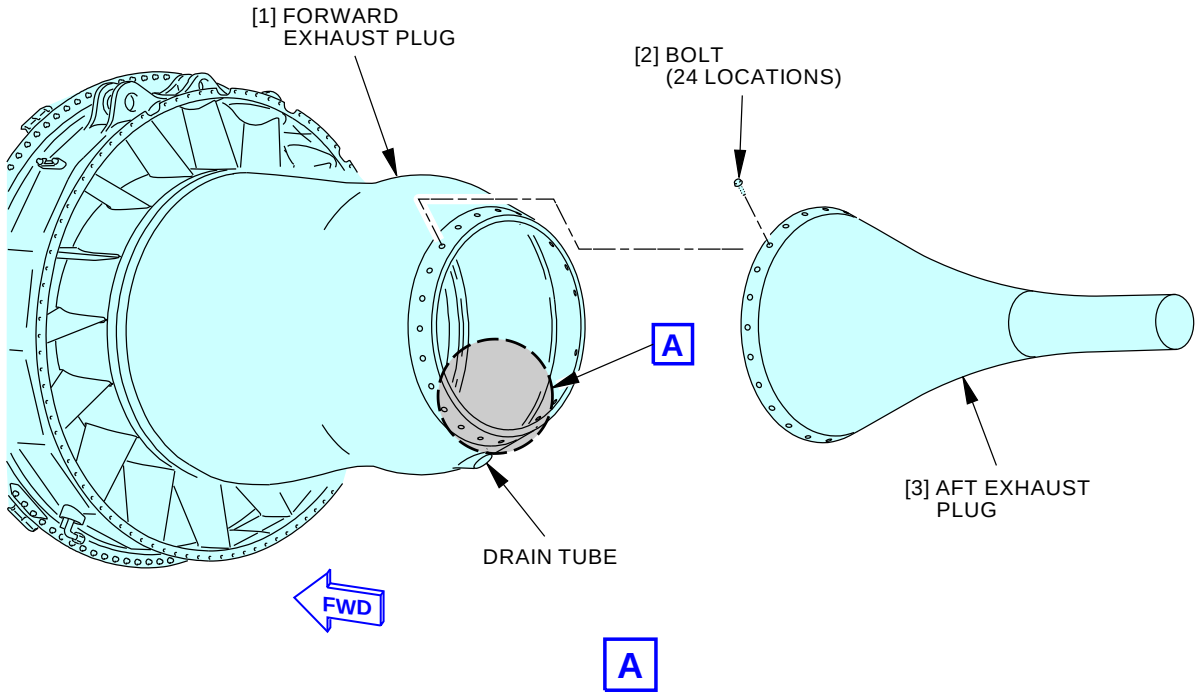
F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	4	C00154	ENGINE 2 START VALVE

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-01-01





NOTE:

SHOWN WITH PRIMARY NOZZLE ASSEMBLY REMOVED.

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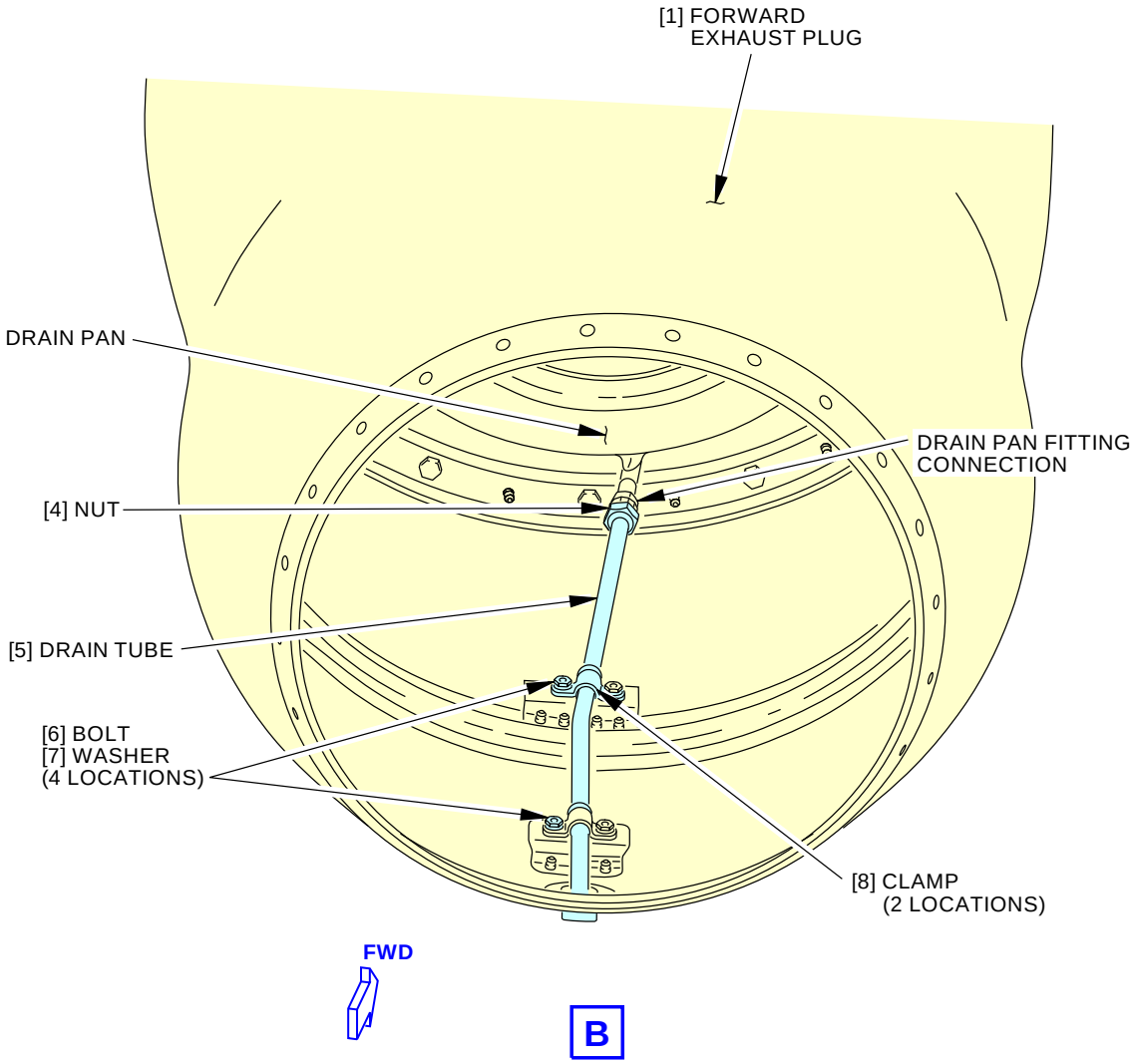
Exhaust Plug Drain Tube Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-01-01



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Exhaust Plug Drain Tube Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE EXHAUST NOZZLE			78-011-02-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	1.1	ENG CNG		AIRPLANE: ALL NOTE; ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		NOTE			427

Detailed inspection of the right engine exhaust plug drain pan and tube for condition and security.

Note: This task is intended for on-aircraft use or if the short exhaust plug is still installed on the engine. Refer to CMM 78-11-40 for off-aircraft use or if the short exhaust plug has been removed from the engine.

AIRPLANE NOTE: Applicable to airplanes with exhaust plugs equipped with drain pan and tube system installed.

ACCESS NOTE: Engine exhaust plug removal required.

A. References

Reference	Title
AMM 78-11-01-000-802-F00	Primary Nozzle Assembly Removal (P/B 401)
AMM 78-11-02-000-802-F00	Primary Plug Assembly Removal (P/B 401)
AMM 78-11-02-400-802-F00	Primary Plug Assembly Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008

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
STD-13412	Auger - Drain pipe (25 inch minimum length, 0.32 +/- .05 inch diameter)
STD-1399	Borescope - Flexible, 6mm, Direct View
STD-14360	Flashlight
STD-600	Mirror - Inspection
STD-77	Air Source - Regulated, Dry Filtered, 0-50 psig

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-02-01

MECH | INSP

TASK 78-11-00-210-803-F00

1. Exhaust Plug Drain Pan and Drain Tube - Inspection/Check

A. General

(1) This task does a visual inspection of the engine exhaust plug drain pan and tube for condition and security while the exhaust sleeve assembly and primary plug assembly are installed on the engine.

(2) For access to the drain pan and drain tube, you must remove the aft exhaust plug.

(3) It is not necessary to remove the forward exhaust plug or the primary nozzle assembly.

(4) There are two methods to inspect the drain tube for blockage. Either may be used.

(a) Borescope option

(b) Drain Tube Removal option

B. Prepare for the Inspection/Check

SUBTASK 78-11-00-860-001-F00

(1) For Engine 1, open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	8	C01103	ENGINE 1 START VALVE

SUBTASK 78-11-00-010-003-F00

(2) For Engine 2, open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	4	C00154	ENGINE 2 START VALVE

SUBTASK 78-11-00-010-004-F00

(3) Do these steps to remove the aft exhaust plug [3] (Figure 1):

(a) Remove the 24 bolts [2] that attach the aft exhaust plug [3] to the forward exhaust plug [1].

1) Make sure that the aft exhaust plug [3] is satisfactorily held before you remove the last bolt [2].

NOTE: The aft plug weighs approximately 14 lb (6 kg).

(b) Remove the aft exhaust plug [3].

C. Drain Pan Inspection/Check

SUBTASK 78-11-00-210-010-F00

(1) Use a flashlight, STD-14360, and inspection mirror, STD-600, to inspect the interior and exterior surface of the drain pan for cracks, holes, and punctures.

(a) If any cracks, holes, or punctures are found, remove the exhaust sleeve and forward exhaust plug.

1) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-011-02-01

MECH	INSP

2) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

D. Drain Tube Inspection/Check - Borescope Method

SUBTASK 78-11-00-290-001-F00

(1) Insert a 6 mm direct view flexible borescope, STD-1399, through the aft end of the drain tube [5] toward the drain pan.

(a) No blockage is permitted in the drain tube [5] or at the drain pan fitting connection.

1) If blockage is found in the drain tube, remove the drain tube [5] for cleaning or replacement.

2) If blockage is found at the drain pan fitting connection, remove the exhaust sleeve and forward exhaust plug for cleaning.

a) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

b) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

E. Drain Tube Inspection/Check - Drain Tube Removal Method

(Figure 1)

SUBTASK 78-11-00-020-001-F00

(1) Remove the drain tube [5].

(a) Remove the four clamp bolts [6], washers [7] and clamps [8].

(b) Disconnect the nut [4].

(c) Remove the drain tube [5] from the drain pan fitting connection.

(d) Use a flashlight, STD-14360, and inspection mirror, STD-600, to inspect the drain pan fitting connection for blockage.

1) If blockage is found at the drain pan fitting connection, remove the exhaust sleeve and forward exhaust plug for cleaning.

a) Do this task: Primary Nozzle Assembly Removal, AMM TASK 78-11-01-000-802-F00.

b) Do this task: Primary Plug Assembly Removal, AMM TASK 78-11-02-000-802-F00.

SUBTASK 78-11-00-140-002-F00

(2) Do a check of the drain tube for blockage.

(a) Insert a drain pipe auger, STD-13412, completely through the drain tube [5] until it can be seen at the opposite end.

(b) If significant resistance is felt, repeat the process until the blockage is removed and little or no resistance is felt.

(c) If the blockage is too great to be removed by the auger or the auger cannot be fully inserted into the drain tube, use a 0-50 psig dry filtered regulated air source, STD-77, to supply 30 psi (207 kPa) to 40 psi (276 kPa) air pressure through the drain tube.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-011-02-01

MECH	INSP

(d) If the blockage is too great to be removed by the auger or air pressure, replace the drain tube [5].

SUBTASK 78-11-00-420-001-F00

(3) If the drain tube is not blocked, install the drain tube.

(a) Attach the drain tube [5] to the brackets with the bolts [6], washers [7] and clamps [8].

1) Tighten the bolts [6] to 78 in-lb (8.8 N·m) to 82 in-lb (9.3 N·m).

(b) Connect the drain tube [5] to the drain pan fitting connection.

1) Apply Never-Seez NSBT compound, D00006 to the drain tube where it joins the drain pan fitting connection.

2) Hold the drain pan fitting connection with a wrench while you tighten the nut [4] to 250 in-lb (28 N·m) to 300 in-lb (34 N·m).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 78-11-00-410-003-F00

(1) Do these steps to install the aft exhaust plug [3] (AMM TASK 78-11-02-400-802-F00):

NOTE: The forward plug and aft plug are a matched set.

(a) Apply Never-Seez NSBT compound, D00006, to the threads of the bolts [2].

(b) Align the alignment notch with the locating rivet at the 12:00 o'clock position on the forward exhaust plug [1].

(c) Move the aft exhaust plug [3] forward and over the attach flange of the forward exhaust plug [1].

(d) Install the 24 bolts [2] to attach the aft exhaust plug [3].

1) Tighten the bolts [2] to 68 in-lb (7.7 N·m) to 82 in-lb (9.3 N·m).

SUBTASK 78-11-00-860-002-F00

(2) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	8	C01103	ENGINE 1 START VALVE

SUBTASK 78-11-00-860-003-F00

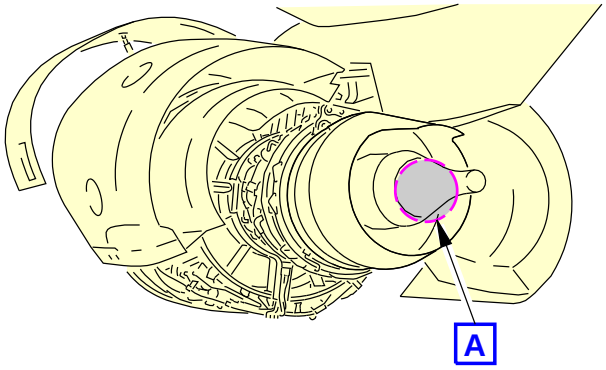
(3) Remove the safety tag and close this circuit breaker:

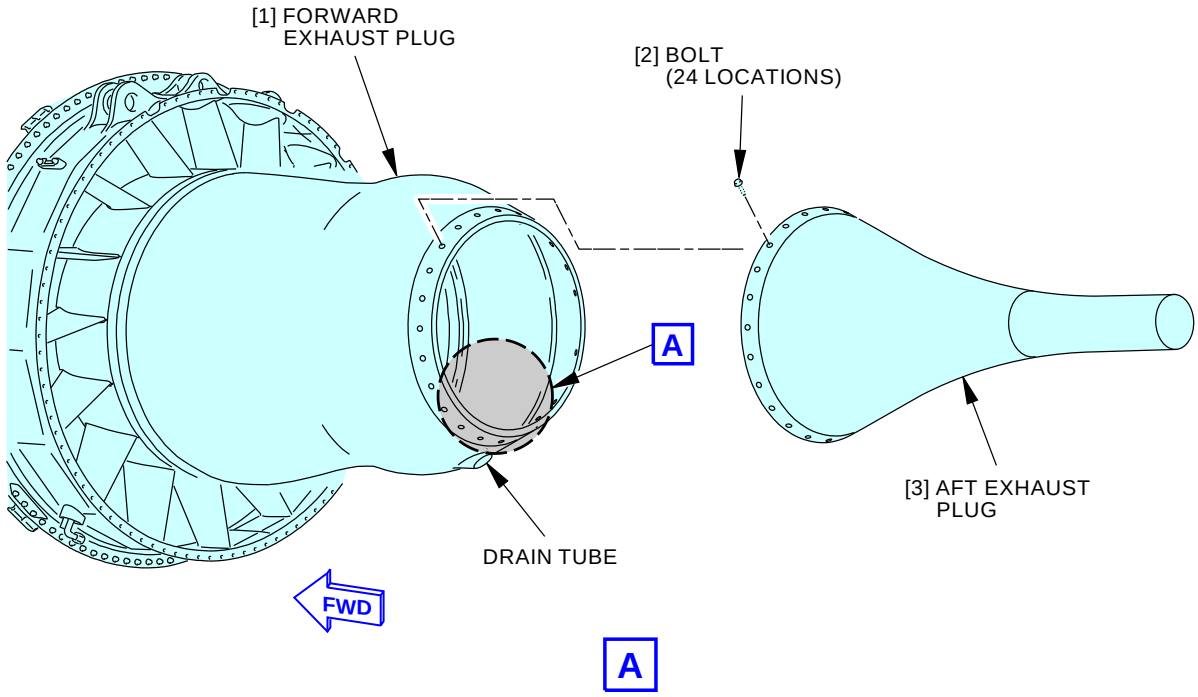
F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	4	C00154	ENGINE 2 START VALVE

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-02-01





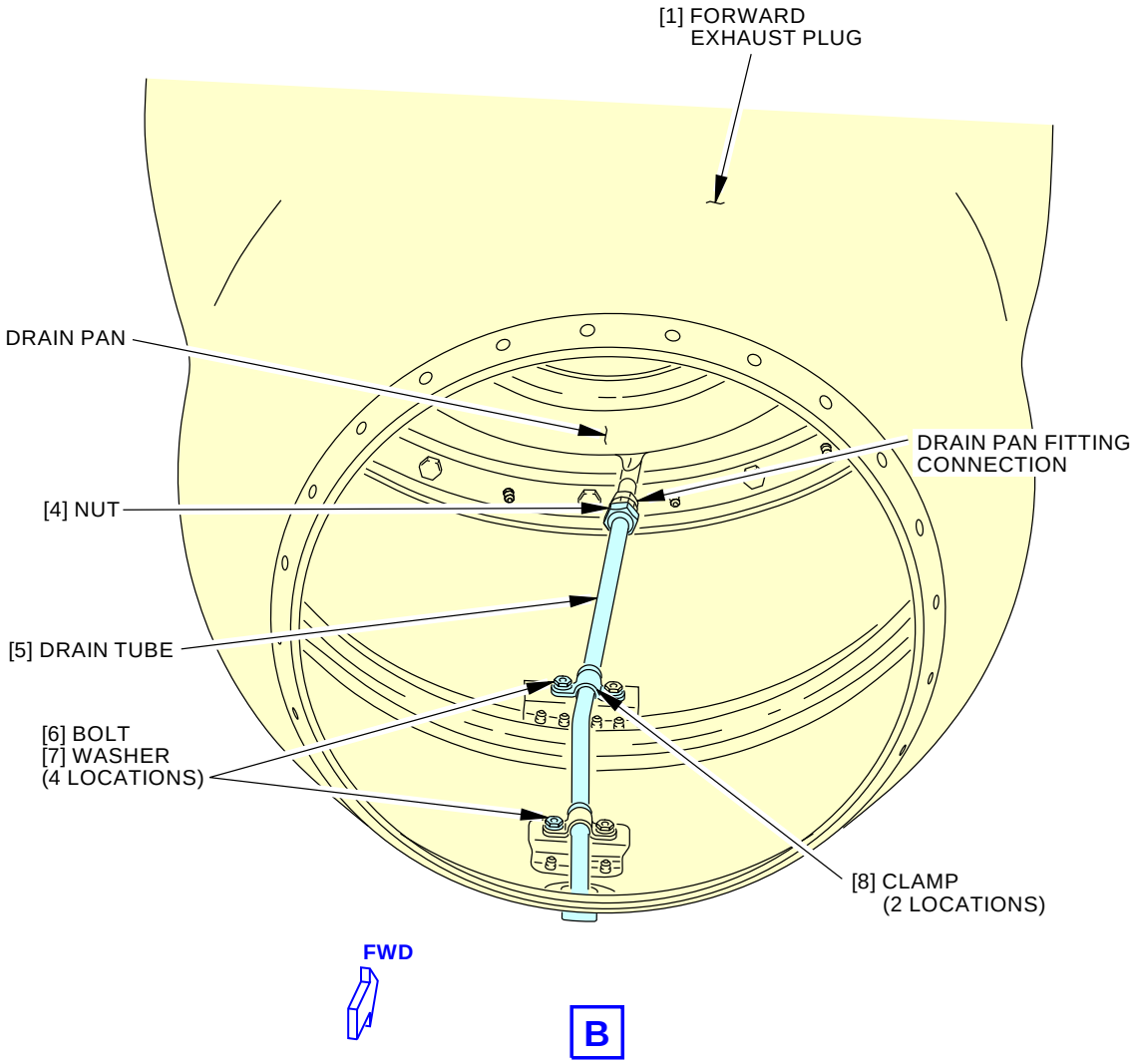
NOTE:

SHOWN WITH PRIMARY NOZZLE ASSEMBLY REMOVED.

2338538 S0000532973_V2

Exhaust Plug Drain Tube Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-011-02-01



2338311 S0000532873_V2

Exhaust Plug Drain Tube Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE T/R FAN DUCT WALLS			**78-050-01-01**
DATE	TASK				RELATED CARD
	VISUAL CHECK				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	**1.1**	**15000 FH**	**15000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		413 414 415 416			**415 416**

Visually check the left engine T/R's fan duct walls.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-050-01-01

MECH | INSP

TASK 78-31-01-200-801-F00

1. Thrust Reverser Fan Duct Wall Inspection

A. General

(1) This is a task to do a visual inspection check of the fan duct inner and outer walls for damage.

B. Prepare for the Inspection

SUBTASK 78-31-01-010-015-F00

WARNING: DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Thrust Reverser Fan Duct Wall Inspection

SUBTASK 78-31-01-210-001-F00

(1) Look through the forward and aft ends of the fan duct to examine the walls for the damage that follows:

(a) Holes, cracks, nicks, gouges, delamination, dents and edge corrosion.

(b) Pitting in the surface layer (small areas where the surface appears chipped away around the perforation of the acoustic panel) (Figure 2).

NOTE: This pitting can occur during the usual manufacturing process of the acoustic panel. This condition has been inspected and approved for in-service use at the time of manufacture.

1) No action is necessary with the following conditions:

a) The surface area adjacent to each pitting location has the original silver finish and does not show the black panel material.

b) There are no signs of edge erosion.

D. Put the Airplane Back to its Usual Condition

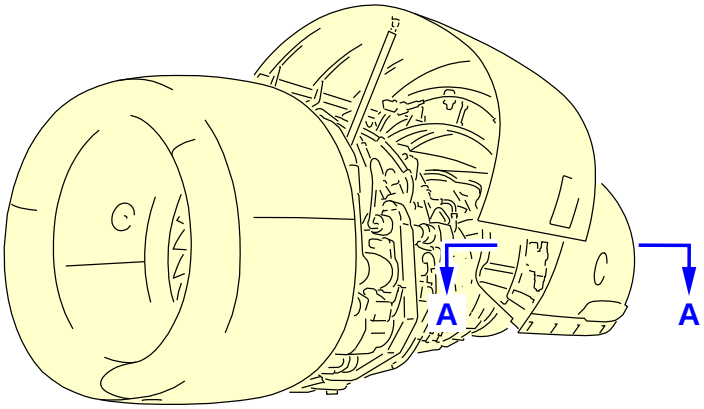
SUBTASK 78-31-01-410-012-F00

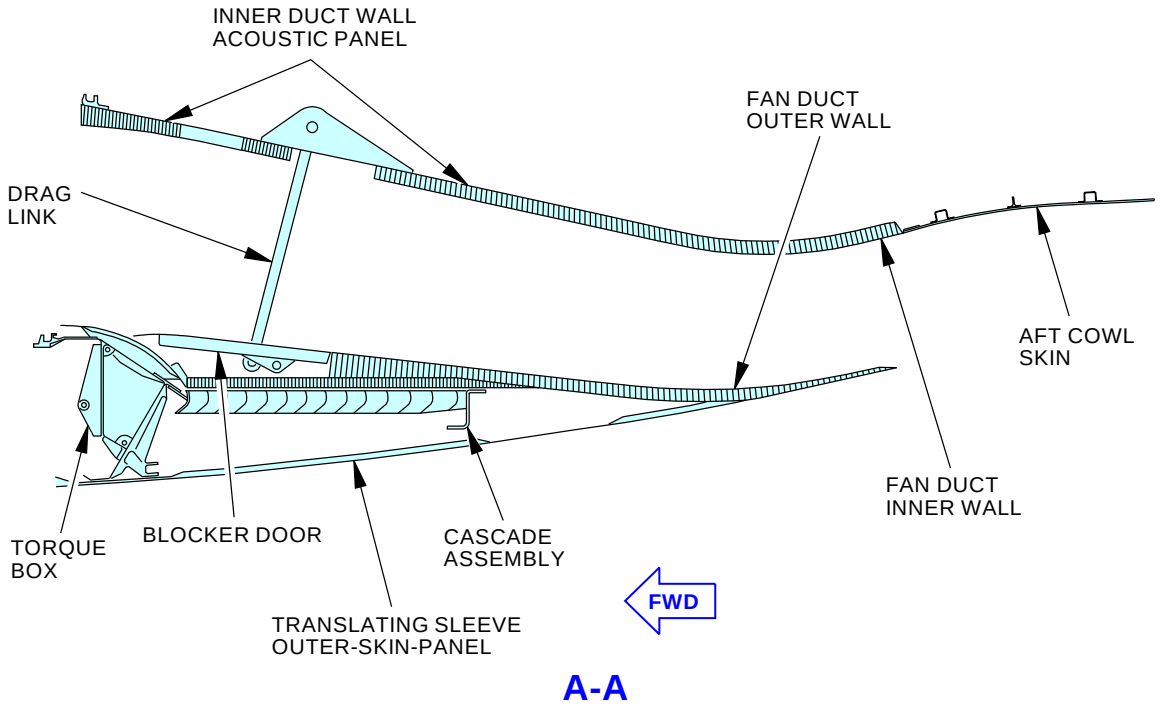
WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-050-01-01





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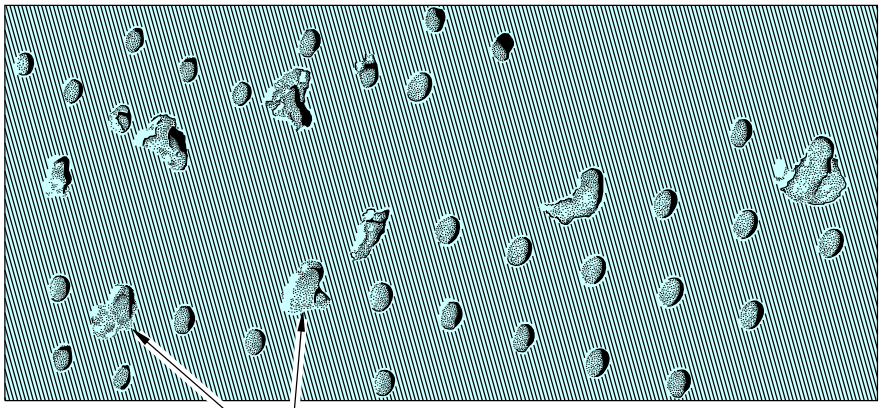
Thrust Reverser Fan Duct Wall Inspection
Figure 1

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-050-01-01



N88638 S0006583312_V2

Inner and Outer Duct Wall Acoustic Panel Inspection
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE T/R FAN DUCT WALLS			**78-050-02-01**
DATE	TASK				RELATED CARD
	VISUAL CHECK				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	**1.1**	**15000 FH**	**15000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		423 424 425 426			**425 426**

Visually check the right engine T/R's fan duct walls.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-050-02-01

MECH | INSP

TASK 78-31-01-200-801-F00

1. Thrust Reverser Fan Duct Wall Inspection

A. General

(1) This is a task to do a visual inspection check of the fan duct inner and outer walls for damage.

B. Prepare for the Inspection

SUBTASK 78-31-01-010-015-F00

WARNING: DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Thrust Reverser Fan Duct Wall Inspection

SUBTASK 78-31-01-210-001-F00

(1) Look through the forward and aft ends of the fan duct to examine the walls for the damage that follows:

(a) Holes, cracks, nicks, gouges, delamination, dents and edge corrosion.

(b) Pitting in the surface layer (small areas where the surface appears chipped away around the perforation of the acoustic panel) (Figure 2).

NOTE: This pitting can occur during the usual manufacturing process of the acoustic panel. This condition has been inspected and approved for in-service use at the time of manufacture.

1) No action is necessary with the following conditions:

a) The surface area adjacent to each pitting location has the original silver finish and does not show the black panel material.

b) There are no signs of edge erosion.

D. Put the Airplane Back to its Usual Condition

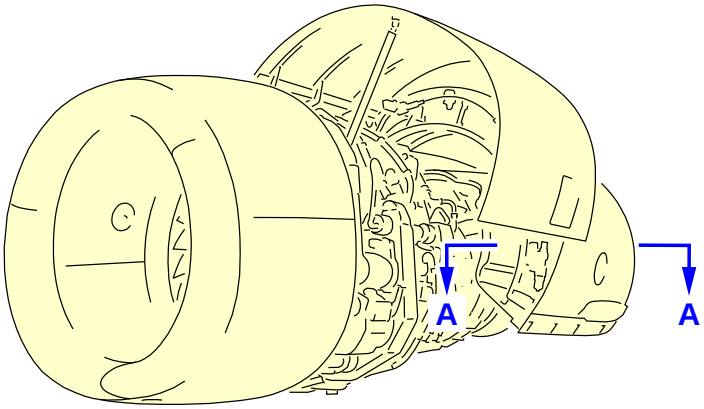
SUBTASK 78-31-01-410-012-F00

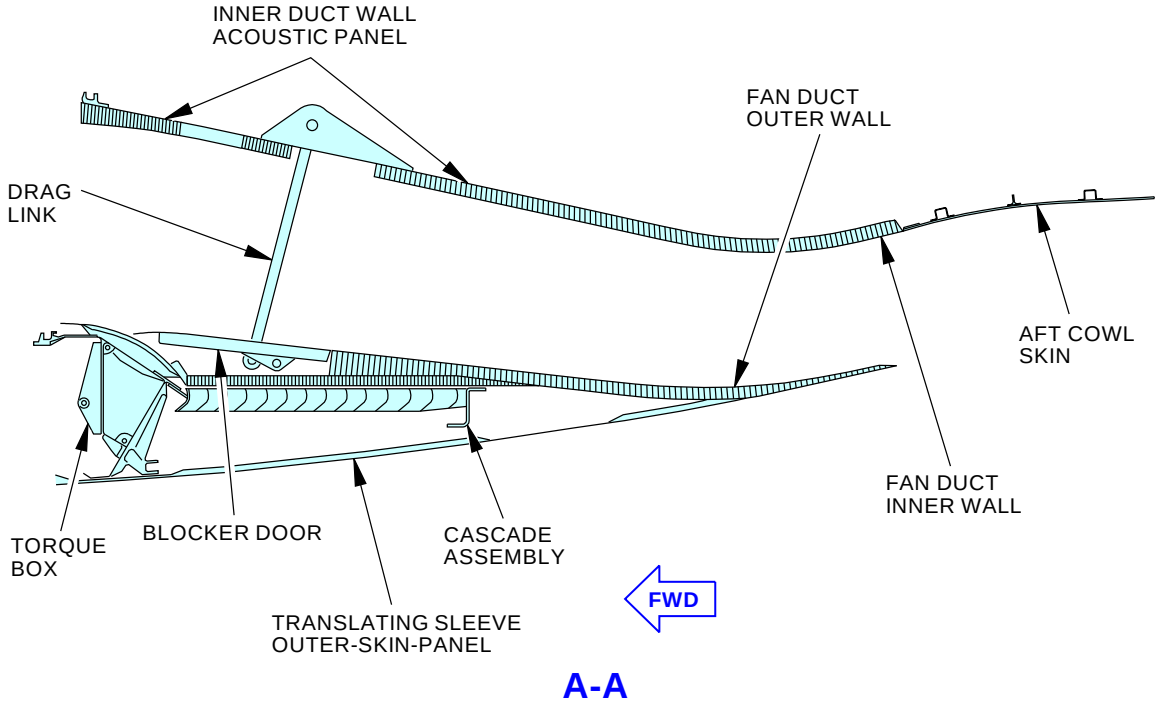
WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-050-02-01



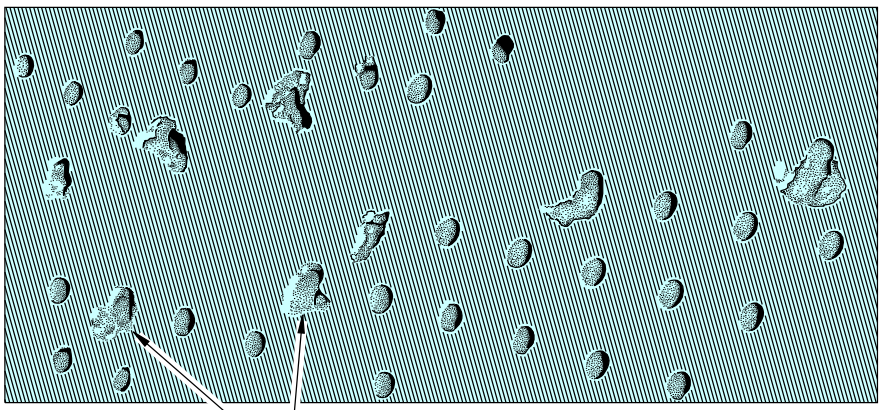


A-A

H53270 S0006583311_V2

Thrust Reverser Fan Duct Wall Inspection
Figure 1

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-050-02-01



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Inner and Outer Duct Wall Acoustic Panel Inspection
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE DRAG LINK'S SPHERICAL BEARING			**78-060-01-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	**1.1**	**12000 FH**	**12000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		413 414 415 416			**415 416**

Detailed inspection of the left engine thrust reverser drag link spherical bearings.

A. References

Reference	Title
AMM 27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
AMM 71-11-02-410-801-F00	Close the Fan Cowl Panels (P/B 201)
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-440-803-F00	Thrust Reverser Activation After Ground Maintenance (P/B 201)
AMM 78-31-00-980-803-F00	Thrust Reverser Operation - Extend (Manual Procedure) (P/B 201)
AMM 78-31-00-980-804-F00	Thrust Reverser Operation - Retract (Manual Procedure) (P/B 201)
AMM 78-31-00-980-805-F00	Thrust Reverser Operation - Extend (Power Procedure) (P/B 201)
AMM 78-31-00-980-806-F00	Thrust Reverser Operation - Retract (Power Procedure) (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-01-01

MECH | INSP

TASK 78-31-07-900-801-F00

1. Remove and Inspect the Drag Link Spherical Bearing

(Figure 1)

A. General

(1) This is a scheduled maintenance task to examine the ball and the spherical bearing race in the drag link.

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Ball	78-31-51-10-068	AKS ALL

C. Prepare for the procedure

SUBTASK 78-31-07-010-008-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

SUBTASK 78-31-07-980-005-F00

CAUTION: DO NOT MANUALLY EXTEND THE INBOARD THRUST REVERSER SLEEVE MORE THAN 10.0 INCHES (25.4 CM). MAKE SURE THAT THE LEADING EDGE FLAPS ARE COMPLETELY RETRACTED AND MONITOR THE POSITION OF THE THRUST REVERSER SLEEVE AS IT IS EXTENDED SO THAT IT WILL NOT TOUCH THE LEADING EDGE OF THE WING. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Do these steps to expose the hardware that attaches the drag link to the blocker door:

NOTE: The sleeve must be partially extended to release the load on the drag link and expose the hardware that attaches the drag link to the blocker door.

(a) For the inboard thrust reverser sleeve, do these steps to manually extend the thrust reverser sleeve:

1) Make sure that the leading edge flaps are completely retracted.

NOTE: Without hydraulics to hold the flaps in the retract position, the weight of the flaps can cause them to extend a small amount.

2) Monitor the position of the thrust reverser sleeve as it is extended to make sure that it does not touch the leading edge of the wing.

3) Manually extend the thrust reverser sleeve no more than 10 in. (25.4 cm) from the forward edge of the torque box.

4) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-060-01-01

MECH	INSP

(b) For the outboard thrust reverser sleeve, manually extend the thrust reverser sleeve approximately 10 in. (25.4 cm).

NOTE: The outboard thrust reverser sleeve will not touch the leading edge of the wing.

1) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

D. Procedure

SUBTASK 78-31-07-840-001-F00

CAUTION: WHEN YOU WORK IN THE FAN DUCT, USE SUFFICIENT PROTECTION. IF TOOLS OR THE DRAG LINKS FALL OR HIT THE BLOCKER DOORS AND FAN DUCT WALLS, DAMAGE TO THE COMPOSITE PANELS CAN OCCUR.

(1) For each of the drag links, do these steps to examine the drag link and the spherical bearing:

(a) Put protective material on the fan duct walls and blocker doors.

SUBTASK 78-31-07-210-001-F00

(2) Examine the drag links to look for these conditions:

NOTE: Record the drag link location and condition.

(a) Loose nuts on the drag link bolts.

(b) Drag link bolts that have a shank length that is too long.

(c) Bushings in the pivot link of the blocker doors that are worn.

(d) Bushings in the drag link anchor fittings that are worn.

(e) The race of the spherical bearings that are loose in the drag link.

(f) Pivot links or anchor fittings that have cracks or other damage.

(g) If you find one or more of the problems, then repair or replace the drag link.

SUBTASK 78-31-07-640-001-F00

(3) Do these steps to examine the ball [1] and the spherical bearing race:

(a) Put cotton wiper, G00034 around the anchor fitting and drag link at the inner wall.

NOTE: When the drag link is disconnected from the blocker door, it can move forward or aft and fall against the inner wall. This can cause damage to the inner wall composite panel.

(b) Remove the nut, two washers, bushing and bolt that attach the drag link to the pivot link on the blocker door.

(c) See if the spherical bearing has a removable ball (Figure 2).

NOTE: The ball is removable on spherical bearings with loader slots. The ball is not removable on liner spherical bearings.

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A REMOVABLE BALL

SUBTASK 78-31-07-210-002-F00

(4) Examine the ball [1] and the bearing race for pits or scratches (Figure 2).

NOTE: The spherical bearing consists of a ball and a race.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-01-01

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A REMOVABLE BALL (Continued)

MECH | INSP

(a) Turn the ball [1] until it will come out of the race of the spherical bearing.

(b) Use a cotton wiper, G00034 to clean the ball [1].

(c) Use a cotton wiper, G00034 to clean the race of the bearing race.

(d) If the ball [1] has pits or scratches, then replace the ball [1].

(e) If the bearing race has pits or scratches, then replace the spherical bearing.

(f) Install the ball [1] in the spherical bearing.

NOTE: The re-application of the solid film lubricant is not recommended.

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A NON-REMOVABLE BALL

SUBTASK 78-31-07-210-003-F00

(5) Examine the ball [1] and the bearing race for pits, scratches, tears in the liner or missing linear (Figure 2).

NOTE: The spherical bearing consists of a ball and a race. The ball is not removable on the liner spherical bearing. The liner is attached to the inside of the race.

(a) Turn the ball [1] 90 degrees, use a cotton wiper, G00034 to clean the ball [1].

(b) If the ball [1] has pits or scratches, then replace the drag link.

(c) If you find tears in the liner or missing liner on the race, replace the drag link.

NOTE: The liner material from the race may transfer to the ball which will be light brown in color. Transfer of liner material on to the ball is satisfactory. The liner bearing will not corrode, therefore liner material, dirt, and/or grease should not be mistaken as corrosion on the bearing.

NOTE: The re-application of the solid film lubricant is not recommended.

AKS ALL

SUBTASK 78-31-07-420-002-F00

(6) Attach the drag link to the translating sleeve.

(a) Align the drag link with the pivot link on the blocker door.

1) Install the bushing, two washers, bolt and nut.

a) Tighten the nut to 160 in-lb (18.1 N·m)-240 in-lb (27.1 N·m).

(b) Remove the cotton wiper, G00034 from the anchor fitting at the inner wall and the protective material from the fan duct walls and blocker doors.

(c) Manually retract the thrust reverser sleeve (AMM TASK 78-31-00-980-804-F00).

SUBTASK 78-31-07-410-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS, BUT DO NOT DO THE THRUST REVERSER OR LEADING EDGE ACTIVATION. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(7) Close and latch the thrust reverser, but do not do the thrust reverser or leading edge activation and do not close the fan cowl panels at this time (Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00).

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-060-01-01

MECH | INSP

SUBTASK 78-31-07-980-006-F00

(8) Manually translate the sleeve through an extend and retract cycle.

(a) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

(b) Do this task: Thrust Reverser Operation - Retract (Manual Procedure), AMM TASK 78-31-00-980-804-F00.

(c) Make sure that the blocker doors and drag links move smoothly.

E. Installation Test

SUBTASK 78-31-07-440-001-F00

(1) Do this task: Thrust Reverser Activation After Ground Maintenance, AMM TASK 78-31-00-440-803-F00.

SUBTASK 78-31-07-710-002-F00

(2) Operate the thrust reverser through an extend and retract cycle to make sure that the blocker doors and drag links operate correctly.

(a) Do this task: Thrust Reverser Operation - Extend (Power Procedure), AMM TASK 78-31-00-980-805-F00.

(b) Do this task: Thrust Reverser Operation - Retract (Power Procedure), AMM TASK 78-31-00-980-806-F00.

(c) Make sure that the blocker doors and drag links operate correctly.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 78-31-07-410-005-F00

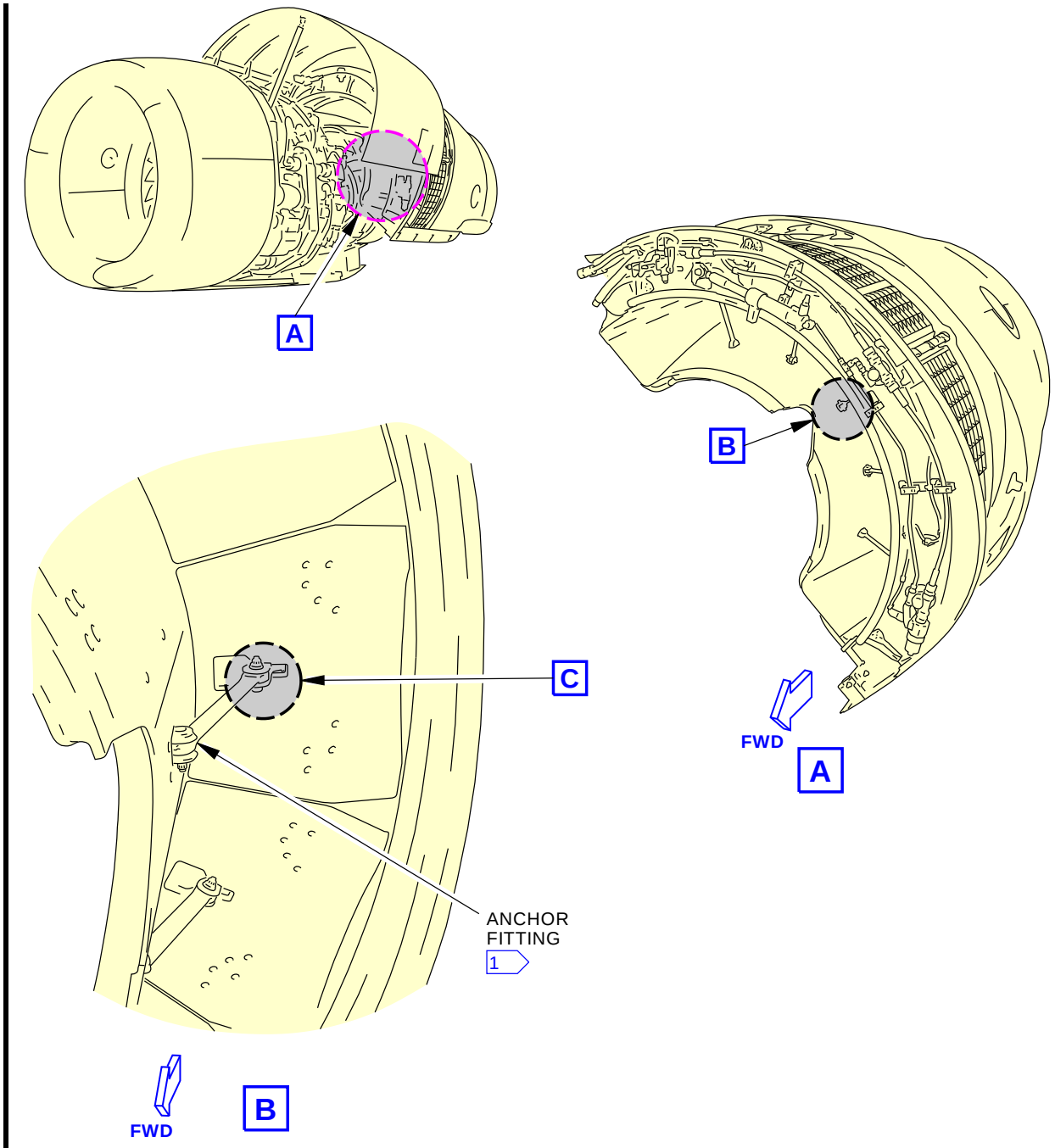
(1) Do this task: Close the Fan Cowl Panels, AMM TASK 71-11-02-410-801-F00.

SUBTASK 78-31-07-440-002-F00

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

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-01-01

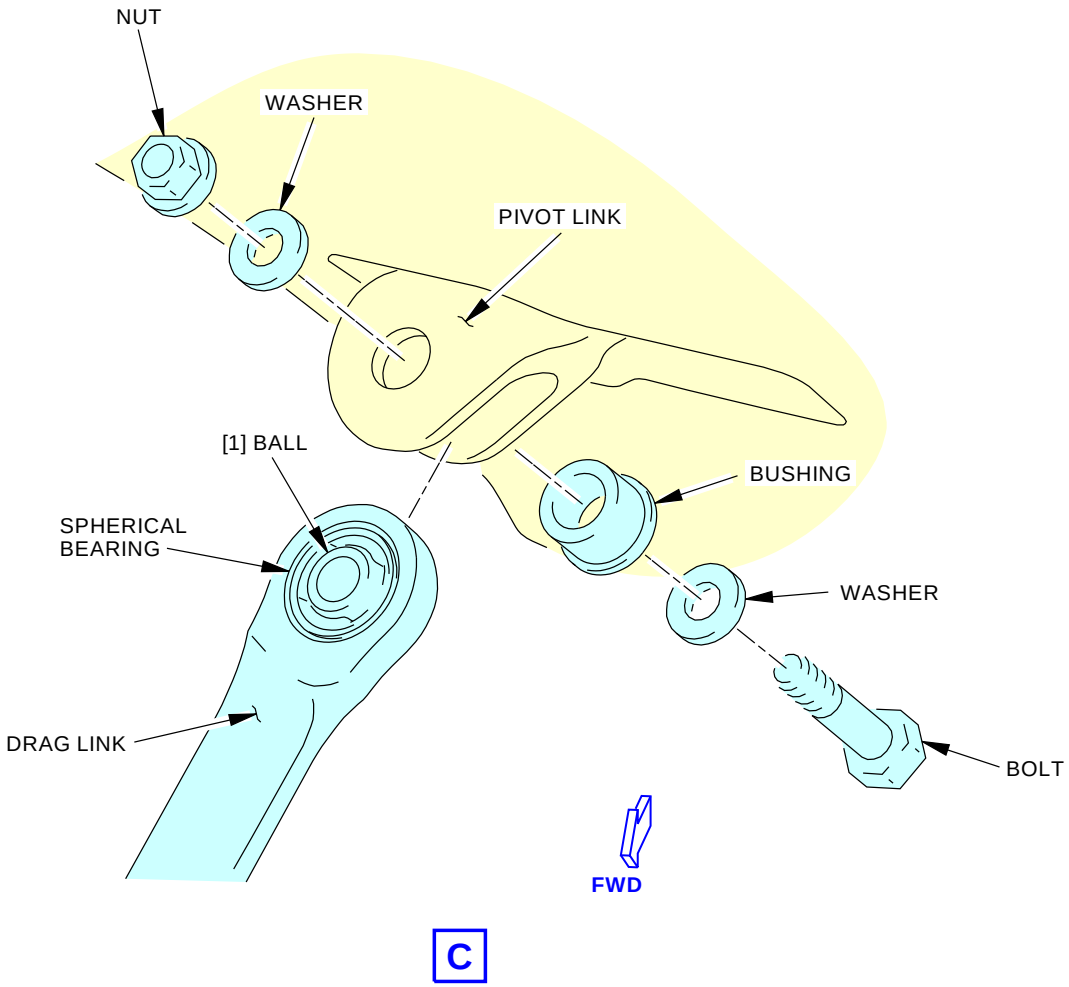


1 WRAP CLOTH AROUND THE ANCHOR FITTING TO PROTECT THE INNER WALL.

G30032 S0006583388_V2

Drag Link Spherical Bearing
Figure 1 (Sheet 1 of 2)

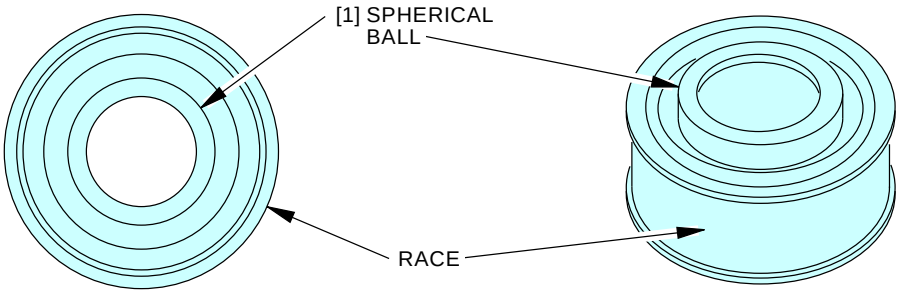
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-01-01



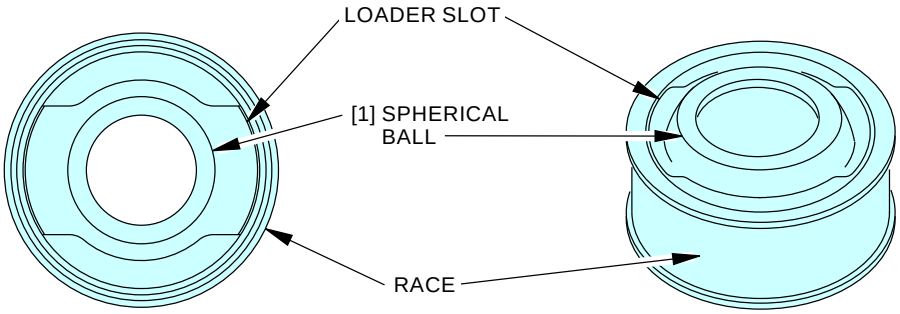
G32769 S0006583389_V2

Drag Link Spherical Bearing
Figure 1 (Sheet 2 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-01-01



BEARING WITH NON-REMOVABLE BALL



BEARING WITH REMOVABLE BALL

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Spherical Bearing Type
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE DRAG LINK'S SPHERICAL BEARING			**78-060-02-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	**1.1**	**12000 FH**	**12000 FH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		423 424 425 426			**425 426**

Detailed inspection of the right engine thrust reverser drag link spherical bearings.

A. References

Reference	Title
AMM 27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
AMM 71-11-02-410-801-F00	Close the Fan Cowl Panels (P/B 201)
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-440-803-F00	Thrust Reverser Activation After Ground Maintenance (P/B 201)
AMM 78-31-00-980-803-F00	Thrust Reverser Operation - Extend (Manual Procedure) (P/B 201)
AMM 78-31-00-980-804-F00	Thrust Reverser Operation - Retract (Manual Procedure) (P/B 201)
AMM 78-31-00-980-805-F00	Thrust Reverser Operation - Extend (Power Procedure) (P/B 201)
AMM 78-31-00-980-806-F00	Thrust Reverser Operation - Retract (Power Procedure) (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-02-01

MECH | INSP

TASK 78-31-07-900-801-F00

1. Remove and Inspect the Drag Link Spherical Bearing

(Figure 1)

A. General

(1) This is a scheduled maintenance task to examine the ball and the spherical bearing race in the drag link.

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Ball	78-31-51-10-068	AKS ALL

C. Prepare for the procedure

SUBTASK 78-31-07-010-008-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

SUBTASK 78-31-07-980-005-F00

CAUTION: DO NOT MANUALLY EXTEND THE INBOARD THRUST REVERSER SLEEVE MORE THAN 10.0 INCHES (25.4 CM). MAKE SURE THAT THE LEADING EDGE FLAPS ARE COMPLETELY RETRACTED AND MONITOR THE POSITION OF THE THRUST REVERSER SLEEVE AS IT IS EXTENDED SO THAT IT WILL NOT TOUCH THE LEADING EDGE OF THE WING. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Do these steps to expose the hardware that attaches the drag link to the blocker door:

NOTE: The sleeve must be partially extended to release the load on the drag link and expose the hardware that attaches the drag link to the blocker door.

(a) For the inboard thrust reverser sleeve, do these steps to manually extend the thrust reverser sleeve:

1) Make sure that the leading edge flaps are completely retracted.

NOTE: Without hydraulics to hold the flaps in the retract position, the weight of the flaps can cause them to extend a small amount.

2) Monitor the position of the thrust reverser sleeve as it is extended to make sure that it does not touch the leading edge of the wing.

3) Manually extend the thrust reverser sleeve no more than 10 in. (25.4 cm) from the forward edge of the torque box.

4) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-060-02-01

MECH	INSP

(b) For the outboard thrust reverser sleeve, manually extend the thrust reverser sleeve approximately 10 in. (25.4 cm).

NOTE: The outboard thrust reverser sleeve will not touch the leading edge of the wing.

1) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

D. Procedure

SUBTASK 78-31-07-840-001-F00

CAUTION: WHEN YOU WORK IN THE FAN DUCT, USE SUFFICIENT PROTECTION. IF TOOLS OR THE DRAG LINKS FALL OR HIT THE BLOCKER DOORS AND FAN DUCT WALLS, DAMAGE TO THE COMPOSITE PANELS CAN OCCUR.

(1) For each of the drag links, do these steps to examine the drag link and the spherical bearing:

(a) Put protective material on the fan duct walls and blocker doors.

SUBTASK 78-31-07-210-001-F00

(2) Examine the drag links to look for these conditions:

NOTE: Record the drag link location and condition.

(a) Loose nuts on the drag link bolts.

(b) Drag link bolts that have a shank length that is too long.

(c) Bushings in the pivot link of the blocker doors that are worn.

(d) Bushings in the drag link anchor fittings that are worn.

(e) The race of the spherical bearings that are loose in the drag link.

(f) Pivot links or anchor fittings that have cracks or other damage.

(g) If you find one or more of the problems, then repair or replace the drag link.

SUBTASK 78-31-07-640-001-F00

(3) Do these steps to examine the ball [1] and the spherical bearing race:

(a) Put cotton wiper, G00034 around the anchor fitting and drag link at the inner wall.

NOTE: When the drag link is disconnected from the blocker door, it can move forward or aft and fall against the inner wall. This can cause damage to the inner wall composite panel.

(b) Remove the nut, two washers, bushing and bolt that attach the drag link to the pivot link on the blocker door.

(c) See if the spherical bearing has a removable ball (Figure 2).

NOTE: The ball is removable on spherical bearings with loader slots. The ball is not removable on liner spherical bearings.

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A REMOVABLE BALL

SUBTASK 78-31-07-210-002-F00

(4) Examine the ball [1] and the bearing race for pits or scratches (Figure 2).

NOTE: The spherical bearing consists of a ball and a race.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-060-02-01

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A REMOVABLE BALL (Continued)

MECH | INSP

(a) Turn the ball [1] until it will come out of the race of the spherical bearing.

(b) Use a cotton wiper, G00034 to clean the ball [1].

(c) Use a cotton wiper, G00034 to clean the race of the bearing race.

(d) If the ball [1] has pits or scratches, then replace the ball [1].

(e) If the bearing race has pits or scratches, then replace the spherical bearing.

(f) Install the ball [1] in the spherical bearing.

NOTE: The re-application of the solid film lubricant is not recommended.

AKS ALL; DRAG LINK SPHERICAL BEARINGS WITH A NON-REMOVABLE BALL

SUBTASK 78-31-07-210-003-F00

(5) Examine the ball [1] and the bearing race for pits, scratches, tears in the liner or missing linear (Figure 2).

NOTE: The spherical bearing consists of a ball and a race. The ball is not removable on the liner spherical bearing. The liner is attached to the inside of the race.

(a) Turn the ball [1] 90 degrees, use a cotton wiper, G00034 to clean the ball [1].

(b) If the ball [1] has pits or scratches, then replace the drag link.

(c) If you find tears in the liner or missing liner on the race, replace the drag link.

NOTE: The liner material from the race may transfer to the ball which will be light brown in color. Transfer of liner material on to the ball is satisfactory. The liner bearing will not corrode, therefore liner material, dirt, and/or grease should not be mistaken as corrosion on the bearing.

NOTE: The re-application of the solid film lubricant is not recommended.

AKS ALL

SUBTASK 78-31-07-420-002-F00

(6) Attach the drag link to the translating sleeve.

(a) Align the drag link with the pivot link on the blocker door.

1) Install the bushing, two washers, bolt and nut.

a) Tighten the nut to 160 in-lb (18.1 N·m)-240 in-lb (27.1 N·m).

(b) Remove the cotton wiper, G00034 from the anchor fitting at the inner wall and the protective material from the fan duct walls and blocker doors.

(c) Manually retract the thrust reverser sleeve (AMM TASK 78-31-00-980-804-F00).

SUBTASK 78-31-07-410-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS, BUT DO NOT DO THE THRUST REVERSER OR LEADING EDGE ACTIVATION. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(7) Close and latch the thrust reverser, but do not do the thrust reverser or leading edge activation and do not close the fan cowl panels at this time (Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00).

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-060-02-01

MECH	INSP

SUBTASK 78-31-07-980-006-F00

(8) Manually translate the sleeve through an extend and retract cycle.

(a) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

(b) Do this task: Thrust Reverser Operation - Retract (Manual Procedure), AMM TASK 78-31-00-980-804-F00.

(c) Make sure that the blocker doors and drag links move smoothly.

E. Installation Test

SUBTASK 78-31-07-440-001-F00

(1) Do this task: Thrust Reverser Activation After Ground Maintenance, AMM TASK 78-31-00-440-803-F00.

SUBTASK 78-31-07-710-002-F00

(2) Operate the thrust reverser through an extend and retract cycle to make sure that the blocker doors and drag links operate correctly.

(a) Do this task: Thrust Reverser Operation - Extend (Power Procedure), AMM TASK 78-31-00-980-805-F00.

(b) Do this task: Thrust Reverser Operation - Retract (Power Procedure), AMM TASK 78-31-00-980-806-F00.

(c) Make sure that the blocker doors and drag links operate correctly.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 78-31-07-410-005-F00

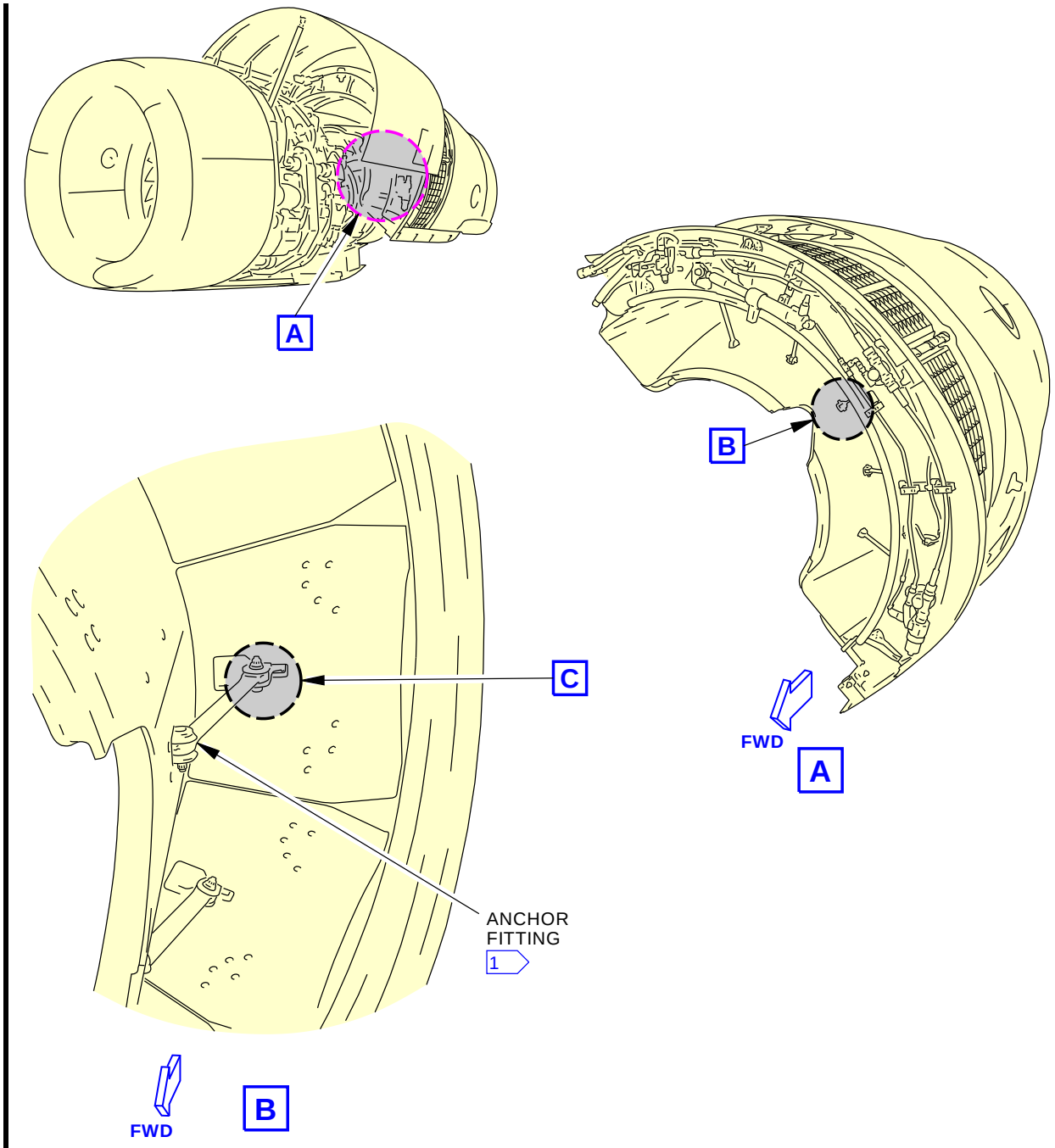
(1) Do this task: Close the Fan Cowl Panels, AMM TASK 71-11-02-410-801-F00.

SUBTASK 78-31-07-440-002-F00

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

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-02-01

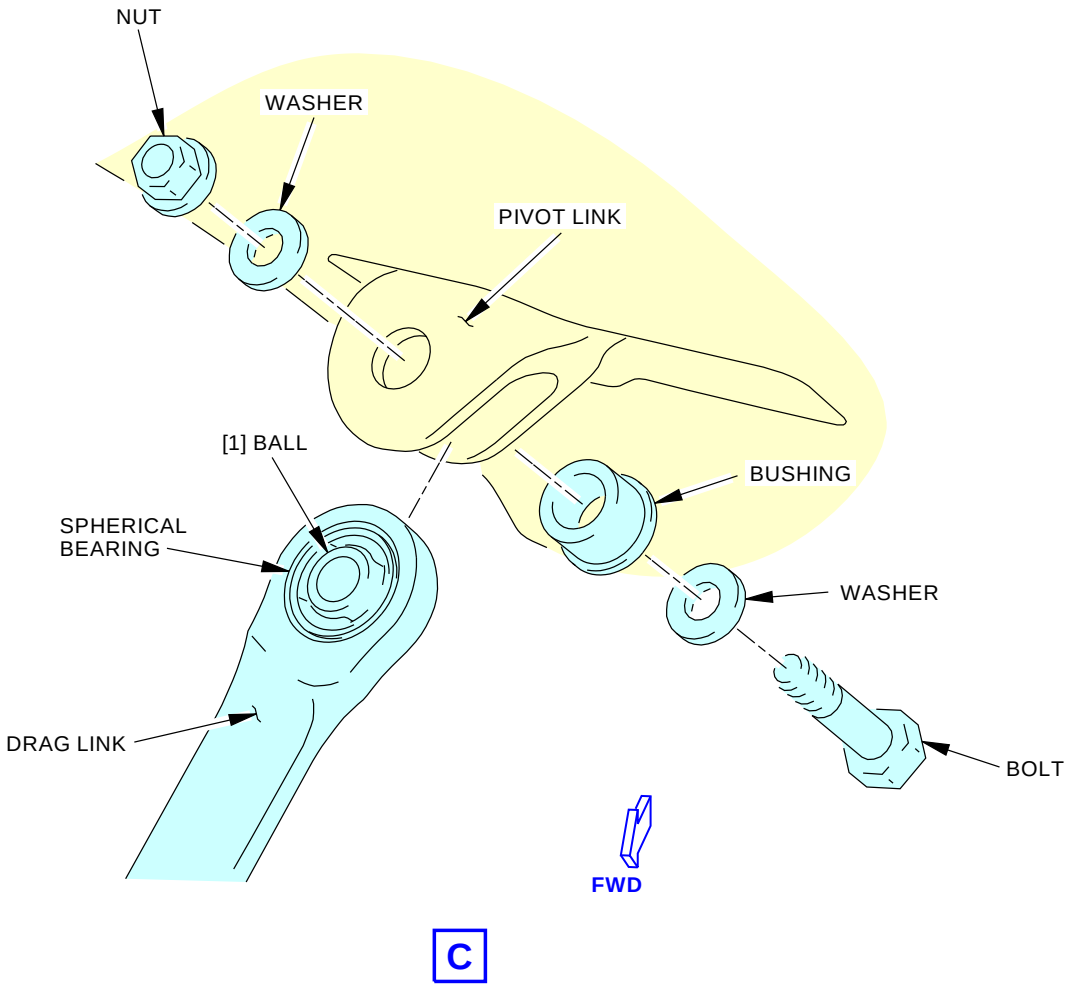


1 WRAP CLOTH AROUND THE ANCHOR FITTING TO PROTECT THE INNER WALL.

G30032 S0006583388_V2

Drag Link Spherical Bearing
Figure 1 (Sheet 1 of 2)

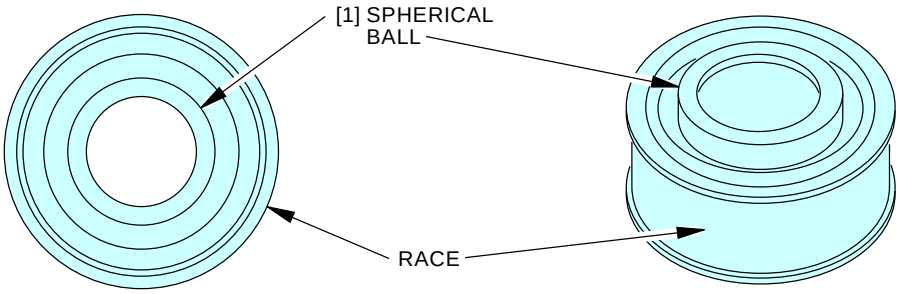
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-02-01



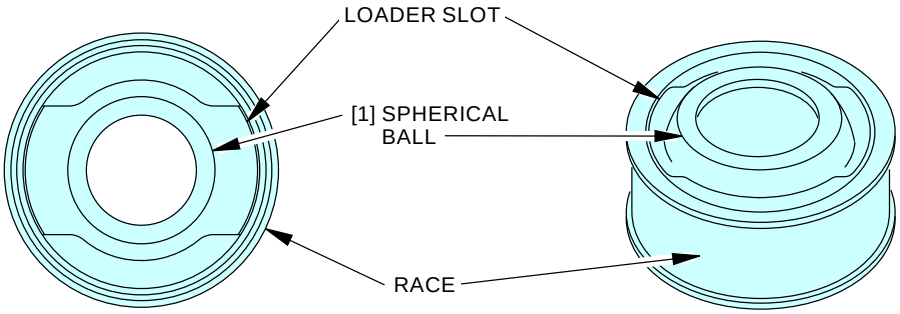
G32769 S0006583389_V2

Drag Link Spherical Bearing
Figure 1 (Sheet 2 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-060-02-01



BEARING WITH NON-REMOVABLE BALL



BEARING WITH REMOVABLE BALL

D85886 S0000163877_V2

Spherical Bearing Type
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE BLOCKER DOORS			**78-070-01-01**
DATE	TASK				RELATED CARD
	VISUAL CHECK				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	**1.1**	**12000 FH**	**12000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		413 414 415 416			**415 416**

Visually check the left engine blocker doors.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-980-801-F00	Thrust Reverser Operation - Extend (Selection) (P/B 201)
AMM 78-31-00-980-802-F00	Thrust Reverser Operation - Retract (Selection) (P/B 201)
AMM 78-31-01-960-803-F00	Blocker Door Support Assembly Replacement (P/B 801)
AMM 78-31-06-000-801-F00	Blocker Door Removal (P/B 401)
AMM 78-31-06-400-801-F00	Blocker Door Installation (P/B 401)
SL 737-SL-78-053-A	Trust Reverser Blocker Door Wear Pad Separation

B. Consumable Materials

Reference	Description	Specification
A01054	Adhesive - Modified Epoxy	BMS5-92 Type V
A01085	Adhesive - Epoxy, High Temperature Resistant, 2 Part	BAC5010 Type 111 (BMS5-141)
B00065	Alcohol - Denatured, Ethyl (Ethanol)	AMS 3002 (Supersedes O-A-396)
B50073	Alcohol - Isopropyl	ASTM D 770
C00766	Primer - Nonchromated Primer For Composites	BMS10-103 Type I
G50381	Abrasive - Aluminum Oxide Paper, 180 Grit	

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-01-01

MECH | INSP

TASK 78-31-06-200-801-F00

1. Blocker Door Inspection (Visual)

(Figure 1 and Figure 2)

A. General

(1) This is a task to do a visual check of the blocker doors.

(a) A composite blocker door or an aluminum blocker door may be installed.

B. Prepare for the Inspection

SUBTASK 78-31-06-010-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THIS PROCEDURE WHEN YOU OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Procedure

SUBTASK 78-31-06-210-001-F00

(1) Look for missing blocker doors:

(a) If you find missing blocker doors, replace the blocker doors.

These are the tasks:

1) Blocker Door Removal, AMM TASK 78-31-06-000-801-F00

2) Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

SUBTASK 78-31-06-210-002-F00

(2) Examine the blocker doors for the damage that follows:

NOTE: Refer to SRM 54–30–01 for allowable damage limits.

(a) Holes

Cracks

Nicks

Gouges

Scratches

Dents

Edge Damage

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

Delamination

1) If you find damage, replace the blocker door.

a) Blocker Door Removal, AMM TASK 78-31-06-000-801-F00

b) Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

NOTE: Composite blocker doors may be repaired in accordance with SRM 54–30–01 and returned to service.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-01-01

MECH	INSP

AKS ALL; AIRPLANES WITH ALUMINUM BLOCKER DOORS

2) If you find damage, contact Boeing Customer Service for the permitted limits and repair procedures.

AKS ALL

SUBTASK 78-31-06-860-002-F00

(3) Do this task: Thrust Reverser Operation - Extend (Selection), AMM TASK 78-31-00-980-801-F00.

SUBTASK 78-31-06-210-004-F00

(4) Visually examine the aft surface of each blocker door for missing wear pads.

NOTE: It may be necessary to use a mirror to see all areas.

NOTE: Blocker doors, P/N 315A2510-9 and -10, 315A2512-15 and -17, and 315A2512-16 and -18, 315A2535-1 and -2, 315A2535-3 and -4 do not have wear pads on the blocker door (SL 737-SL-78-053-A).

NOTE: Check the part number of the blocker door before installation of a wear pad that appears to be missing. Blocker doors without wear pads can look almost the same as blocker doors with missing wear pads.

(a) If you find a wear pad missing, do the steps that follow:

NOTE: Wear pad replacement requires removal of the blocker door.

1) Make a record of each location where a wear pad is missing.

2) For each affected blocker door location, do this task: Blocker Door Removal, AMM TASK 78-31-06-000-801-F00.

3) If the wear pad is partially installed or is loose, remove it from the blocker door.

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

NOTE: Wear pad removal can cause delamination of the blocker door.

AKS ALL

a) Remove the worn or damage wear pad from the bond assembly.

4) Visually check the blocker door for delamination at the wear pad location.

a) If you find delamination, replace the blocker door.

5) Install the wear pad to the blocker door:

a) Lightly abrade the mating surfaces of the wear pad and the blocker door with 180 grit abrasive paper, G50381 to remove gloss and any contaminants.

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

NOTE: Do not abrade into fibers.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-01-01

AKS ALL

MECH | INSP

b) Clean with alcohol, B50073 or alcohol, B00065.

c) Apply adhesive, A01054 to the wear pad.

NOTE: The adhesive, A01054 is the preferred adhesive for in-service replacement of the wear pad. The adhesive, A01085 is the alternate adhesive.

<1> Make sure bondline thickness is 0.003-0.010 inches.

<2> Make sure a fillet of adhesive extends out around the part after squeeze out.

d) Let the adhesive cure.

e) Apply primer, C00766 to surfaces not covered with primer, support or adhesive.

6) For each affected blocker door location, do this task: Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

SUBTASK 78-31-06-210-003-F00

(5) Examine the blocker door support assemblies:

NOTE: The blocker door support assemblies are the two bumpers that are attached to the translating sleeve below the edge of the each blocker door.

(a) If one support assembly is missing below a blocker door, then the Continue-In-Service limit is a maximum of 14 days.

NOTE: The limit of 14 days is an action to prevent damage. The limit makes it necessary for the replacement of the first missing support because it is possible that the second support could also become detached. Two blocker door supports prevent the vibration of the closed blocker door. One blocker door support is permitted because the door is supported. If the second support were to also become detached, the blocker door will vibrate which will cause wear and damage to the blocker door and the thrust reverser sleeve.

(b) If two support assemblies are missing below a blocker door, then replace the support assemblies (AMM TASK 78-31-01-960-803-F00).

NOTE: Continued operation, for a maximum of 14 days, is permitted if one support assembly is re-installed. If a new part is not available, one support assembly from an adjacent door, that has two support assemblies, can be removed and installed.

SUBTASK 78-31-06-860-003-F00

(6) Do this task: Thrust Reverser Operation - Retract (Selection), AMM TASK 78-31-00-980-802-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-01-01

MECH	INSP

D. Put the Airplane Back to Its Usual Condition

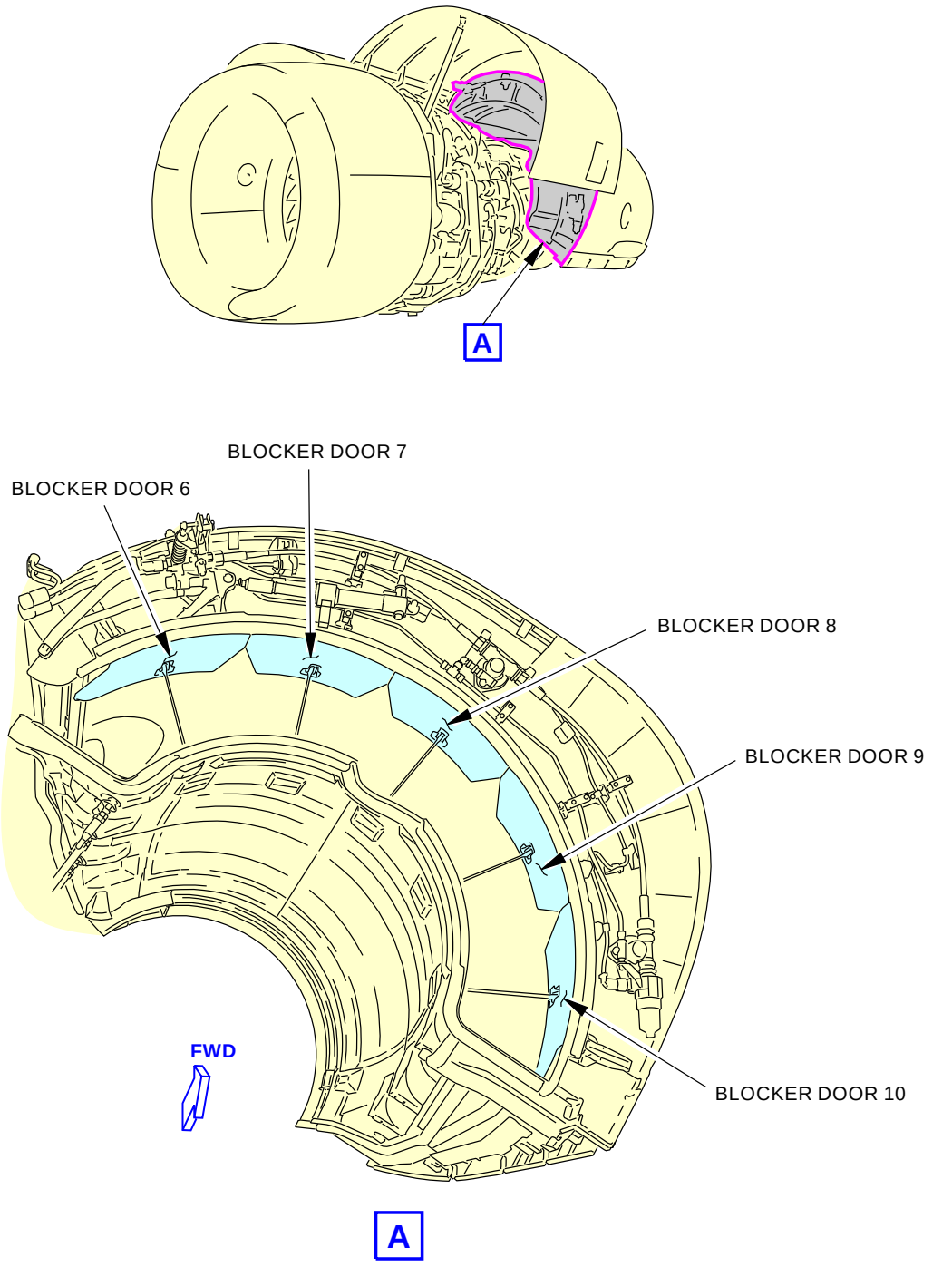
SUBTASK 78-31-06-410-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THIS PROCEDURE WHEN YOU CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

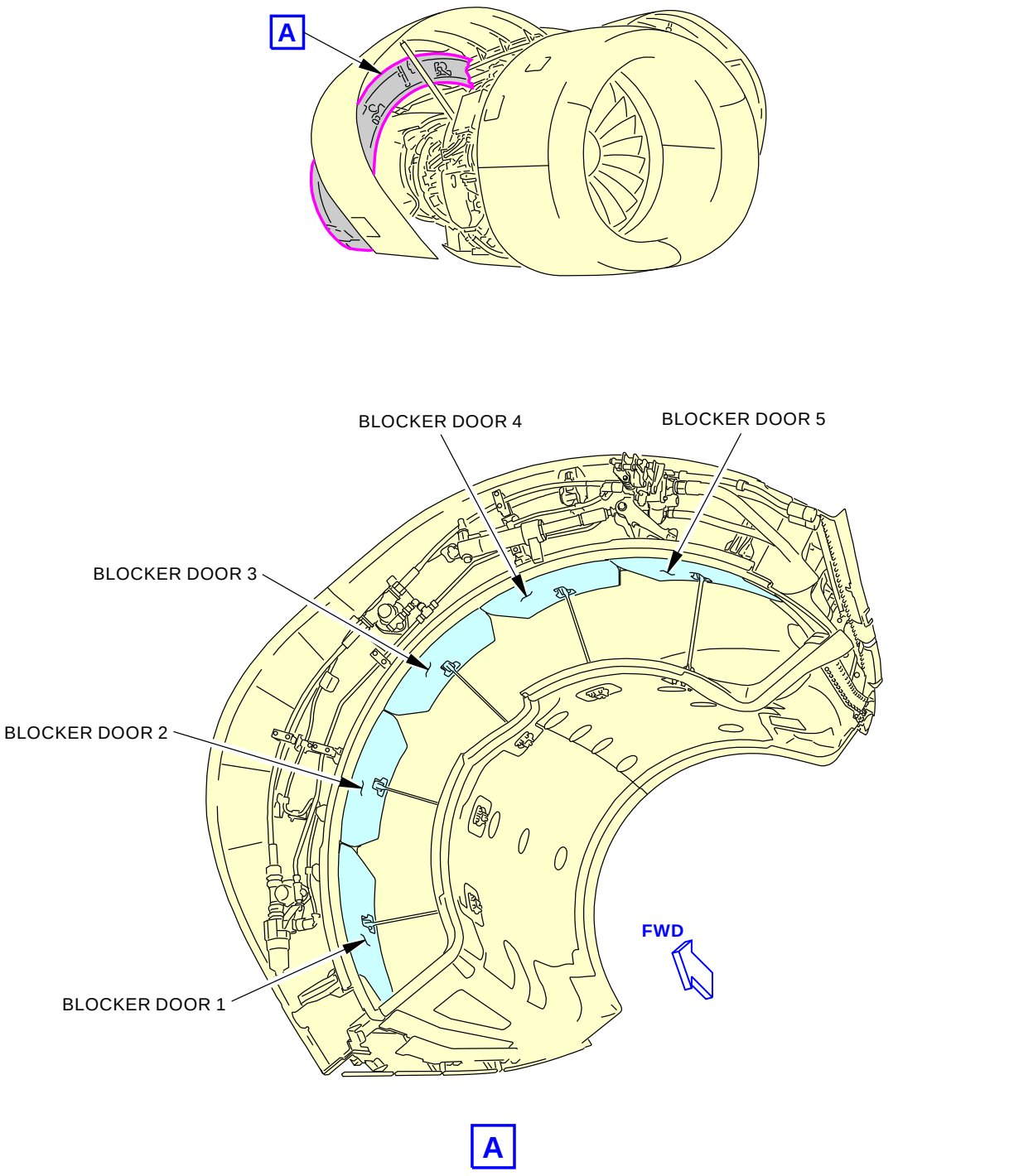
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-01-01



Left Thrust Reverser Blocker Door Inspection
Figure 1

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-01-01



Right Thrust Reverser Blocker Door Inspection
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE BLOCKER DOORS			**78-070-02-01**
DATE	TASK				RELATED CARD
	VISUAL CHECK				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	**1.1**	**12000 FH**	**12000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		423 424 425 426			**425 426**

Visually check the right engine blocker doors.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-980-801-F00	Thrust Reverser Operation - Extend (Selection) (P/B 201)
AMM 78-31-00-980-802-F00	Thrust Reverser Operation - Retract (Selection) (P/B 201)
AMM 78-31-01-960-803-F00	Blocker Door Support Assembly Replacement (P/B 801)
AMM 78-31-06-000-801-F00	Blocker Door Removal (P/B 401)
AMM 78-31-06-400-801-F00	Blocker Door Installation (P/B 401)
SL 737-SL-78-053-A	Trust Reverser Blocker Door Wear Pad Separation

B. Consumable Materials

Reference	Description	Specification
A01054	Adhesive - Modified Epoxy	BMS5-92 Type V
A01085	Adhesive - Epoxy, High Temperature Resistant, 2 Part	BAC5010 Type 111 (BMS5-141)
B00065	Alcohol - Denatured, Ethyl (Ethanol)	AMS 3002 (Supersedes O-A-396)
B50073	Alcohol - Isopropyl	ASTM D 770
C00766	Primer - Nonchromated Primer For Composites	BMS10-103 Type I
G50381	Abrasive - Aluminum Oxide Paper, 180 Grit	

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-02-01

MECH | INSP

TASK 78-31-06-200-801-F00

1. Blocker Door Inspection (Visual)

(Figure 1 and Figure 2)

A. General

(1) This is a task to do a visual check of the blocker doors.

(a) A composite blocker door or an aluminum blocker door may be installed.

B. Prepare for the Inspection

SUBTASK 78-31-06-010-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THIS PROCEDURE WHEN YOU OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Procedure

SUBTASK 78-31-06-210-001-F00

(1) Look for missing blocker doors:

(a) If you find missing blocker doors, replace the blocker doors.

These are the tasks:

1) Blocker Door Removal, AMM TASK 78-31-06-000-801-F00

2) Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

SUBTASK 78-31-06-210-002-F00

(2) Examine the blocker doors for the damage that follows:

NOTE: Refer to SRM 54–30–01 for allowable damage limits.

(a) Holes

Cracks

Nicks

Gouges

Scratches

Dents

Edge Damage

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

Delamination

1) If you find damage, replace the blocker door.

a) Blocker Door Removal, AMM TASK 78-31-06-000-801-F00

b) Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

NOTE: Composite blocker doors may be repaired in accordance with SRM 54–30–01 and returned to service.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-02-01

MECH	INSP

AKS ALL; AIRPLANES WITH ALUMINUM BLOCKER DOORS

2) If you find damage, contact Boeing Customer Service for the permitted limits and repair procedures.

AKS ALL

SUBTASK 78-31-06-860-002-F00

(3) Do this task: Thrust Reverser Operation - Extend (Selection), AMM TASK 78-31-00-980-801-F00.

SUBTASK 78-31-06-210-004-F00

(4) Visually examine the aft surface of each blocker door for missing wear pads.

NOTE: It may be necessary to use a mirror to see all areas.

NOTE: Blocker doors, P/N 315A2510-9 and -10, 315A2512-15 and -17, and 315A2512-16 and -18, 315A2535-1 and -2, 315A2535-3 and -4 do not have wear pads on the blocker door (SL 737-SL-78-053-A).

NOTE: Check the part number of the blocker door before installation of a wear pad that appears to be missing. Blocker doors without wear pads can look almost the same as blocker doors with missing wear pads.

(a) If you find a wear pad missing, do the steps that follow:

NOTE: Wear pad replacement requires removal of the blocker door.

1) Make a record of each location where a wear pad is missing.

2) For each affected blocker door location, do this task: Blocker Door Removal, AMM TASK 78-31-06-000-801-F00.

3) If the wear pad is partially installed or is loose, remove it from the blocker door.

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

NOTE: Wear pad removal can cause delamination of the blocker door.

AKS ALL

a) Remove the worn or damage wear pad from the bond assembly.

4) Visually check the blocker door for delamination at the wear pad location.

a) If you find delamination, replace the blocker door.

5) Install the wear pad to the blocker door:

a) Lightly abrade the mating surfaces of the wear pad and the blocker door with 180 grit abrasive paper, G50381 to remove gloss and any contaminants.

AKS ALL; AIRPLANES WITH COMPOSITE BLOCKER DOORS

NOTE: Do not abrade into fibers.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-070-02-01

AKS ALL

MECH | INSP

b) Clean with alcohol, B50073 or alcohol, B00065.

c) Apply adhesive, A01054 to the wear pad.

NOTE: The adhesive, A01054 is the preferred adhesive for in-service replacement of the wear pad. The adhesive, A01085 is the alternate adhesive.

<1> Make sure bondline thickness is 0.003-0.010 inches.

<2> Make sure a fillet of adhesive extends out around the part after squeeze out.

d) Let the adhesive cure.

e) Apply primer, C00766 to surfaces not covered with primer, support or adhesive.

6) For each affected blocker door location, do this task: Blocker Door Installation, AMM TASK 78-31-06-400-801-F00.

SUBTASK 78-31-06-210-003-F00

(5) Examine the blocker door support assemblies:

NOTE: The blocker door support assemblies are the two bumpers that are attached to the translating sleeve below the edge of the each blocker door.

(a) If one support assembly is missing below a blocker door, then the Continue-In-Service limit is a maximum of 14 days.

NOTE: The limit of 14 days is an action to prevent damage. The limit makes it necessary for the replacement of the first missing support because it is possible that the second support could also become detached. Two blocker door supports prevent the vibration of the closed blocker door. One blocker door support is permitted because the door is supported. If the second support were to also become detached, the blocker door will vibrate which will cause wear and damage to the blocker door and the thrust reverser sleeve.

(b) If two support assemblies are missing below a blocker door, then replace the support assemblies (AMM TASK 78-31-01-960-803-F00).

NOTE: Continued operation, for a maximum of 14 days, is permitted if one support assembly is re-installed. If a new part is not available, one support assembly from an adjacent door, that has two support assemblies, can be removed and installed.

SUBTASK 78-31-06-860-003-F00

(6) Do this task: Thrust Reverser Operation - Retract (Selection), AMM TASK 78-31-00-980-802-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-02-01

MECH	INSP

D. Put the Airplane Back to Its Usual Condition

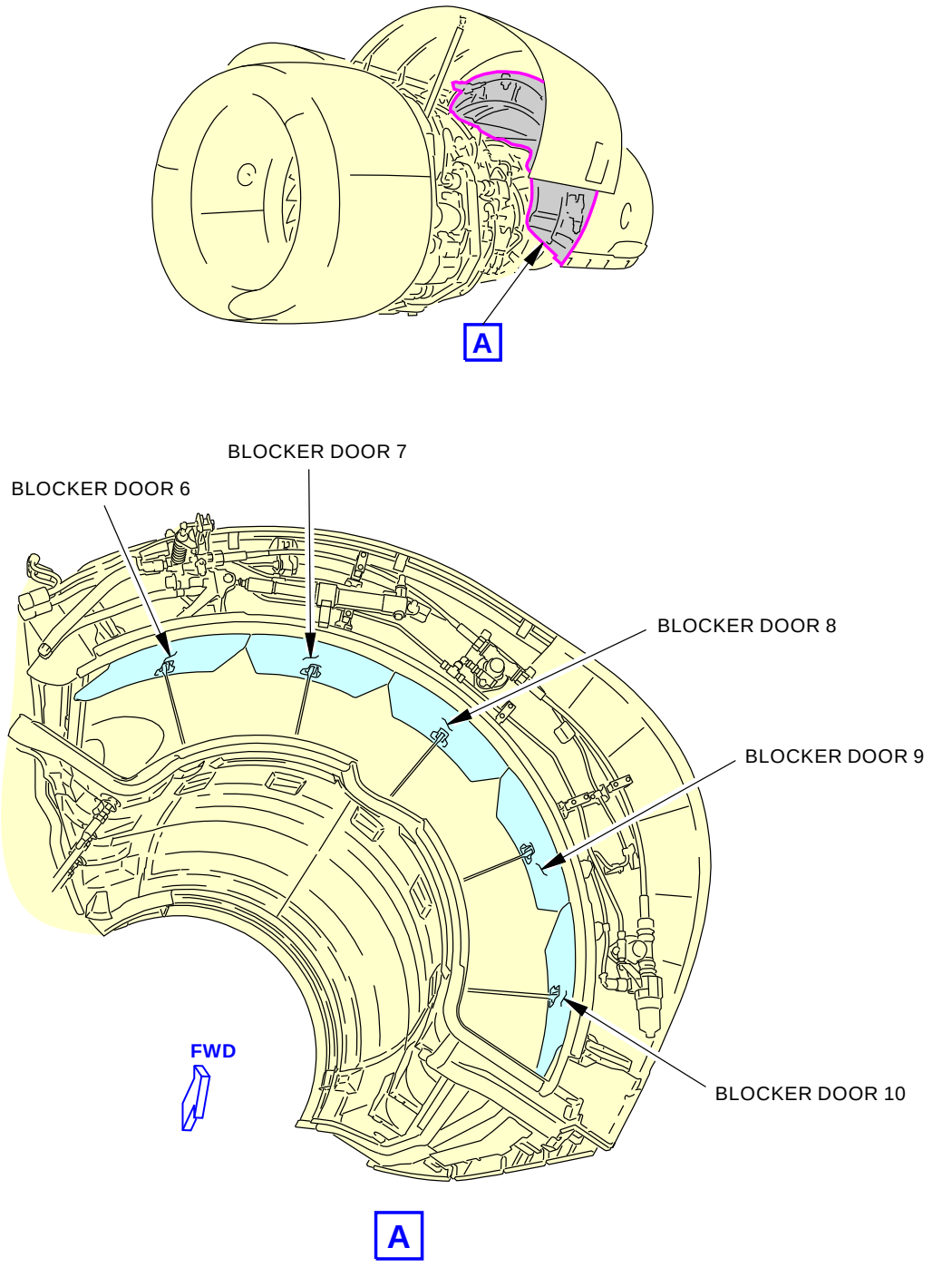
SUBTASK 78-31-06-410-001-F00

WARNING: OBEY THE INSTRUCTIONS IN THIS PROCEDURE WHEN YOU CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

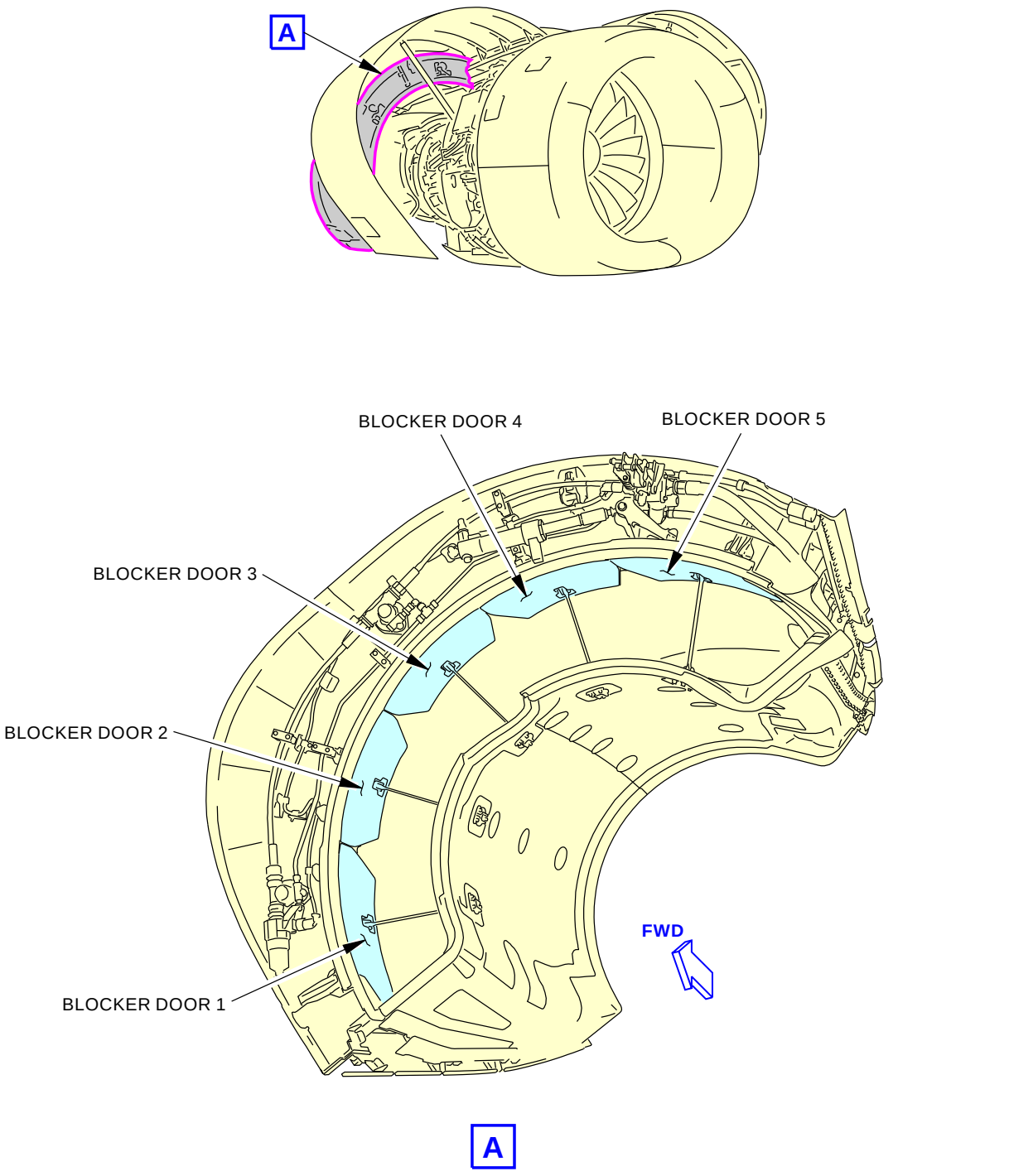
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-02-01



Left Thrust Reverser Blocker Door Inspection
Figure 1

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-070-02-01



Right Thrust Reverser Blocker Door Inspection
Figure 2

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE BULLNOSE SEAL AND RETAINER			**78-080-01-01**
DATE	TASK **VISUAL CHECK**				RELATED CARD
TAIL NUMBER	WORK AREA **LEFT ENGINE**	VERSION **1.1**	THRESHOLD **15000 FH**	REPEAT **15000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS **413 414 415 416**			ZONE **415 416**

Visually check the left engine bullnose seal and retainer.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-440-803-F00	Thrust Reverser Activation After Ground Maintenance (P/B 201)
AMM 78-31-00-980-803-F00	Thrust Reverser Operation - Extend (Manual Procedure) (P/B 201)
AMM 78-31-00-980-804-F00	Thrust Reverser Operation - Retract (Manual Procedure) (P/B 201)
AMM 78-31-23-000-801-F00	Bullnose Seal Removal (P/B 401)
AMM 78-31-23-400-801-F00	Bullnose Seal Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-080-01-01

TASK 78-31-23-200-801-F00

MECH | INSP

1. Bullnose Seal Inspection (Visual)

(Figure 1)

A. General

(1) This is a scheduled maintenance task to do a visual check of the bullnose seal and retainer.

(2) You must extend the thrust reverser sleeve to see the bullnose seal and retainer.

(3) The bullnose seal is installed along the full length of the inner wall of the translating sleeve, radially out from the forward edge of the blocker doors and radially in from the cascade segments.

B. Prepare for the Inspection

SUBTASK 78-31-23-010-002-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

SUBTASK 78-31-23-980-002-F00

CAUTION: DO NOT MANUALLY EXTEND THE INBOARD THRUST REVERSER SLEEVE MORE THAN 10.0 INCHES. MAKE SURE THAT THE LEADING EDGE FLAPS ARE COMPLETELY RETRACTED AND MONITOR THE POSITION OF THE THRUST REVERSER SLEEVE AS IT IS EXTENDED SO THAT IT WILL NOT TOUCH THE LEADING EDGE OF THE WING. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Do these steps to expose the bullnose seal:

NOTE: The sleeve must be partially extended to expose the bullnose seal.

(a) For the inboard thrust reverser sleeve, do these steps to manually extend the thrust reverser sleeve:

1) Make sure that the leading edge flaps are completely retracted.

NOTE: Without hydraulics to hold the flaps in the retract position, the weight of the flaps can cause them to extend a small amount.

2) Monitor the position of the thrust reverser sleeve as it is extended to make sure that it does not touch the leading edge of the wing.

3) Manually extend the thrust reverser sleeve no more than 10.0 inches (254.0 mm) from the forward edge of the torque box.

4) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-080-01-01

MECH	INSP

(b) For the outboard thrust reverser sleeve, manually extend the thrust reverser sleeve approximately 10.0 inches (254.0 mm).

NOTE: The outboard thrust reverser sleeve will not touch the leading edge of the wing.

1) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

C. Procedure

SUBTASK 78-31-23-210-001-F00

(1) Look through the forward end of the thrust reverser to examine the bullnose seal for damage:

(a) Missing material, cuts, gouges, and holes that extend through the bullnose seal.

1) Not serviceable - Replace the bullnose seal.

a) Do this task: Bullnose Seal Removal, AMM TASK 78-31-23-000-801-F00,

b) Do this task: Bullnose Seal Installation, AMM TASK 78-31-23-400-801-F00.

SUBTASK 78-31-23-210-002-F00

(2) Examine the bullnose seal retainer for damage:

(a) Missing metal or distortion.

1) Not serviceable - Replace the retainer (CMM 78-31-24).

SUBTASK 78-31-23-210-003-F00

(3) Do a check for missing or loose nuts that hold the retainer and blocker door hinge in their position.

(a) Missing or loose nuts

1) Not Serviceable - Replace or tighten the nuts that attach the blocker door hinge and the retainer.

a) Tighten the nuts to 20-30 pound-inches (2.3-3.4 Newton meters).

2) Replace or tighten the nuts that attach only the retainer.

a) Tighten the nuts to 20-30 pound-inches (2.3-3.4 Newton meters).

D. Put the Airplane Back to Its Usual Condition

SUBTASK 78-31-23-840-001-F00

(1) Do this task: Thrust Reverser Operation - Retract (Manual Procedure), AMM TASK 78-31-00-980-804-F00.

SUBTASK 78-31-23-410-002-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Close the thrust reverser, do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-080-01-01

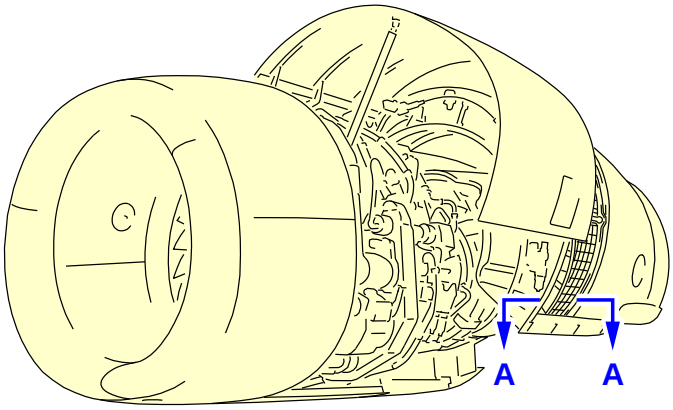
MECH	INSP

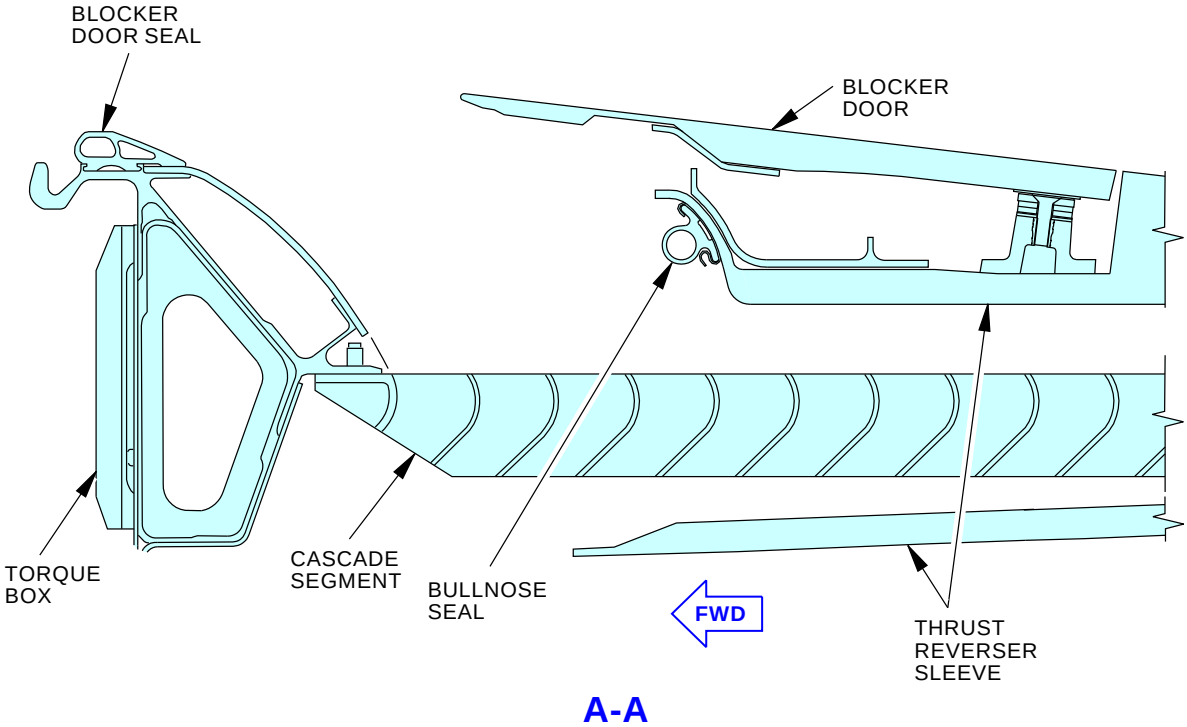
SUBTASK 78-31-23-440-001-F00

(3) Do this task: Thrust Reverser Activation After Ground Maintenance, AMM TASK 78-31-00-440-803-F00

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-080-01-01





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Bullnose Seal Inspection
Figure 1

EFFECTIVITY	SOURCE	
AKS ALL	**MRB**	**LEFT ENGINE BULLNOSE SEAL AND RETAINER**

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE BULLNOSE SEAL AND RETAINER			**78-080-02-01**
DATE	TASK				RELATED CARD
	VISUAL CHECK				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	**1.1**	**15000 FH**	**15000 FH**	AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		423 424 425 426			**425 426**

Visually check the right engine bullnose seal and retainer.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-440-803-F00	Thrust Reverser Activation After Ground Maintenance (P/B 201)
AMM 78-31-00-980-803-F00	Thrust Reverser Operation - Extend (Manual Procedure) (P/B 201)
AMM 78-31-00-980-804-F00	Thrust Reverser Operation - Retract (Manual Procedure) (P/B 201)
AMM 78-31-23-000-801-F00	Bullnose Seal Removal (P/B 401)
AMM 78-31-23-400-801-F00	Bullnose Seal Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-080-02-01

MECH	INSP

TASK 78-31-23-200-801-F00

1. Bullnose Seal Inspection (Visual)

(Figure 1)

A. General

(1) This is a scheduled maintenance task to do a visual check of the bullnose seal and retainer.

(2) You must extend the thrust reverser sleeve to see the bullnose seal and retainer.

(3) The bullnose seal is installed along the full length of the inner wall of the translating sleeve, radially out from the forward edge of the blocker doors and radially in from the cascade segments.

B. Prepare for the Inspection

SUBTASK 78-31-23-010-002-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANEL. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

SUBTASK 78-31-23-980-002-F00

CAUTION: DO NOT MANUALLY EXTEND THE INBOARD THRUST REVERSER SLEEVE MORE THAN 10.0 INCHES. MAKE SURE THAT THE LEADING EDGE FLAPS ARE COMPLETELY RETRACTED AND MONITOR THE POSITION OF THE THRUST REVERSER SLEEVE AS IT IS EXTENDED SO THAT IT WILL NOT TOUCH THE LEADING EDGE OF THE WING. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Do these steps to expose the bullnose seal:

NOTE: The sleeve must be partially extended to expose the bullnose seal.

(a) For the inboard thrust reverser sleeve, do these steps to manually extend the thrust reverser sleeve:

1) Make sure that the leading edge flaps are completely retracted.

NOTE: Without hydraulics to hold the flaps in the retract position, the weight of the flaps can cause them to extend a small amount.

2) Monitor the position of the thrust reverser sleeve as it is extended to make sure that it does not touch the leading edge of the wing.

3) Manually extend the thrust reverser sleeve no more than 10.0 inches (254.0 mm) from the forward edge of the torque box.

4) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-080-02-01

MECH	INSP

(b) For the outboard thrust reverser sleeve, manually extend the thrust reverser sleeve approximately 10.0 inches (254.0 mm).

NOTE: The outboard thrust reverser sleeve will not touch the leading edge of the wing.

1) Do this task: Thrust Reverser Operation - Extend (Manual Procedure), AMM TASK 78-31-00-980-803-F00.

C. Procedure

SUBTASK 78-31-23-210-001-F00

(1) Look through the forward end of the thrust reverser to examine the bullnose seal for damage:

(a) Missing material, cuts, gouges, and holes that extend through the bullnose seal.

1) Not serviceable - Replace the bullnose seal.

a) Do this task: Bullnose Seal Removal, AMM TASK 78-31-23-000-801-F00,

b) Do this task: Bullnose Seal Installation, AMM TASK 78-31-23-400-801-F00.

SUBTASK 78-31-23-210-002-F00

(2) Examine the bullnose seal retainer for damage:

(a) Missing metal or distortion.

1) Not serviceable - Replace the retainer (CMM 78-31-24).

SUBTASK 78-31-23-210-003-F00

(3) Do a check for missing or loose nuts that hold the retainer and blocker door hinge in their position.

(a) Missing or loose nuts

1) Not Serviceable - Replace or tighten the nuts that attach the blocker door hinge and the retainer.

a) Tighten the nuts to 20-30 pound-inches (2.3-3.4 Newton meters).

2) Replace or tighten the nuts that attach only the retainer.

a) Tighten the nuts to 20-30 pound-inches (2.3-3.4 Newton meters).

D. Put the Airplane Back to Its Usual Condition

SUBTASK 78-31-23-840-001-F00

(1) Do this task: Thrust Reverser Operation - Retract (Manual Procedure), AMM TASK 78-31-00-980-804-F00.

SUBTASK 78-31-23-410-002-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Close the thrust reverser, do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-080-02-01

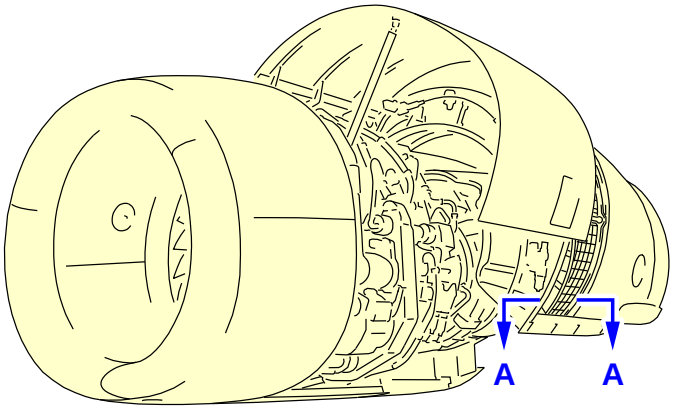
MECH	INSP

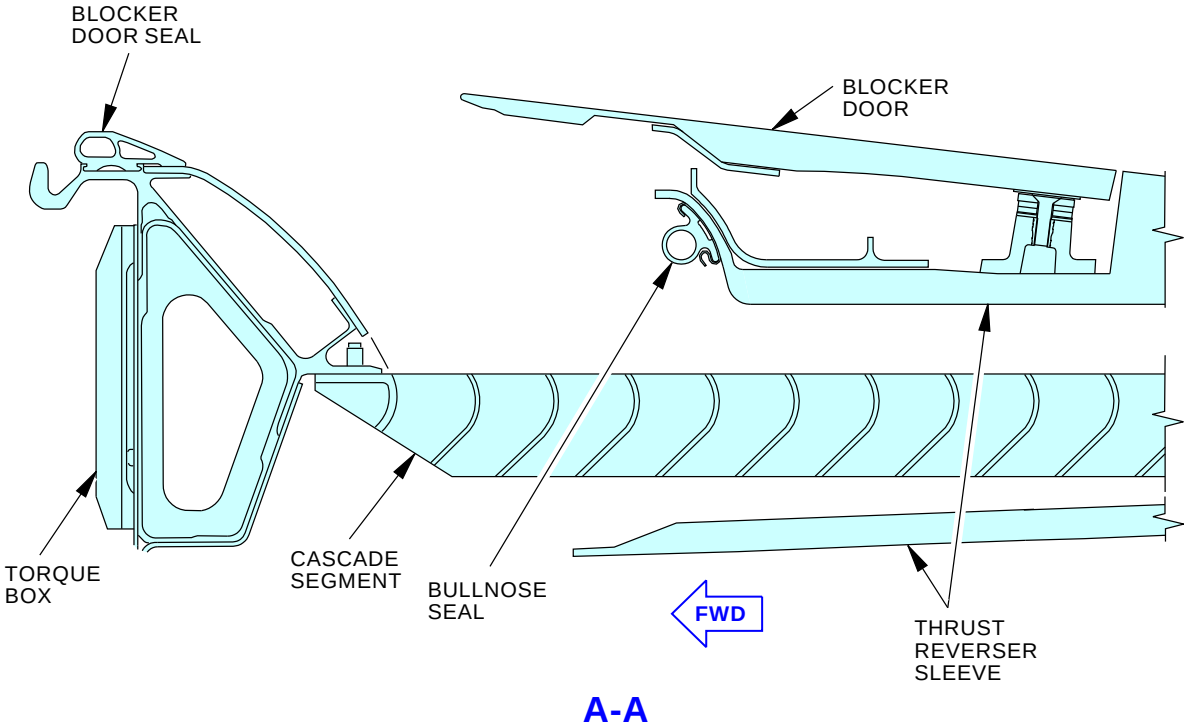
SUBTASK 78-31-23-440-001-F00

(3) Do this task: Thrust Reverser Activation After Ground Maintenance, AMM TASK 78-31-00-440-803-F00

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-080-02-01





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Bullnose Seal Inspection
Figure 1

EFFECTIVITY	SOURCE	RIGHT ENGINE BULLNOSE SEAL AND RETAINER
AKS ALL	MRB	D633A109-AKS 78-080-02-01

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE T/R FIRE SEAL			78-100-01-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	1.1	7500 FH	7500 FH	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		413 414 415 416			415 416

Detailed inspection of the left engine T/R fire seal.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-12-000-801-F00	Fireseal Removal (P/B 401)
AMM 78-31-12-400-801-F00	Fireseal Installation (P/B 401)
AMM 78-31-13-200-801-F00	Insulation Blanket Inspection (P/B 601)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-01-01

MECH | INSP

TASK 78-31-12-200-802-F00

1. Fireseal Inspection (Detailed)

(Figure 1)

A. General

(1) This is a scheduled maintenance task to do a detailed check of the fireseal.

(2) The fireseal is on the inner surface of each thrust reverser on an engine.

B. Prepare for the Inspection

SUBTASK 78-31-12-010-002-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: 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.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Procedure

SUBTASK 78-31-12-220-001-F00

(1) Visually examine the fireseal for damage:

(a) Cuts, frayed material, missing or loose fireseal, and missing sealant.

SUBTASK 78-31-12-960-001-F00

(2) If you find damage or missing fireseal, replace the fireseal.

(a) Do this task: Fireseal Removal, AMM TASK 78-31-12-000-801-F00.

(b) Do this task: Fireseal Installation, AMM TASK 78-31-12-400-801-F00.

SUBTASK 78-31-12-211-001-F00

(3) If there is damage to the vertical fire seal at the upper bifurcation, do this task:Insulation Blanket Inspection, AMM TASK 78-31-13-200-801-F00.

NOTE: On the vertical fire seal at the upper bifurcation, an internal splice is on the forward segment, approximately 10 in. (254 mm) from the top segment of the seal. Some fire seals have an internal splice at the top of the fire seal that could cause worn areas on the fire seal. Worn fire seals can cause decreased fire extinguishing function for the engine core. Worn or damaged fire seals can decrease fire containment under the thrust reverser. There can be damage to the thermal insulation blankets on the thrust reverser aft of the vertical fire seal. Damaged vertical fire seals are replaced with new fire seals that do not have an internal splice.

SUBTASK 78-31-12-390-002-F00

(4) If you find missing sealant, do the instructions in the task that follows to replace the sealant:

(a) Do this task: Fireseal Installation, AMM TASK 78-31-12-400-801-F00.

SUBTASK 78-31-12-220-002-F00

(5) Do a check for loose, missing, or damaged fireseal retainers.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-100-01-01

MECH	INSP

(a) If you find loose, missing, or damaged fireseal retainers, tighten or replace the fireseal retainers.

D. Put the Airplane Back to Its Usual Condition

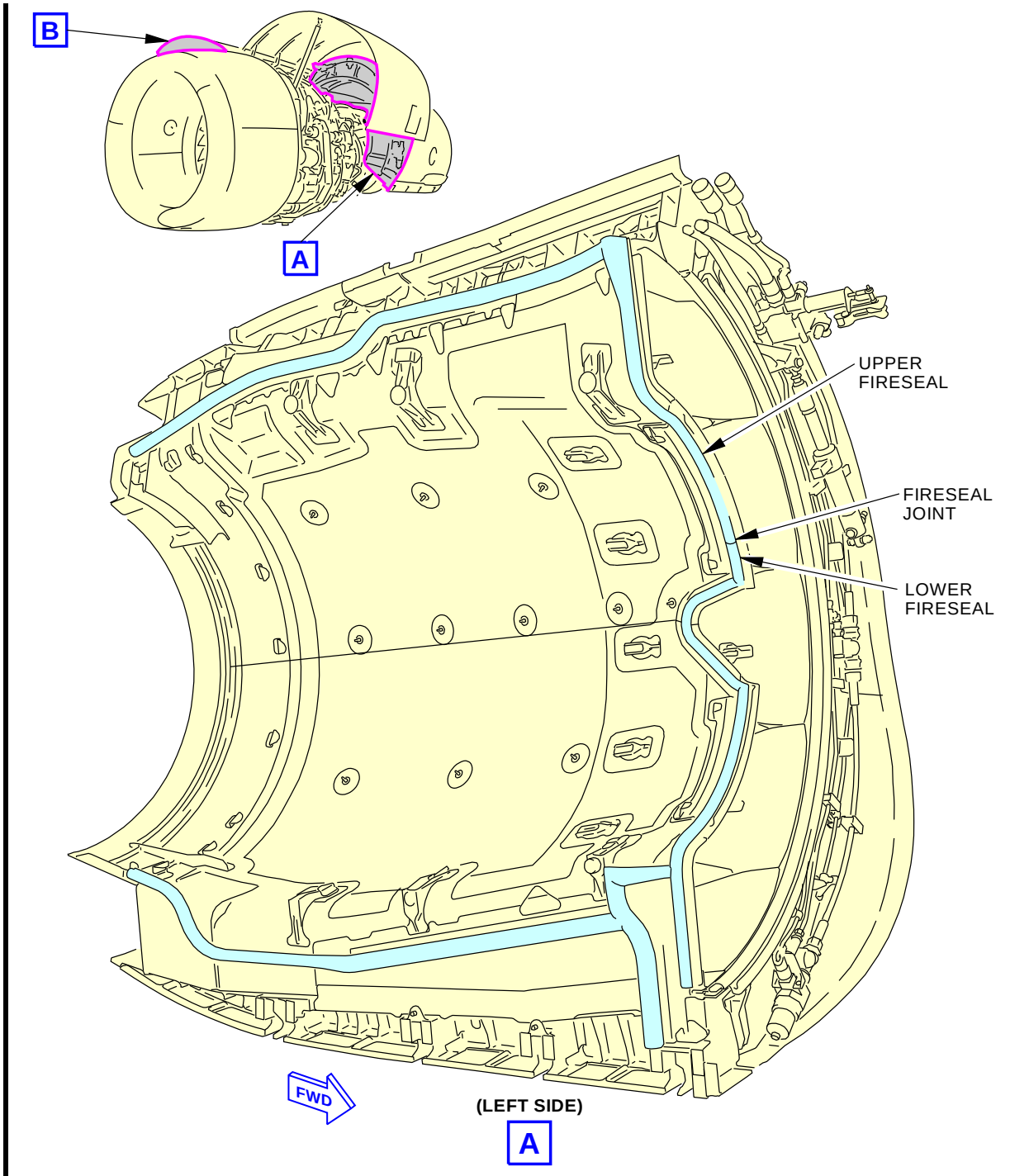
SUBTASK 78-31-12-410-002-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

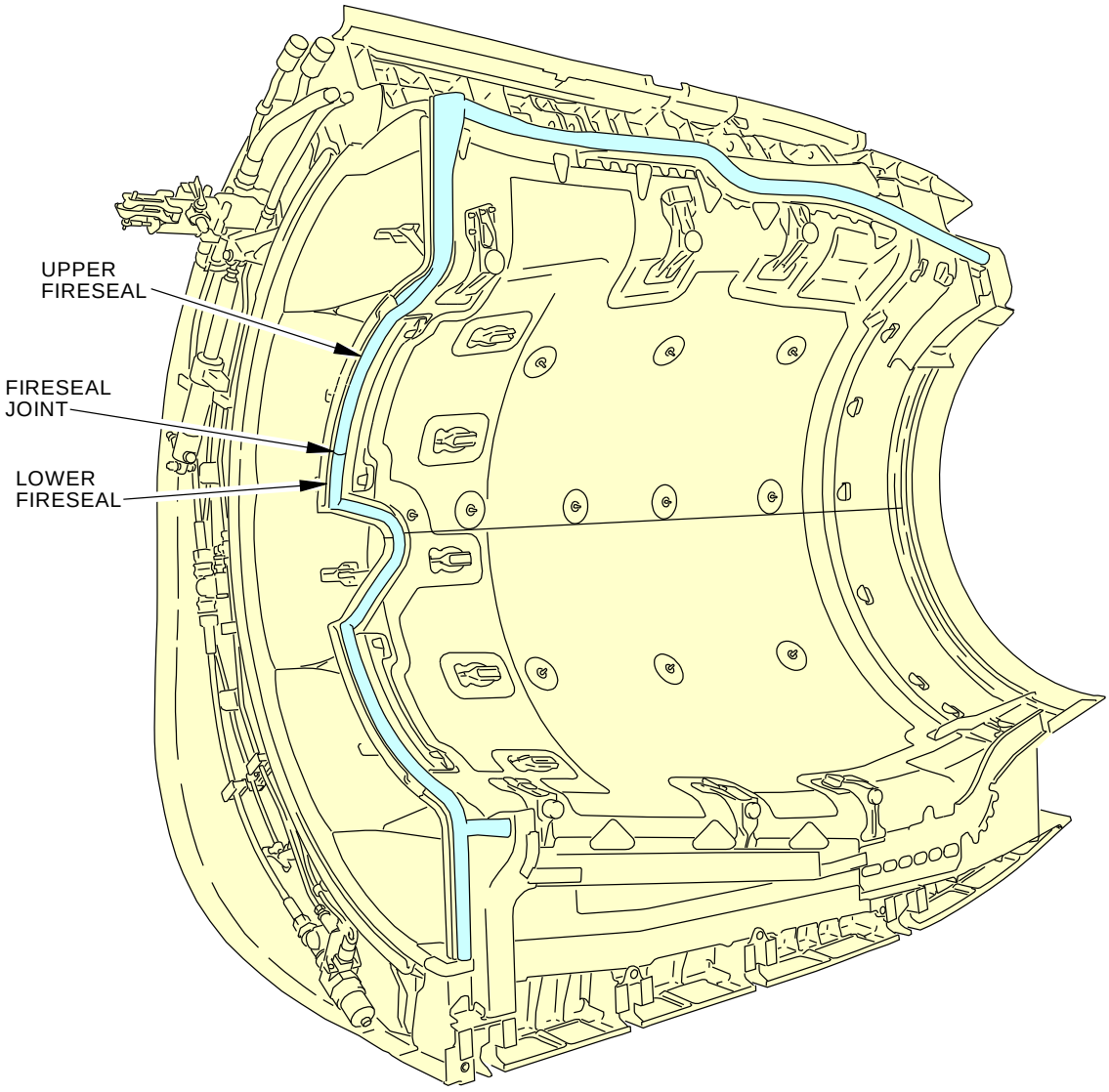
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-01-01



Thrust Reverser Fireseal Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-01-01



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Thrust Reverser Fireseal Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE T/R FIRE SEAL			78-100-02-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	1.1	7500 FH	7500 FH	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		423 424 425 426			425 426

Detailed inspection of the right engine T/R fire seal.

A. References

Reference	Title
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-12-000-801-F00	Fireseal Removal (P/B 401)
AMM 78-31-12-400-801-F00	Fireseal Installation (P/B 401)
AMM 78-31-13-200-801-F00	Insulation Blanket Inspection (P/B 601)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-02-01

MECH | INSP

TASK 78-31-12-200-802-F00

1. Fireseal Inspection (Detailed)

(Figure 1)

A. General

(1) This is a scheduled maintenance task to do a detailed check of the fireseal.

(2) The fireseal is on the inner surface of each thrust reverser on an engine.

B. Prepare for the Inspection

SUBTASK 78-31-12-010-002-F00

WARNING: DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: 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.

(1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Procedure

SUBTASK 78-31-12-220-001-F00

(1) Visually examine the fireseal for damage:

(a) Cuts, frayed material, missing or loose fireseal, and missing sealant.

SUBTASK 78-31-12-960-001-F00

(2) If you find damage or missing fireseal, replace the fireseal.

(a) Do this task: Fireseal Removal, AMM TASK 78-31-12-000-801-F00.

(b) Do this task: Fireseal Installation, AMM TASK 78-31-12-400-801-F00.

SUBTASK 78-31-12-211-001-F00

(3) If there is damage to the vertical fire seal at the upper bifurcation, do this task:Insulation Blanket Inspection, AMM TASK 78-31-13-200-801-F00.

NOTE: On the vertical fire seal at the upper bifurcation, an internal splice is on the forward segment, approximately 10 in. (254 mm) from the top segment of the seal. Some fire seals have an internal splice at the top of the fire seal that could cause worn areas on the fire seal. Worn fire seals can cause decreased fire extinguishing function for the engine core. Worn or damaged fire seals can decrease fire containment under the thrust reverser. There can be damage to the thermal insulation blankets on the thrust reverser aft of the vertical fire seal. Damaged vertical fire seals are replaced with new fire seals that do not have an internal splice.

SUBTASK 78-31-12-390-002-F00

(4) If you find missing sealant, do the instructions in the task that follows to replace the sealant:

(a) Do this task: Fireseal Installation, AMM TASK 78-31-12-400-801-F00.

SUBTASK 78-31-12-220-002-F00

(5) Do a check for loose, missing, or damaged fireseal retainers.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-100-02-01

MECH	INSP

(a) If you find loose, missing, or damaged fireseal retainers, tighten or replace the fireseal retainers.

D. Put the Airplane Back to Its Usual Condition

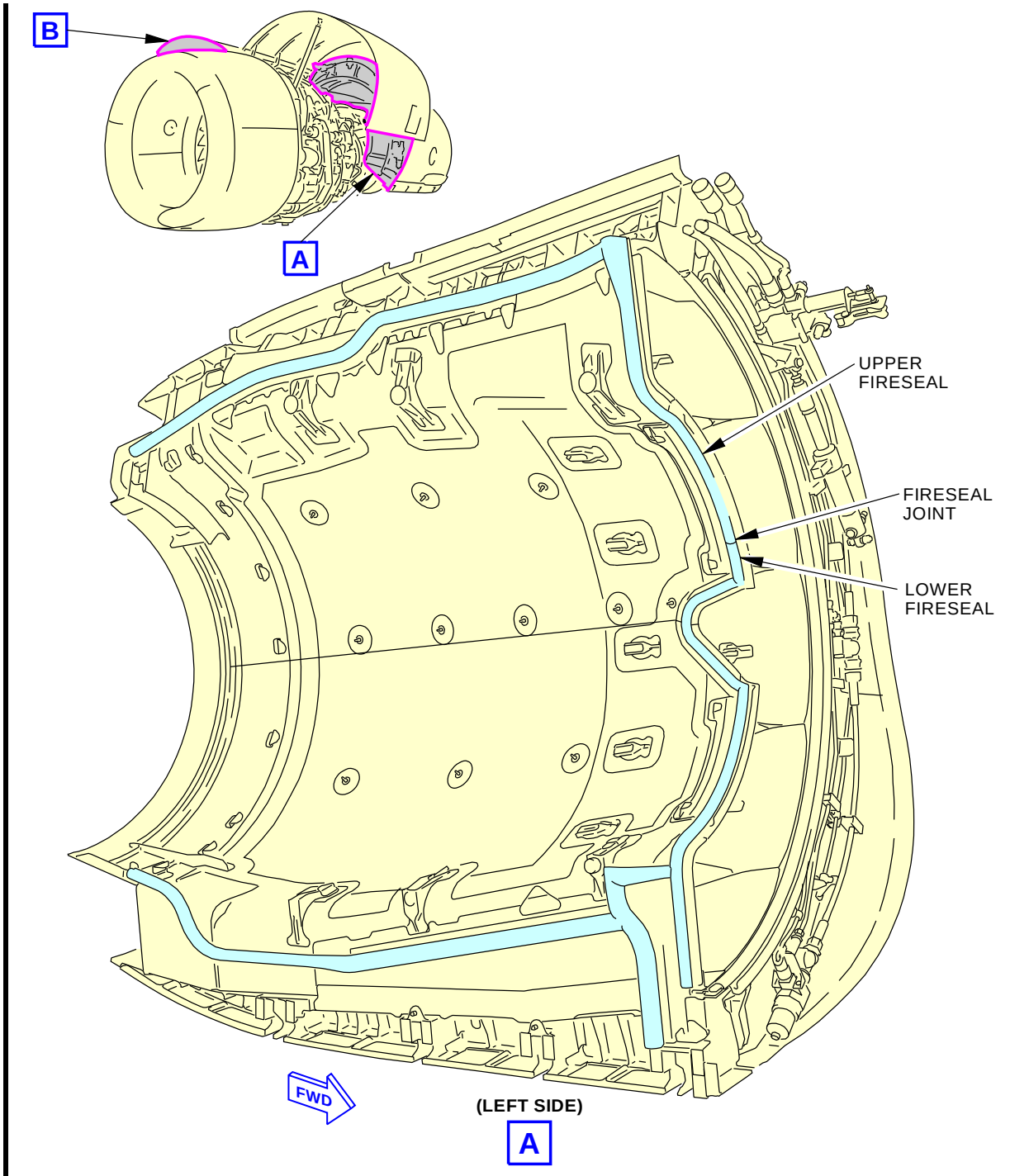
SUBTASK 78-31-12-410-002-F00

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

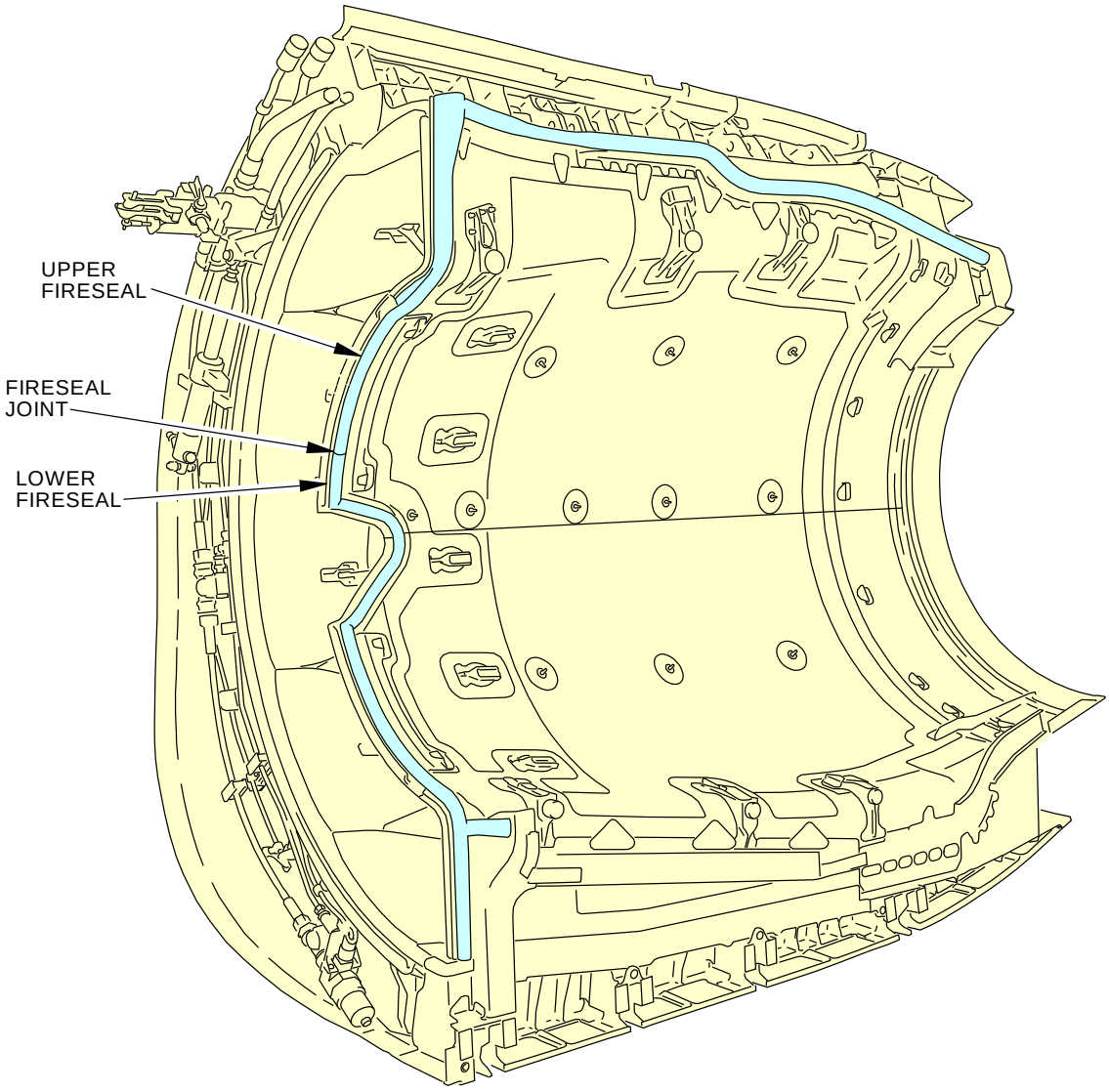
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-02-01



Thrust Reverser Fireseal Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-100-02-01



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Thrust Reverser Fireseal Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE T/R SYNC LOCK			**78-110-01-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	LEFT ENGINE	**1.1**	**5000 FH**	**5000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		117A			**117 118 415 416**

Perform an operational check of the left engine T/R sync lock.

SPECIAL NOTE: CMR task (78-CMR-01) interval for this task is 5000 FH. See MPD Section 9.

A. References

Reference	Title
AMM 29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
AMM 29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
AMM 78-34-10-000-801-F00	Thrust Reverser Sync Lock Removal (P/B 401)
AMM 78-34-10-400-801-F00	Thrust Reverser Sync Lock Installation (P/B 401)
FIM 78-31 TASK 801	Engine Accessory Unit (EAU) BITE Procedure

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-01-01

MECH | INSP

78-CMR-01

TASK 78-31-00-700-803-F00

1. Sync Lock Operational Test

A. General

(1) This task is to do a check of the sync locks for the left and right thrust reverser on an engine.

(2) This task is also done to do a check of the sync locks if there was an electrical power interruption when the thrust reverser was in transit.

(3) When the thrust reversers go through the deploy and stow cycle to do a test of the sync locks, it can cause stow and deploy faults that will show on the EAU. After the test is complete, it will be necessary to reset the EAU to clear the faults.

B. Procedure

SUBTASK 78-31-00-860-033-F00

(1) For Engine 1, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-034-F00

(2) For Engine 2, open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-860-035-F00

(3) For the applicable engine, make sure that the start lever is in the CUTOFF position.

SUBTASK 78-31-00-860-036-F00

(4) Make sure that the applicable thrust lever is in the idle position.

SUBTASK 78-31-00-860-037-F00

(5) Make sure that the REVERSER light on the aft overhead P5 panel is off.

(a) If the REVERSER light is on, do this task: FIM 78-31 TASK 801.

MECH | INSP

SUBTASK 78-31-00-860-038-F00

(6) Make sure that the applicable reverse thrust lever is forward and down in the retract (stow) position.

SUBTASK 78-31-00-860-126-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(7) Pressurize the applicable hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-710-005-F00

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AFT OF THE APPLICABLE THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(8) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: It is not necessary to apply power (move the ENGINE START switch to the CONT position) to the EEC to extend and retract the thrust reverser. However, because the EEC is not powered, the reverse thrust lever will be blocked by the interlock and will not move to the full reverse thrust position; and, the REV light will not indicate the sleeve position.

SUBTASK 78-31-00-860-039-F00

(9) After the thrust reversers are fully deployed, remove power from the applicable hydraulic system, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(a) For Engine 1, remove power from hydraulic system A.

(b) For Engine 2, remove power from hydraulic system B.

(c) Wait for 30 seconds.

NOTE: This will allow the hydraulic pressure to decrease before the start of the subsequent step.

NOTE: Residual pressure can move the directional control valve in the subsequent step. To make sure the hydraulic pressure is removed, you can select another hydraulic device in the applicable system.

SUBTASK 78-31-00-860-040-F00

(10) Move the applicable reverse thrust lever down and forward to the retract (stow) position.

NOTE: The step commands the sync locks to lock.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-01-01

MECH	INSP

(a) Wait for 30 seconds.

NOTE: This will permit time for all of the timers in the circuits to time out before the hydraulic system is pressurized.

SUBTASK 78-31-00-860-041-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(11) Pressurize the applicable hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-710-006-F00

(12) Make sure that the thrust reverser sleeves do not retract (stow).

NOTE: When the hydraulic system is pressurized, the thrust reverser auto-restow function will try to stow the thrust reverser. However, because the sync locks are locked, the thrust reverser can not retract (stow).

(a) This is the indication that the sync locks are serviceable.

SUBTASK 78-31-00-710-017-F00

(13) If a thrust reverser sleeve does retract (stow), then the applicable sync lock is not serviceable.

(a) Replace the sync lock.

These are the tasks:

- Thrust Reverser Sync Lock Removal, AMM TASK 78-34-10-000-801-F00
- Thrust Reverser Sync Lock Installation, AMM TASK 78-34-10-400-801-F00.

SUBTASK 78-31-00-740-001-F00

(14) Do these steps to read the deploy and stow faults on the EAU:

(a) To get access to the EAU, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

NOTE: The EAU is on the E3-2 shelf.

(b) Push and hold the T/R STOW FAULTS button on the applicable EAU.

(c) Make sure that these lights stay ON for the applicable Engine:

1) For Engine 1;

a) S831 - L SLEEVE STOW SENSOR.

b) S835 - L SLEEVE LOCK SENSOR.

c) S833 - HYD ISO VALVE SENSOR.

d) S834 - DIR CONT VALVE SENSOR.

e) S832 - R SLEEVE STOW SENSOR.

f) S836 - R SLEEVE LOCK SENSOR.

2) For Engine 2;

a) S831 - L SLEEVE STOW SENSOR.

b) S835 - L SLEEVE LOCK SENSOR.

c) S830 - HYD ISO VALVE SENSOR.

d) S839 - DIR CONT VALVE SENSOR.

e) S832 - R SLEEVE STOW SENSOR.

f) S836 - R SLEEVE LOCK SENSOR.

(d) Release the T/R STOW FAULTS button.

SUBTASK 78-31-00-710-007-F00

(15) Do these steps to clear the deploy and stow faults and reset the EAU:

(a) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: The thrust reverser must be in the deploy position to reset the deploy faults.

1) Push and hold the FAULT RESET button on the EAU for a minimum of two seconds.

2) Wait for at least 30 seconds to make sure that the fault lights do not come on again.

(b) Move the applicable reverse thrust lever forward and down to the retract (stow) position.

(c) Make sure that the REVERSER light goes off.

C. Put the Airplane Back to its Usual Condition

SUBTASK 78-31-00-860-132-F00

(1) After the thrust reversers are fully stowed, remove power from the applicable hydraulic system, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(a) For Engine 1, remove power from hydraulic system A.

(b) For Engine 2, remove power from hydraulic system B.

SUBTASK 78-31-00-860-130-F00

(2) Make sure that the ENGINE START switch is in the OFF position.

SUBTASK 78-31-00-860-045-F00

(3) For Engine 1, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-01-01

MECH	INSP

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-046-F00

(4) For Engine 2, remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-410-001-F00

(5) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE T/R SYNC LOCK			**78-110-02-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	RIGHT ENGINE	**1.1**	**5000 FH**	**5000 FH**	AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		117A			**117 118 425 426**

Perform an operational check of the right engine T/R sync lock.

SPECIAL NOTE: CMR task (78-CMR-01) interval for this task is 5000 FH. See MPD Section 9.

A. References

Reference	Title
AMM 29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
AMM 29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
AMM 78-34-10-000-801-F00	Thrust Reverser Sync Lock Removal (P/B 401)
AMM 78-34-10-400-801-F00	Thrust Reverser Sync Lock Installation (P/B 401)
FIM 78-31 TASK 801	Engine Accessory Unit (EAU) BITE Procedure

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-02-01

MECH	INSP

78-CMR-01

TASK 78-31-00-700-803-F00

1. Sync Lock Operational Test

A. General

(1) This task is to do a check of the sync locks for the left and right thrust reverser on an engine.

(2) This task is also done to do a check of the sync locks if there was an electrical power interruption when the thrust reverser was in transit.

(3) When the thrust reversers go through the deploy and stow cycle to do a test of the sync locks, it can cause stow and deploy faults that will show on the EAU. After the test is complete, it will be necessary to reset the EAU to clear the faults.

B. Procedure

SUBTASK 78-31-00-860-033-F00

(1) For Engine 1, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-034-F00

(2) For Engine 2, open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-860-035-F00

(3) For the applicable engine, make sure that the start lever is in the CUTOFF position.

SUBTASK 78-31-00-860-036-F00

(4) Make sure that the applicable thrust lever is in the idle position.

SUBTASK 78-31-00-860-037-F00

(5) Make sure that the REVERSER light on the aft overhead P5 panel is off.

(a) If the REVERSER light is on, do this task: FIM 78-31 TASK 801.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-02-01

MECH | INSP

SUBTASK 78-31-00-860-038-F00

(6) Make sure that the applicable reverse thrust lever is forward and down in the retract (stow) position.

SUBTASK 78-31-00-860-126-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(7) Pressurize the applicable hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-710-005-F00

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AFT OF THE APPLICABLE THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(8) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: It is not necessary to apply power (move the ENGINE START switch to the CONT position) to the EEC to extend and retract the thrust reverser. However, because the EEC is not powered, the reverse thrust lever will be blocked by the interlock and will not move to the full reverse thrust position; and, the REV light will not indicate the sleeve position.

SUBTASK 78-31-00-860-039-F00

(9) After the thrust reversers are fully deployed, remove power from the applicable hydraulic system, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(a) For Engine 1, remove power from hydraulic system A.

(b) For Engine 2, remove power from hydraulic system B.

(c) Wait for 30 seconds.

NOTE: This will allow the hydraulic pressure to decrease before the start of the subsequent step.

NOTE: Residual pressure can move the directional control valve in the subsequent step. To make sure the hydraulic pressure is removed, you can select another hydraulic device in the applicable system.

SUBTASK 78-31-00-860-040-F00

(10) Move the applicable reverse thrust lever down and forward to the retract (stow) position.

NOTE: The step commands the sync locks to lock.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-110-02-01

MECH	INSP

(a) Wait for 30 seconds.

NOTE: This will permit time for all of the timers in the circuits to time out before the hydraulic system is pressurized.

SUBTASK 78-31-00-860-041-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(11) Pressurize the applicable hydraulic system, do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-710-006-F00

(12) Make sure that the thrust reverser sleeves do not retract (stow).

NOTE: When the hydraulic system is pressurized, the thrust reverser auto-restow function will try to stow the thrust reverser. However, because the sync locks are locked, the thrust reverser can not retract (stow).

(a) This is the indication that the sync locks are serviceable.

SUBTASK 78-31-00-710-017-F00

(13) If a thrust reverser sleeve does retract (stow), then the applicable sync lock is not serviceable.

(a) Replace the sync lock.

These are the tasks:

- Thrust Reverser Sync Lock Removal, AMM TASK 78-34-10-000-801-F00
- Thrust Reverser Sync Lock Installation, AMM TASK 78-34-10-400-801-F00.

SUBTASK 78-31-00-740-001-F00

(14) Do these steps to read the deploy and stow faults on the EAU:

(a) To get access to the EAU, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

NOTE: The EAU is on the E3-2 shelf.

(b) Push and hold the T/R STOW FAULTS button on the applicable EAU.

(c) Make sure that these lights stay ON for the applicable Engine:

1) For Engine 1;

a) S831 - L SLEEVE STOW SENSOR.

b) S835 - L SLEEVE LOCK SENSOR.

c) S833 - HYD ISO VALVE SENSOR.

d) S834 - DIR CONT VALVE SENSOR.

e) S832 - R SLEEVE STOW SENSOR.

f) S836 - R SLEEVE LOCK SENSOR.

2) For Engine 2;

a) S831 - L SLEEVE STOW SENSOR.

b) S835 - L SLEEVE LOCK SENSOR.

c) S830 - HYD ISO VALVE SENSOR.

d) S839 - DIR CONT VALVE SENSOR.

e) S832 - R SLEEVE STOW SENSOR.

f) S836 - R SLEEVE LOCK SENSOR.

(d) Release the T/R STOW FAULTS button.

SUBTASK 78-31-00-710-007-F00

(15) Do these steps to clear the deploy and stow faults and reset the EAU:

(a) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: The thrust reverser must be in the deploy position to reset the deploy faults.

1) Push and hold the FAULT RESET button on the EAU for a minimum of two seconds.

2) Wait for at least 30 seconds to make sure that the fault lights do not come on again.

(b) Move the applicable reverse thrust lever forward and down to the retract (stow) position.

(c) Make sure that the REVERSER light goes off.

C. Put the Airplane Back to its Usual Condition

SUBTASK 78-31-00-860-132-F00

(1) After the thrust reversers are fully stowed, remove power from the applicable hydraulic system, do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(a) For Engine 1, remove power from hydraulic system A.

(b) For Engine 2, remove power from hydraulic system B.

SUBTASK 78-31-00-860-130-F00

(2) Make sure that the ENGINE START switch is in the OFF position.

SUBTASK 78-31-00-860-045-F00

(3) For Engine 1, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-046-F00

(4) For Engine 2, remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-410-001-F00

(5) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE BITE CHECK THE EAU			**78-120-01-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	E/E COMPARTMENT	**1.1**	**3600 FH**	**3600 FH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		117A			**117 118**

Perform operational check (bite) on the left engine EAU.

A. References

Reference	Title
AMM 78-34-06-000-801-F00	Engine Accessory Unit Removal (P/B 401)
AMM 78-34-06-400-801-F00	Engine Accessory Unit Installation (P/B 401)
FIM 78-34 TASK 809	All Lights Do Not Come On During the BITE Procedure - Fault Isolation

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-120-01-01

TASK 78-31-00-700-804-F00

MECH	INSP

1. Thrust Reverser Engine Accessory Unit (EAU) Test

(Figure 1)

A. General

(1) This task is to do a check of the Engine Accessory Unit (EAU).

(2) The EAU is in the electronic equipment (EE) compartment on the E3-2 shelf.

(3) The equipment number for the EAU is M528.

B. Procedure

SUBTASK 78-31-00-010-001-F00

(1) To get access to the EAU, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

NOTE: The EAU is on the E3-2 shelf.

SUBTASK 78-31-00-710-008-F00

(2) Do these steps to do a check of the EAU for the applicable engine:

(a) Push and hold the T/R STOW FAULTS or the T/R DEPLOY FAULTS button on the EAU.

(b) Make sure that all of the lights come on for one second.

1) If all of the lights do not come on for one second, then, do this task: All Lights Do Not Come On During the BITE Procedure - Fault Isolation, FIM 78-34 TASK 809.

(c) After one second, make sure that all of the lights go out, but the green NO FAULTS DETECTED light.

1) This is the indication that the EAU is serviceable.

(d) Release the T/R STOW FAULTS or the T/R DEPLOY FAULTS button.

(e) If the red EAU FAULT light stays on, then the check for the EAU failed. Do this step:

1) Replace the EAU, M528. These are the tasks:

- Engine Accessory Unit Removal, AMM TASK 78-34-06-000-801-F00
- Engine Accessory Unit Installation, AMM TASK 78-34-06-400-801-F00.

(f) If other fault lights stay on, do the applicable fault isolation task in the Fault Isolation Manual.

C. Put the Airplane Back to its Usual Condition

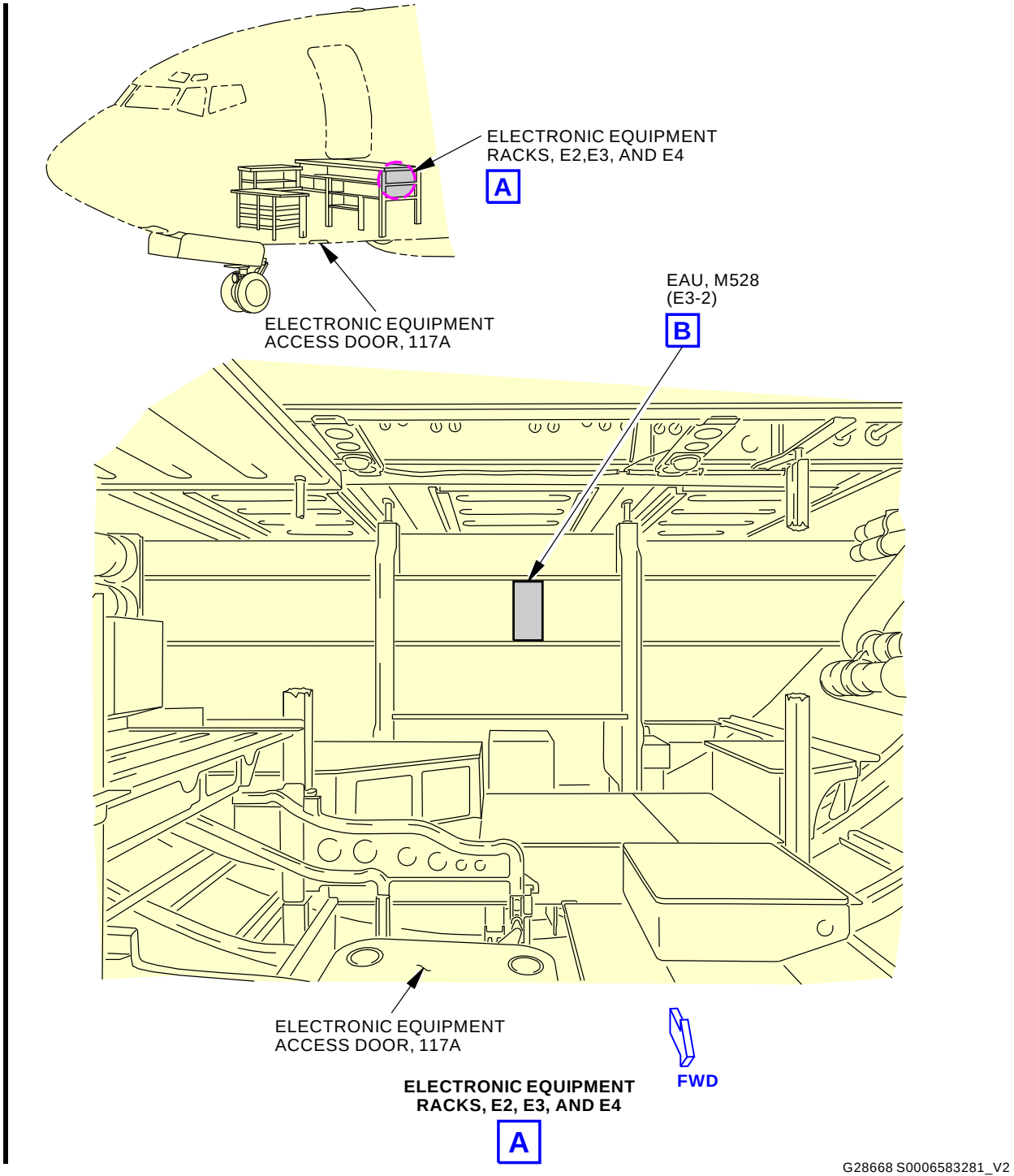
SUBTASK 78-31-00-410-002-F00

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

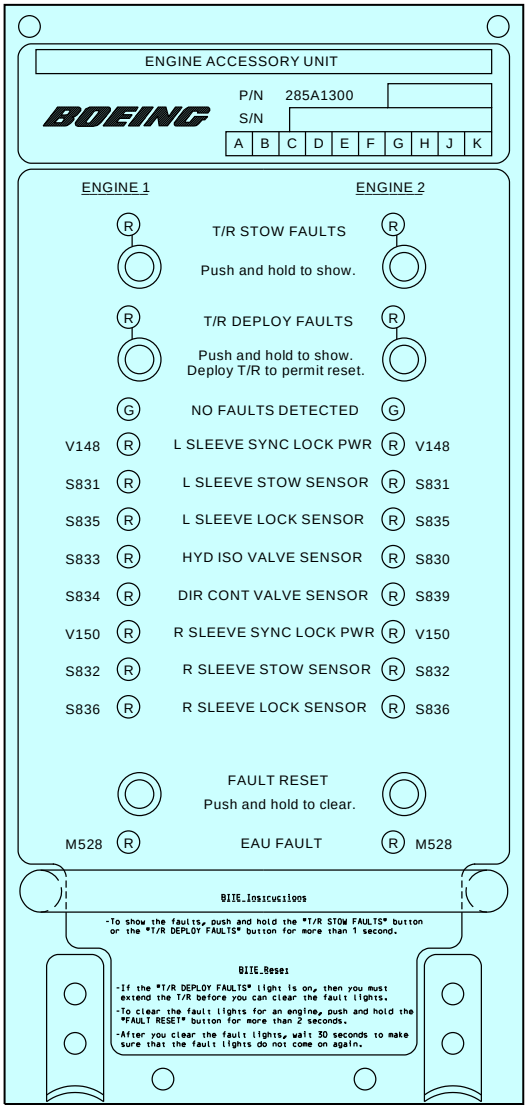
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-120-01-01



Engine Accessory Unit (EAU)
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-120-01-01



ENGINE ACCESSORY UNIT

B

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Engine Accessory Unit (EAU)
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE BITE CHECK THE EAU			**78-120-02-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	E/E COMPARTMENT	**1.1**	**3600 FH**	**3600 FH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		117A			**117 118**

Perform operational check (bite) on the right engine EAU.

A. References

Reference	Title
AMM 78-34-06-000-801-F00	Engine Accessory Unit Removal (P/B 401)
AMM 78-34-06-400-801-F00	Engine Accessory Unit Installation (P/B 401)
FIM 78-34 TASK 809	All Lights Do Not Come On During the BITE Procedure - Fault Isolation

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-120-02-01

MECH | INSP

TASK 78-31-00-700-804-F00

1. Thrust Reverser Engine Accessory Unit (EAU) Test

(Figure 1)

A. General

(1) This task is to do a check of the Engine Accessory Unit (EAU).

(2) The EAU is in the electronic equipment (EE) compartment on the E3-2 shelf.

(3) The equipment number for the EAU is M528.

B. Procedure

SUBTASK 78-31-00-010-001-F00

(1) To get access to the EAU, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

NOTE: The EAU is on the E3-2 shelf.

SUBTASK 78-31-00-710-008-F00

(2) Do these steps to do a check of the EAU for the applicable engine:

(a) Push and hold the T/R STOW FAULTS or the T/R DEPLOY FAULTS button on the EAU.

(b) Make sure that all of the lights come on for one second.

1) If all of the lights do not come on for one second, then, do this task: All Lights Do Not Come On During the BITE Procedure - Fault Isolation, FIM 78-34 TASK 809.

(c) After one second, make sure that all of the lights go out, but the green NO FAULTS DETECTED light.

1) This is the indication that the EAU is serviceable.

(d) Release the T/R STOW FAULTS or the T/R DEPLOY FAULTS button.

(e) If the red EAU FAULT light stays on, then the check for the EAU failed. Do this step:

1) Replace the EAU, M528. These are the tasks:

- Engine Accessory Unit Removal, AMM TASK 78-34-06-000-801-F00
- Engine Accessory Unit Installation, AMM TASK 78-34-06-400-801-F00.

(f) If other fault lights stay on, do the applicable fault isolation task in the Fault Isolation Manual.

C. Put the Airplane Back to its Usual Condition

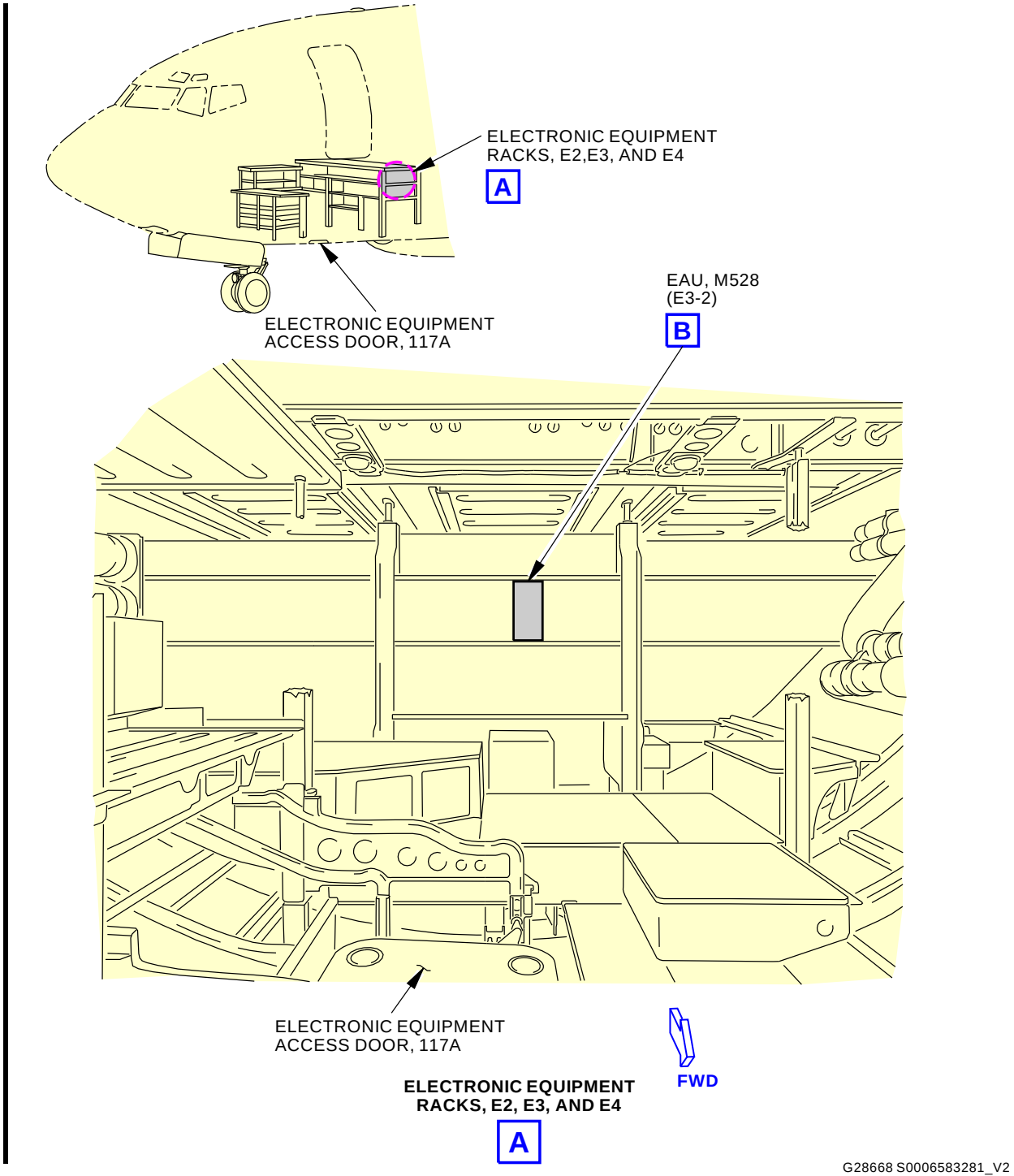
SUBTASK 78-31-00-410-002-F00

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

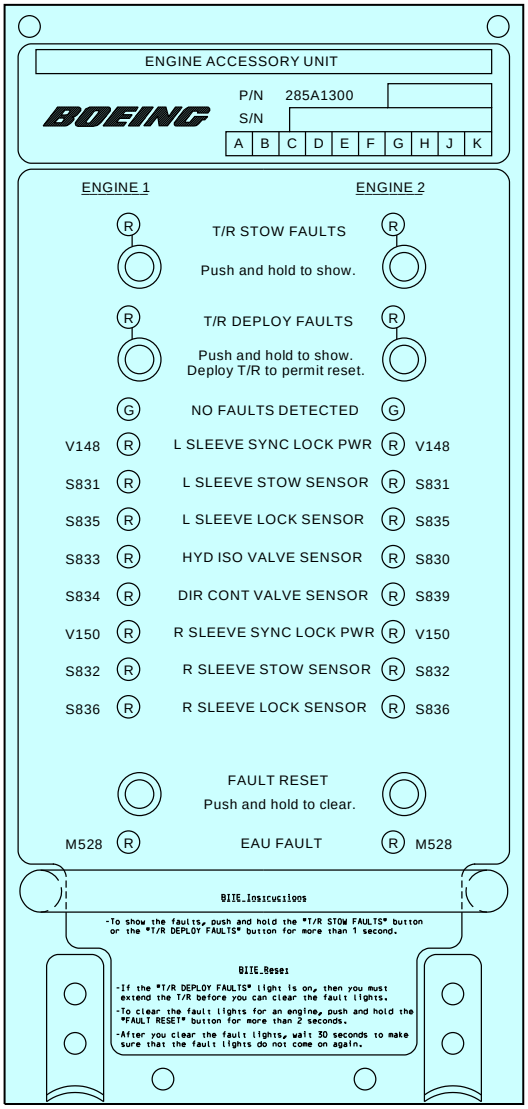
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-120-02-01



Engine Accessory Unit (EAU)
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				78-120-02-01



ENGINE ACCESSORY UNIT

B

G28630 S0006583282_V2

Engine Accessory Unit (EAU)
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		LEFT ENGINE "REVERSER" LIGHT INDICATION SYSTEM			**78-130-01-01**
DATE	TASK **OPERATIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **LEFT ENGINE**	VERSION **1.1**	THRESHOLD **15000 FH**	REPEAT **15000 FH**	APPLICABILITY AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL **AIRPL**				
		ACCESS			ZONE **211 212**

Perform an operational check of the left engine "reverser" light indication system.

A. References

Reference	Title
AMM 29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
AMM 29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
AMM 29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
FIM 78-31 TASK 801	Engine Accessory Unit (EAU) BITE Procedure

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-01-01

MECH | INSP

TASK 78-31-00-700-801-F00

1. Thrust Reverser Normal Operation Test

A. General

(1) This task is used to do a check of the thrust reverser operation if a component was removed or replaced in the thrust reverser hydraulic system.

(2) This task is also used as a scheduled maintenance task to do a check of the wiring between the EAU and the REVERSER light.

(3) This task is also used to do a check of the thrust reverser operation if a thrust reverser was removed or replaced.

B. Prepare for the Test

SUBTASK 78-31-00-860-105-F00

CAUTION: DO NOT OPERATE THE THRUST REVERSER WHEN ELECTRICAL POWER INTERRUPTIONS (FOR MORE THAN A NORMAL BUS TRANSFER) CAN OCCUR. IF THERE IS A LOSS OF ELECTRICAL POWER WHEN THE THRUST REVERSER IS IN TRANSIT, DAMAGE TO THE SYNC LOCKS CAN OCCUR AND THE SYNC LOCK OPERATIONAL TEST MUST BE DONE.

(1) Do not operate the thrust reverser if there will be electrical power interruptions (for more than a normal bus transfer) while the thrust reverser is in transit.

SUBTASK 78-31-00-860-113-F00

CAUTION: DO NOT EXTEND THE THRUST REVERSER WHEN THE THRUST REVERSER IS OPEN. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Make sure that the applicable thrust reverser is closed and latched.

SUBTASK 78-31-00-860-002-F00

(3) For Engine 1, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-003-F00

(4) For Engine 2, open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-01-01

MECH | INSP

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-860-004-F00

(5) For the applicable engine, move the ENGINE START switch on the forward overhead P5 panel to the CONT position.

NOTE: This supplies power to the EEC which is necessary for the interlock to release and the REV light indication to operate.

SUBTASK 78-31-00-860-005-F00

(6) For the applicable engine, make sure that the start lever is in the CUTOFF position.

SUBTASK 78-31-00-860-006-F00

(7) Make sure that the applicable thrust lever is in the idle position.

SUBTASK 78-31-00-860-007-F00

(8) Make sure that the applicable reverse thrust lever is forward and down in the retract (stow) position.

SUBTASK 78-31-00-860-125-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(9) If not already done, pressurize the applicable hydraulic system; do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-860-009-F00

(10) Make sure that the REVERSER light on the aft overhead P5 panel is off.

(a) If the REVERSER light is on, do this task: FIM 78-31 TASK 801.

SUBTASK 78-31-00-860-010-F00

(11) Reset the MASTER CAUTION light.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-01-01

MECH | INSP

C. Normal Operation Test

SUBTASK 78-31-00-710-001-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE THRUST REVERSERS. IF THERE ARE PERSONS OR EQUIPMENT IN THE AREA WHEN THE THRUST REVERSER EXTENDS OR RETRACTS, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

CAUTION: DO NOT OPERATE THE HYDRAULIC SYSTEM A (MAIN TANK 1) OR HYDRAULIC SYSTEM B (MAIN TANK 2) FOR M0RE THAN TWO MINUTES UNLESS THE APPLICABLE TANK HAS MORE THAN 1675 POUNDS (761 KILOGRAMS) OF FUEL. IF THERE IS NOT 1675 POUNDS (761 KILOGRAMS) OF FUEL IN THE TANK, LET THE RESERVOIR COOL TO AMBIENT TEMPERATURE AFTER TWO MINUTES OF OPERATION BEFORE YOU CONTINUE THE TEST. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: The REVERSER light on the aft overhead P5 panel could momentarily come on.

(a) Make sure that the thrust reverser sleeves move to the fully extended (deployed) position in these time limits:

NOTE: It is permitted for one thrust reverser sleeve to move before the other. The two sleeves do not have to move together, but do have to deploy in the time limits. The two sleeves can have a lag in movement because of the frictional differences between tolerance stack-ups in the thrust reverser assembly for the inboard and outboard sleeves.

1) Thrust reverser control circuit with 0.10 second time delay module, M1666 (Eng 1) / M1667 (Eng 2);

a) Three seconds if you use the airplane electric motor pumps

b) Two seconds if you use an external hydraulic power source with 2750-2850 psi (1896-1965 kpa).

(b) Make sure that the REV light on the P2 panel comes on.

NOTE: The REV light has three positions: 1) amber when the thrust reverser sleeves are in transit, 2) green when the sleeves are in the fully extended (deployed) position, or 3) off when the thrust reverser sleeves are stowed.

1) Make sure that the REV light turns amber when the thrust reverser is in transit.

2) Make sure that the REV light turns green when the thrust reverser is in the fully extended (deployed) position.

(c) Make sure that the REVERSER light on the aft overhead panel P5 is not on.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-01-01

MECH | INSP

SUBTASK 78-31-00-710-019-F00

(2) Wait 10 seconds before you move the applicable reverse thrust lever forward and down to the retract (stow) position.

NOTE: For Engine 1, if the movement of the reverse thrust lever through the deploy and stow cycle is less than ten seconds, the thrust reverser hydraulic volumetric fuse can close and stop the hydraulic fluid flow. If the fuse does close, the fuse must be reset and the test restarted. To reset the fuse, do the “Reset the Hydraulic Fuse” steps.

NOTE: For Engine 2, there is no thrust reverser volumetric hydraulic fuse in the supply line from system B.

SUBTASK 78-31-00-710-002-F00

(3) Move the applicable reverse thrust lever forward and down to the retract (stow) position.

(a) Make sure that the REVERSER light on the aft overhead P5 panel comes on for approximately ten seconds after you move the reverse thrust lever to the retract (stow) position.

1) This is the indication that the wiring between the EAU and the REVERSER light is not damaged.

(b) Make sure that the REV light turns amber when the thrust reverser sleeves are in transit.

(c) Make sure that the REV light goes out when the thrust reverser sleeves are in the retracted (stowed) position.

(d) Make sure that the thrust reverser sleeves move to the fully retracted (stowed) position in these time limits:

NOTE: It is permitted for one thrust reverser sleeve to move before the other. The two sleeves do not have to move together, but do have to stow in the time limits. The two sleeves can have a lag in movement because of the frictional differences between tolerance stack-ups in the thrust reverser assembly for the inboard and outboard sleeves.

1) Five seconds if you use the airplane electric motor pumps.

2) Four seconds if you use an external hydraulic power source with 2750-2850 psi (1896-1965 kpa).

SUBTASK 78-31-00-210-001-F01

(4) Examine the thrust reverser area for hydraulic fluid leaks.

TRAS actuator leakage limit

Normal Operation Limits	Dispatch Limits to Avoid Delay
8 drops per minute (stopped or in operation)	30 drops per minute (stopped or in operation)

D. Reset the Hydraulic Fuse

SUBTASK 78-31-00-800-001-F00

(1) If it is necessary to reset the fuse, do these steps:

NOTE: The volumetric hydraulic fuse will open when the hydraulic pressure on the two sides of the fuse are approximately the same.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-01-01

MECH	INSP

(a) Remove power from hydraulic system A; do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(b) Depressurize hydraulic system A; do this task: Hydraulic Reservoirs Depressurization, AMM TASK 29-09-00-860-802.

(c) Wait 20 seconds.

(d) Pressurize hydraulic system A; do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

E. Put the Airplane Back to its Usual Condition

SUBTASK 78-31-00-860-013-F00

(1) Move the ENGINE START switch to the off position.

SUBTASK 78-31-00-860-014-F00

(2) For Engine 1, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-015-F00

(3) For Engine 2, remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		RIGHT ENGINE "REVERSER" LIGHT INDICATION SYSTEM			**78-130-02-01**
DATE	TASK **OPERATIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **RIGHT ENGINE**	VERSION **1.1**	THRESHOLD **15000 FH**	REPEAT **15000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS			ZONE **211 212**

Perform an operational check of the right engine "reverser" light indication system.

A. References

Reference	Title
AMM 29-09-00-860-802	Hydraulic Reservoirs Depressurization (P/B 201)
AMM 29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
AMM 29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
FIM 78-31 TASK 801	Engine Accessory Unit (EAU) BITE Procedure

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-02-01

MECH | INSP

TASK 78-31-00-700-801-F00

1. Thrust Reverser Normal Operation Test

A. General

(1) This task is used to do a check of the thrust reverser operation if a component was removed or replaced in the thrust reverser hydraulic system.

(2) This task is also used as a scheduled maintenance task to do a check of the wiring between the EAU and the REVERSER light.

(3) This task is also used to do a check of the thrust reverser operation if a thrust reverser was removed or replaced.

B. Prepare for the Test

SUBTASK 78-31-00-860-105-F00

CAUTION: DO NOT OPERATE THE THRUST REVERSER WHEN ELECTRICAL POWER INTERRUPTIONS (FOR MORE THAN A NORMAL BUS TRANSFER) CAN OCCUR. IF THERE IS A LOSS OF ELECTRICAL POWER WHEN THE THRUST REVERSER IS IN TRANSIT, DAMAGE TO THE SYNC LOCKS CAN OCCUR AND THE SYNC LOCK OPERATIONAL TEST MUST BE DONE.

(1) Do not operate the thrust reverser if there will be electrical power interruptions (for more than a normal bus transfer) while the thrust reverser is in transit.

SUBTASK 78-31-00-860-113-F00

CAUTION: DO NOT EXTEND THE THRUST REVERSER WHEN THE THRUST REVERSER IS OPEN. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Make sure that the applicable thrust reverser is closed and latched.

SUBTASK 78-31-00-860-002-F00

(3) For Engine 1, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-003-F00

(4) For Engine 2, open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-02-01

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(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

SUBTASK 78-31-00-860-004-F00

(5) For the applicable engine, move the ENGINE START switch on the forward overhead P5 panel to the CONT position.

NOTE: This supplies power to the EEC which is necessary for the interlock to release and the REV light indication to operate.

SUBTASK 78-31-00-860-005-F00

(6) For the applicable engine, make sure that the start lever is in the CUTOFF position.

SUBTASK 78-31-00-860-006-F00

(7) Make sure that the applicable thrust lever is in the idle position.

SUBTASK 78-31-00-860-007-F00

(8) Make sure that the applicable reverse thrust lever is forward and down in the retract (stow) position.

SUBTASK 78-31-00-860-125-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. AILERONS, RUDDERS, ELEVATORS, FLAPS, SPOILERS AND THE THRUST REVERSERS CAN MOVE QUICKLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(9) If not already done, pressurize the applicable hydraulic system; do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

(a) For Engine 1, pressurize hydraulic system A.

(b) For Engine 2, pressurize hydraulic system B.

SUBTASK 78-31-00-860-009-F00

(10) Make sure that the REVERSER light on the aft overhead P5 panel is off.

(a) If the REVERSER light is on, do this task: FIM 78-31 TASK 801.

SUBTASK 78-31-00-860-010-F00

(11) Reset the MASTER CAUTION light.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-02-01

MECH | INSP

C. Normal Operation Test

SUBTASK 78-31-00-710-001-F00

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE THRUST REVERSERS. IF THERE ARE PERSONS OR EQUIPMENT IN THE AREA WHEN THE THRUST REVERSER EXTENDS OR RETRACTS, INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

CAUTION: DO NOT OPERATE THE HYDRAULIC SYSTEM A (MAIN TANK 1) OR HYDRAULIC SYSTEM B (MAIN TANK 2) FOR M0RE THAN TWO MINUTES UNLESS THE APPLICABLE TANK HAS MORE THAN 1675 POUNDS (761 KILOGRAMS) OF FUEL. IF THERE IS NOT 1675 POUNDS (761 KILOGRAMS) OF FUEL IN THE TANK, LET THE RESERVOIR COOL TO AMBIENT TEMPERATURE AFTER TWO MINUTES OF OPERATION BEFORE YOU CONTINUE THE TEST. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Move the applicable reverse thrust lever up and aft to the extend (deploy) position.

NOTE: The REVERSER light on the aft overhead P5 panel could momentarily come on.

(a) Make sure that the thrust reverser sleeves move to the fully extended (deployed) position in these time limits:

NOTE: It is permitted for one thrust reverser sleeve to move before the other. The two sleeves do not have to move together, but do have to deploy in the time limits. The two sleeves can have a lag in movement because of the frictional differences between tolerance stack-ups in the thrust reverser assembly for the inboard and outboard sleeves.

1) Thrust reverser control circuit with 0.10 second time delay module, M1666 (Eng 1) / M1667 (Eng 2);

a) Three seconds if you use the airplane electric motor pumps

b) Two seconds if you use an external hydraulic power source with 2750-2850 psi (1896-1965 kpa).

(b) Make sure that the REV light on the P2 panel comes on.

NOTE: The REV light has three positions: 1) amber when the thrust reverser sleeves are in transit, 2) green when the sleeves are in the fully extended (deployed) position, or 3) off when the thrust reverser sleeves are stowed.

1) Make sure that the REV light turns amber when the thrust reverser is in transit.

2) Make sure that the REV light turns green when the thrust reverser is in the fully extended (deployed) position.

(c) Make sure that the REVERSER light on the aft overhead panel P5 is not on.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-02-01

MECH | INSP

SUBTASK 78-31-00-710-019-F00

(2) Wait 10 seconds before you move the applicable reverse thrust lever forward and down to the retract (stow) position.

NOTE: For Engine 1, if the movement of the reverse thrust lever through the deploy and stow cycle is less than ten seconds, the thrust reverser hydraulic volumetric fuse can close and stop the hydraulic fluid flow. If the fuse does close, the fuse must be reset and the test restarted. To reset the fuse, do the “Reset the Hydraulic Fuse” steps.

NOTE: For Engine 2, there is no thrust reverser volumetric hydraulic fuse in the supply line from system B.

SUBTASK 78-31-00-710-002-F00

(3) Move the applicable reverse thrust lever forward and down to the retract (stow) position.

(a) Make sure that the REVERSER light on the aft overhead P5 panel comes on for approximately ten seconds after you move the reverse thrust lever to the retract (stow) position.

1) This is the indication that the wiring between the EAU and the REVERSER light is not damaged.

(b) Make sure that the REV light turns amber when the thrust reverser sleeves are in transit.

(c) Make sure that the REV light goes out when the thrust reverser sleeves are in the retracted (stowed) position.

(d) Make sure that the thrust reverser sleeves move to the fully retracted (stowed) position in these time limits:

NOTE: It is permitted for one thrust reverser sleeve to move before the other. The two sleeves do not have to move together, but do have to stow in the time limits. The two sleeves can have a lag in movement because of the frictional differences between tolerance stack-ups in the thrust reverser assembly for the inboard and outboard sleeves.

1) Five seconds if you use the airplane electric motor pumps.

2) Four seconds if you use an external hydraulic power source with 2750-2850 psi (1896-1965 kpa).

SUBTASK 78-31-00-210-001-F01

(4) Examine the thrust reverser area for hydraulic fluid leaks.

TRAS actuator leakage limit

Normal Operation Limits	Dispatch Limits to Avoid Delay
8 drops per minute (stopped or in operation)	30 drops per minute (stopped or in operation)

D. Reset the Hydraulic Fuse

SUBTASK 78-31-00-800-001-F00

(1) If it is necessary to reset the fuse, do these steps:

NOTE: The volumetric hydraulic fuse will open when the hydraulic pressure on the two sides of the fuse are approximately the same.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 78-130-02-01

MECH	INSP

(a) Remove power from hydraulic system A; do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

(b) Depressurize hydraulic system A; do this task: Hydraulic Reservoirs Depressurization, AMM TASK 29-09-00-860-802.

(c) Wait 20 seconds.

(d) Pressurize hydraulic system A; do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.

E. Put the Airplane Back to its Usual Condition

SUBTASK 78-31-00-860-013-F00

(1) Move the ENGINE START switch to the off position.

SUBTASK 78-31-00-860-014-F00

(2) For Engine 1, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	1	C00458	ENGINE 1 IGNITION RIGHT
A	3	C00153	ENGINE 1 IGNITION LEFT
B	8	C01103	ENGINE 1 START VALVE

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE

SUBTASK 78-31-00-860-015-F00

(3) For Engine 2, remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	9	C00440	FLIGHT CONTROL AUTO SPEED BRAKE
C	4	C00154	ENGINE 2 START VALVE
D	4	C00459	ENGINE 2 IGNITION RIGHT
D	6	C00151	ENGINE 2 IGNITION LEFT

——— END OF TASK ———