

CHAPTER

74

IGNITION

(GE90-100 SERIES ENGINES)

777-200/300 AIRCRAFT MAINTENANCE MANUAL

CHAPTER 74 IGNITION

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CHAPTER 74 IGNITION

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IGNITION POWER SUPPLY - INSPECTION/CHECK

1. General

- A. This procedure has one task:
- (1) An inspection of the ignition power supply.

TASK 74-11-00-200-801-H01

2. Ignition Power Supply Inspection

(Figure 601)

A. **General**

- (1) The task provides the instructions to examine the system 1 (upper) and system 2 (lower) ignition exciters for damage.

B. **References**

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
74-11-01-000-801-H01	Ignition Exciter (System 1 or System 2) Removal (P/B 401)
74-11-01-400-801-H01	Ignition Exciter (System 1 or System 2) Installation (P/B 401)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. **Location Zones**

Zone	Area
411	Engine, Left
421	Engine, Right

D. **Access Panels**

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

E. **Prepare for the Inspection**

SUBTASK 74-11-00-865-001-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1

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(Continued)

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	14	C74405	L ENG IGN 2

SUBTASK 74-11-00-865-002-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-11-00-010-003-H01

**WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

F. Ignition Power Supply Inspection

SUBTASK 74-11-00-010-002-H01

- (1) Remove the ignition exciter heatshield cover [2].
- (a) Remove the five bolts [1] that attach the ignition exciter heatshield cover [2] to the lower heatshield.
 - (b) Remove the electrical cable [3] from the ignition exciter heatshield cover [2].
 - 1) Remove bolt [4] and remove the electrical cable [3] from the spring clip.
 - (c) Remove the ignition exciter heatshield cover [2].

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SUBTASK 74-11-00-210-001-H01

**WARNING**

MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.

- (2) Examine the system 1 (upper) and system 2 (lower) ignition exciters for damage.
 - (a) Signs of a loose ignition exciter
 - 1) If the bolts that attach the ignition exciter are loose, tighten the bolts to 55-70 pound-inches (6.2-7.9 Newton-meters).
 - (b) Cracks in the mounting flange
 - 1) Cracks in the mounting flange are not permitted.
 - (c) Cracks in the ignition exciter housing
 - 1) Cracks in the ignition exciter housing are not permitted.
 - (d) Nicks, Dents, or Scratches
 - 1) If more than 0.030 inch (0.76 mm) in depth, replace the ignition exciter (TASK 74-11-01-000-801-H01 and TASK 74-11-01-400-801-H01).
 - (e) Signs of loose electrical input cable connectors
 - 1) If the electrical input cable connectors are loose, tighten the connectors by hand.
 - (f) Signs of loose ignition leads at the ignition exciters

**CAUTION**

MAKE SURE THE IGNITION LEAD COUPLING NUT AT THE IGNITION EXCITERS ARE TIGHTENED. LOOSE COUPLING NUTS CAN CAUSE AIRPLANE RADIO INTERFERENCE.

- 1) If the ignition leads at the exciters are loose, tighten the ignition lead coupling nuts to 140-160 pound-inches (15.8-18.0 Newton-meters).

SUBTASK 74-11-00-410-001-H01

- (3) Install the ignition exciter heatshield cover [2] on the system 1 and the system 2 ignition exciters.
 - (a) Put the ignition exciter heatshield cover [2] on the ignition exciters and the lower heatshield.
 - (b) Align the heatshield cover holes.
 - (c) Install the five bolts [1] that attach the ignition exciter heatshield cover [2] to the lower heatshield.
 - (d) Tighten the bolts [1] to 110-125 pound-inches (12.4-14.1 Newton-meters).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 74-11-00-410-003-H01

**WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:
 - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.

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- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

- (b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.

- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.

- (d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

SUBTASK 74-11-00-865-003-H01

- (2) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-11-00-865-004-H01

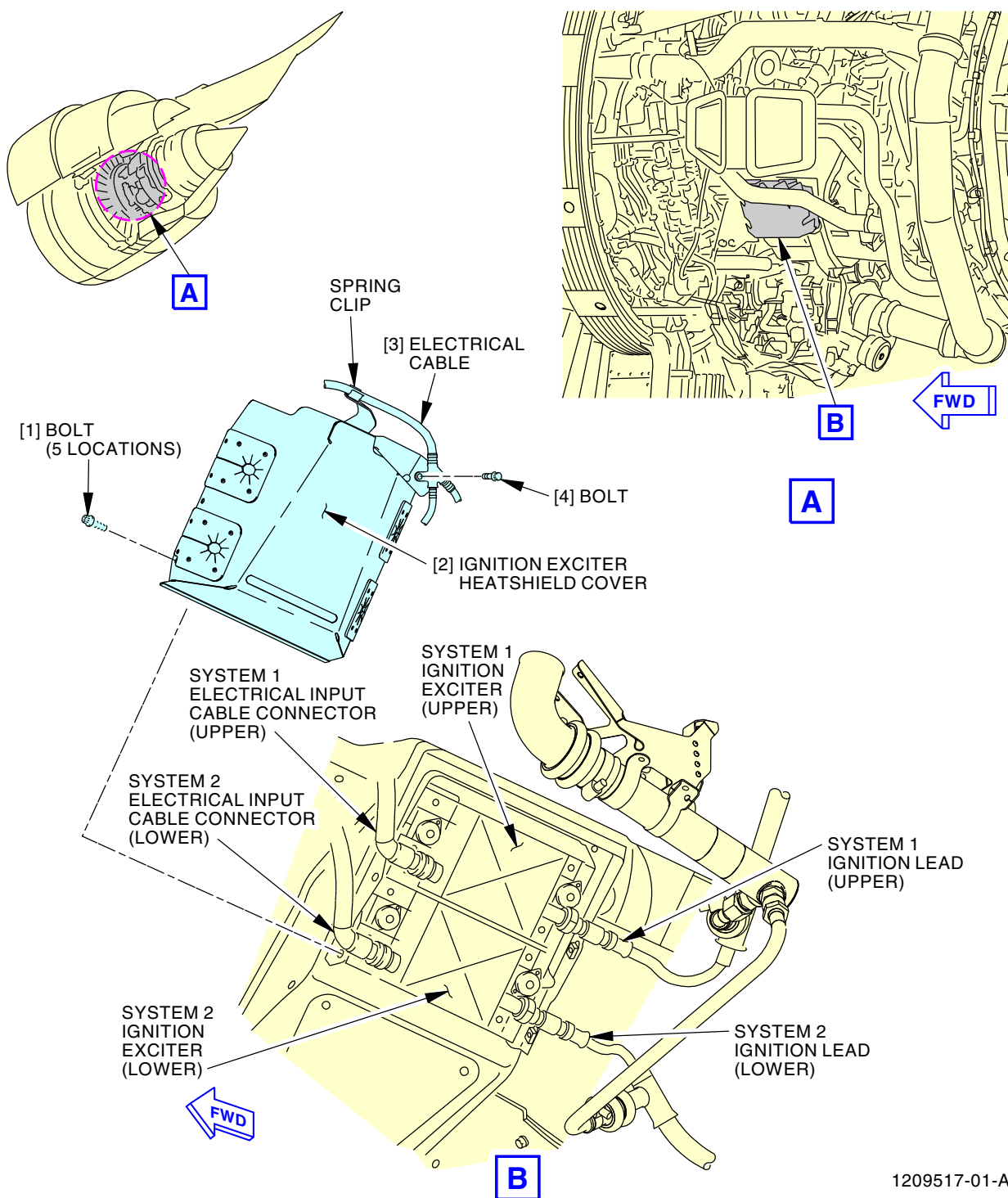
- (3) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

————— END OF TASK —————

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Ignition Power Supply Inspection
Figure 601/74-11-00-990-801-H01

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IGNITION EXCITER - REMOVAL/INSTALLATION

1. General

A. This procedure has two tasks:

- (1) A removal of the system 1 or system 2 ignition exciter
- (2) An installation of the system 1 or system 2 ignition exciter.

TASK 74-11-01-000-801-H01

2. Ignition Exciter (System 1 or System 2) Removal

(Figure 401)

A. **General**

- (1) The task provides the instructions to remove the system 1 (upper) and system 2 (lower) ignition exciters.
- (2) Each engine has two exciters. The system 1 (upper) and the system 2 (lower) exciters are installed on the left side of the engine at the 8:00 position.
- (3) You can use this procedure for the removal of either a single exciter or both exciters.
- (4) To remove the exciter, you must do these steps:
 - (a) Open the circuit breakers for the ignition system.
 - (b) Do the deactivation procedure for the leading edge slats.
 - (c) Do the deactivation procedure for the thrust reversers.
 - (d) Open the left fan cowl panel and the left thrust reverser.
 - (e) Disconnect the electrical input cables and the ignition leads from the exciters.

B. **References**

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
70-00-01-400-807-H01	Electrical Connector - Disconnect and Connect (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

C. **Tools/Equipment**

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. **Location Zones**

Zone	Area
411	Engine, Left
421	Engine, Right

E. **Access Panels**

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

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(Continued)

Number	Name/Location
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425AL	Left Thrust Reverser, Right Engine
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F. Prepare for the Removal

SUBTASK 74-11-01-865-001-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-11-01-865-002-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-11-01-010-001-H01



DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

Number	Name/Location
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

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**777-200/300
AIRCRAFT MAINTENANCE MANUAL****G. Ignition Exciter (System 1 or System 2) Removal**

SUBTASK 74-11-01-010-002-H01

- (1) Remove the ignition exciter heatshield cover [3]:
 - (a) Remove the five bolts [2] that attach the ignition exciter heatshield cover [3] to the heatshield assembly.
 - (b) Remove the bolt [12] from the electrical cable [11].
 - (c) Remove the electrical cable [11] from the spring clip.
 - (d) Remove the ignition exciter heatshield cover [3].

SUBTASK 74-11-01-020-001-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (2) Use teflon-jawed pliers, STD-664 to disconnect the system 1 or system 2 electrical input cable connector [1] from the system 1 (upper) or system 2 (lower) ignition exciter [4] (TASK 70-00-01-400-807-H01).
 - (a) Disconnect the electrical input cable connector [1] from the exciter [4].
 - (b) Put the protective covers on the electrical input cable connector [1] and the ignition exciter [4] connection.
 - (c) Move the electrical input cable away from the ignition exciter [4].

SUBTASK 74-11-01-020-002-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



DO NOT TWIST OR BEND THE IGNITION LEADS. YOU CAN CAUSE DAMAGE TO THE LEADS.

- (3) Do the steps that follow to disconnect the system 1 or system 2 ignition lead [5] from the system 1 (upper) or system 2 (lower) exciter [4]:

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- (a) Loosen the hose clamp [6] which attaches the igniter cooling flexible joint [7] to the ignition lead cooling air plenum [9].
- (b) Remove the igniter cooling flexible joint [7] from the ignition lead cooling air plenum [9].
- (c) Remove the hose clamp [6] from the igniter cooling flexible joint [7].
- (d) Put the protective covers on the igniter cooling flexible joint [7] and the ignition lead cooling air plenum [9].
- (e) Disconnect the system 1 or system 2 ignition lead [5] from the system 1 (upper) or system 2 (lower) ignition exciter [4].
- (f) Put the protective covers on the ignition lead [5] connector and the ignition exciter [4] connection.
- (g) Move the system 1 or system 2 ignition lead [5] away from the system 1 (upper) or system 2 (lower) ignition exciter [4].

SUBTASK 74-11-01-020-003-H01

- (4) Remove the system 1 (upper) or system 2 (lower) ignition exciter [4] from the engine.
 - (a) Remove the bolts [10] that attach the ignition exciter [4] to the mounting bracket.
 - (b) Remove the ignition exciter [4].
 - (c) Put the protective cover on the ignition exciter [4].

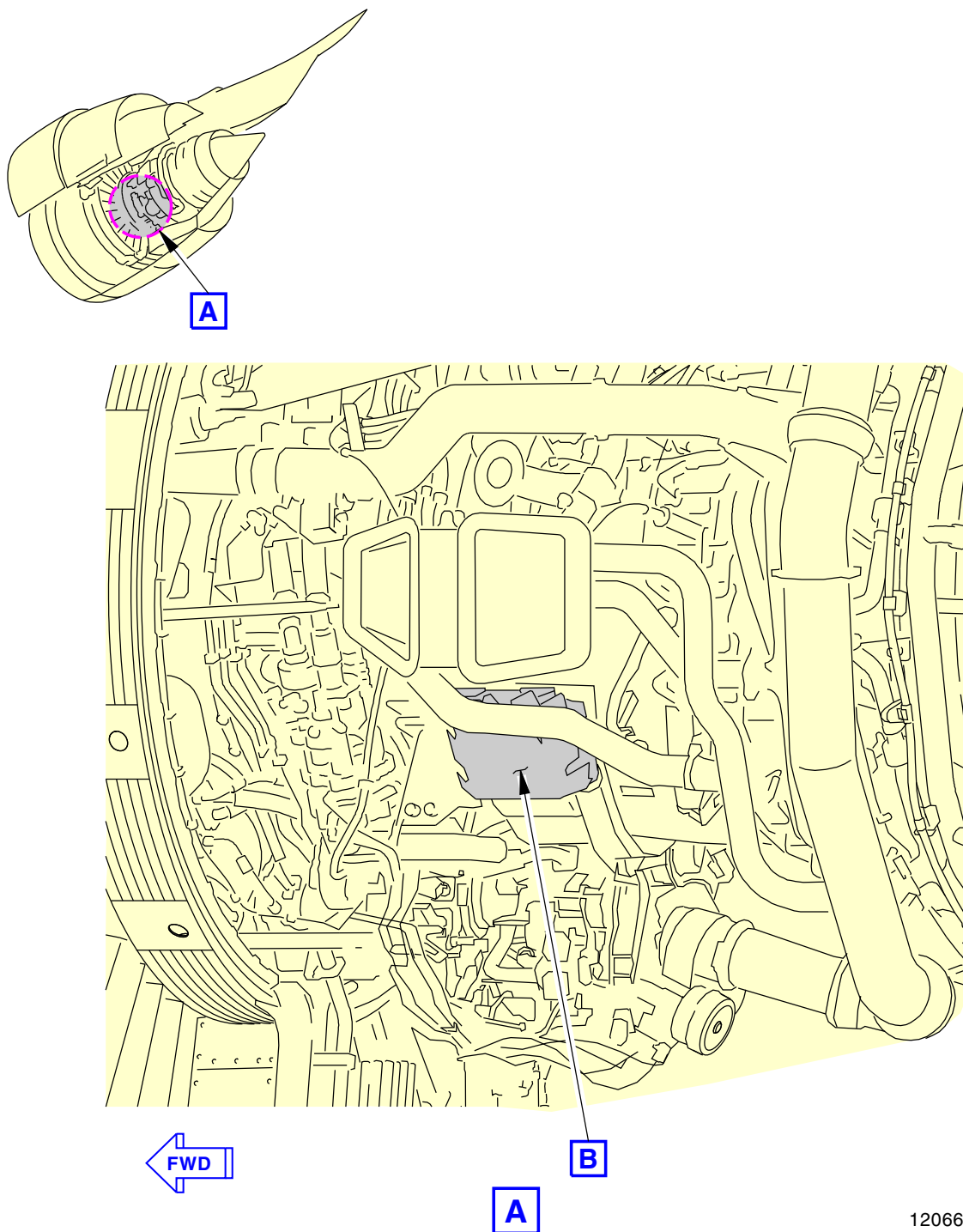
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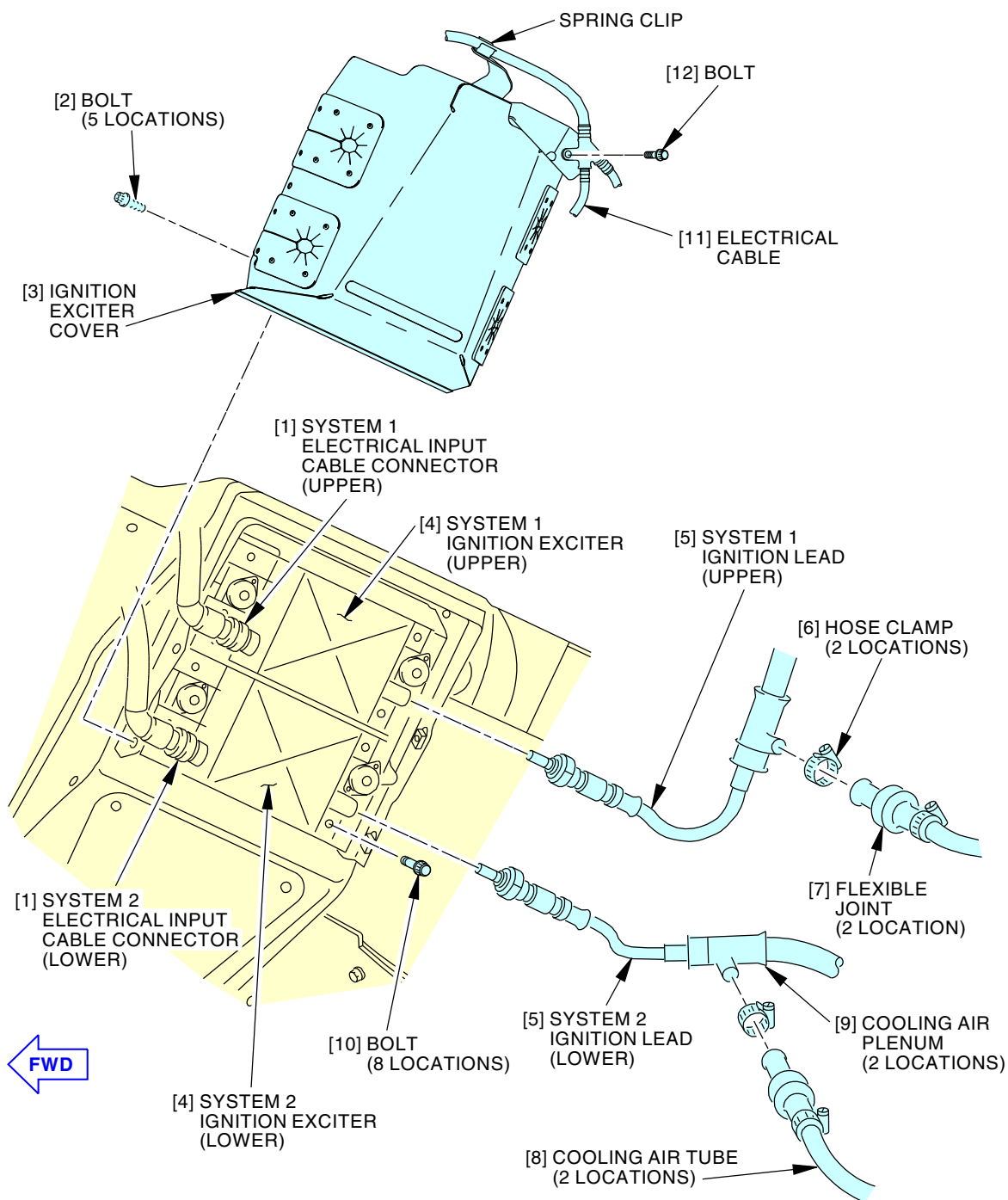
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**777-200/300
AIRCRAFT MAINTENANCE MANUAL**1206655-01-A
M07049 S0004286019_V4**Ignition Exciter Installation**
Figure 401/74-11-01-990-801-H01 (Sheet 1 of 2)EFFECTIVITY
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Ignition Exciter Installation
Figure 401/74-11-01-990-801-H01 (Sheet 2 of 2)

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TASK 74-11-01-400-801-H01

3. Ignition Exciter (System 1 or System 2) Installation

(Figure 401)

A. General

- (1) The task provides the instructions to install the system 1 (upper) and system 2 (lower) ignition exciters.
- (2) You can use this procedure for the installation of either a single exciter or both exciters.
- (3) To install the system 1 (upper) or system 2 (lower) ignition exciters, you must do these steps:
 - (a) Install the ignition exciters on the mounting bracket.
 - (b) Connect the electrical input cable and the ignition leads to the ignition exciters.
 - (c) Install the ignition exciter cover.
 - (d) Close the left thrust reverser.
 - (e) Do the activation procedure for the thrust reversers.
 - (f) Close the left fan cowl panel.
 - (g) Do the activation procedure for the leading edge slats.
- (4) Do the necessary test for the ignition system.

B. References

Reference	Title
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
70-00-01-400-807-H01	Electrical Connector - Disconnect and Connect (P/B 201)
71-00-00-800-833-H00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Exciter	74-11-01-04-020	ARO ALL

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

F. Ignition Exciter (System 1 or System 2) Installation

SUBTASK 74-11-01-420-001-H01

- (1) Install the system 1 (upper) or system 2 (lower) ignition exciter [4]:
 - (a) Remove the protective cover from the ignition exciter [4].
 - (b) Put the ignition exciter [4] on the mounting bracket.

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- (c) Support the ignition exciter [4] with your hand.
- (d) Install the four bolts [10] which attach the ignition exciter [4] to the mounting bracket.
- (e) Tighten the bolts [10] to 110-120 pound-inches (12.4-13.6 Newton-meters).

SUBTASK 74-11-01-420-002-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE BEFORE YOU INSTALL THE IGNITION COMPONENTS. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE THAT THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. DIRTY ELECTRICAL CONNECTORS CAN CAUSE THRUST REVERSER CONTROL AND INDICATION PROBLEMS



USE TEFLON-JAWED PLIERS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.



DO NOT TWIST OR BEND THE IGNITION LEAD. YOU CAN CAUSE DAMAGE TO THE LEAD.

- (2) Connect the system 1 (upper) or system 2 (lower) ignition lead [5] to the ignition exciter [4]:

NOTE: The system 1 (upper) ignition lead for the igniter at the 9:30 o'clock location connects to the system 1 (upper) ignition exciter. The system 2 (lower) ignition lead for the igniter at the 8:00 o'clock location connects to the system 2 (lower) ignition exciter.

- (a) Remove the protective covers from the ignition lead [5] connector and the connection.
- (b) Insert the ignition lead silicon rubber tip into the ignition exciter [4].
 - 1) Make sure the ignition lead cooling air plenum [9] is in the correct position before you tighten the ignition lead [5].
 - 2) Hand tighten the ignition lead [5] connector.



MAKE SURE THE IGNITION LEAD COUPLING NUT AT THE IGNITION EXCITERS ARE TIGHTENED. LOOSE COUPLING NUTS CAN CAUSE AIRPLANE RADIO INTERFERENCE.

- (c) Tighten the ignition lead [5] coupling nut to 140-160 pound-inches (15.8-18.0 Newton-meters).
- (d) Remove the protective covers from the ignition lead cooling air plenum [9] and the igniter cooling flexible joint [7].
- (e) Put the hose clamp [6] around the igniter cooling flexible joint [7].
- (f) Connect the igniter cooling flexible joint [7] to the ignition lead cooling air plenum [9].
- (g) Tighten the hose clamp [6] to 30-40 pound-inches (3.4-4.5 Newton-meters).

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SUBTASK 74-11-01-420-003-H01

**CAUTION**

MAKE SURE THAT THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. DIRTY ELECTRICAL CONNECTORS CAN CAUSE THRUST REVERSER CONTROL AND INDICATION PROBLEMS

**CAUTION**

USE TEFLON-JAWED PLIERS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (3) Use teflon-jawed pliers, STD-664 to connect the system 1 (upper) or system 2 (lower) electrical input cable connector [1] (TASK 70-00-01-400-807-H01):
- (a) Remove the protective covers from the electrical input cable connector [1] and the connection.
 - (b) Connect the electrical input cable connector [1] to the ignition exciter [4].
 - 1) Tighten the electrical input cable connector [1].

SUBTASK 74-11-01-410-001-H01

- (4) Install the ignition exciter heatshield cover [3] on the ignition exciter [4].
- (a) Put the ignition exciter heatshield cover [3] on the ignition exciter [4] and the heatshield assembly.
 - (b) Align the ignition exciter heatshield cover [3] holes with the captive nuts in the heatshield assembly.
 - (c) Install the five bolts [2] that attach the ignition exciter heatshield cover [3] to the heatshield assembly.
 - (d) Tighten the bolts [2] to 110-125 pound-inches (12.4-14.1 Newton-meters).
 - (e) Install the bolt [12] to attach the electrical cable [11] to the ignition exciter heatshield cover [3].
 - 1) Tighten the bolt [12] to 55-70 pound-inches (6.2-7.9 Newton-meters).
 - (f) Install the electrical cable [11] to the spring clip.

G. Put the Airplane Back to its Usual Condition

SUBTASK 74-11-01-865-003-H01

- (1) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-11-01-865-004-H01

- (2) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2

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Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-11-01-410-002-H01



DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:
- (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.
 - 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
 - (b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.
 - 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
 - (c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.
 - (d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

H. Ignition Exciter Test

SUBTASK 74-11-01-710-002-H01

- (1) Do the tests listed in the Power Plant Test Reference Table (TASK 71-00-00-800-833-H00).

————— **END OF TASK** —————

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HIGH TENSION DISTRIBUTION - INSPECTION/CHECK

1. General

- A. This procedure has one task:
- (1) An inspection of the high tension distribution.

TASK 74-21-00-200-801-H01

2. High Tension Distribution Inspection

(Figure 601)

A. **General**

- (1) The task provides the instructions to examine the system 1 (upper) and system 2 (lower) ignition leads and the system 1 and system 2 igniters for damage.

B. **References**

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. **Location Zones**

Zone	Area
411	Engine, Left
421	Engine, Right

D. **Access Panels**

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

E. **Prepare for the Inspection**

SUBTASK 74-21-00-865-001-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

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SUBTASK 74-21-00-865-002-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-00-010-003-H01

**WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

F. High Tension Distribution Inspection

SUBTASK 74-21-00-010-002-H01

- (1) Remove the ignition exciter heatshield cover [2].
- (a) Remove the five bolts [1] that attach the ignition exciter heatshield cover [2] to the lower heatshield.
 - (b) Remove the electrical cable [3] from the ignition exciter heatshield cover [2].
 - 1) Remove the bolt [4] and remove the electrical cable [3] from the spring clip.
 - (c) Remove the ignition exciter heatshield cover [2].

SUBTASK 74-21-00-210-001-H01

**WARNING**

MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.

- (2) Examine the system 1 (upper) and system 2 (lower) ignition leads for damage.

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- (a) Chaffing or broken wire braid
 - 1) Chaffing or broken wire braid is not permitted.
- (b) Arcing
 - 1) Arcing is not permitted.
- (c) Cracks
 - 1) Cracks in the ignition lead cooling air plenum are not permitted.
- (d) Damage on the cooling air tube flexible joint
 - 1) Damage on the cooling air tube flexible joint is not permitted.
- (e) Loose hose clamps
 - 1) If the hose clamps are loose, tighten the hose clamps to 30-40 pound-inches (3.4-4.5 Newton-meters).
- (f) Signs of a loose ignition leads at the igniters
 - 1) If the ignition leads at the igniters are loose, tighten the ignition lead coupling nuts to 260-290 pound-inches (29.4-32.8 Newton-meters).

SUBTASK 74-21-00-210-002-H01

- (3) Examine the system 1 (upper) and system 2 (lower) igniters for damage.
 - (a) Signs of a loose igniters
 - 1) If the igniters are loose, tighten the igniters to 260-290 pound-inches (29.4-32.8 Newton-meters).
 - (b) Cracks
 - 1) Cracks are not permitted.
 - (c) Arcing
 - 1) Arcing is not permitted.
 - (d) Burns or holes
 - 1) Burns or holes are not permitted.

SUBTASK 74-21-00-410-001-H01

- (4) Install the ignition exciter heatshield cover [2] on the ignition exciters.
 - (a) Put the ignition exciter heatshield cover [2] on the ignition exciters and the lower heatshield.
 - (b) Align the heatshield cover holes.
 - (c) Install the five bolts [1] that attach the ignition exciter heatshield cover [2] to the lower heatshield.
 - (d) Tighten the bolts [1] to 110-125 pound-inches (12.4-14.1 Newton-meters).

G. Put the Airplane Back to Its Usual Condition**SUBTASK 74-21-00-410-003-H01****WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:
 - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.

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- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

- (b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.

- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.

- (d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

SUBTASK 74-21-00-865-003-H01

- (2) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-00-865-004-H01

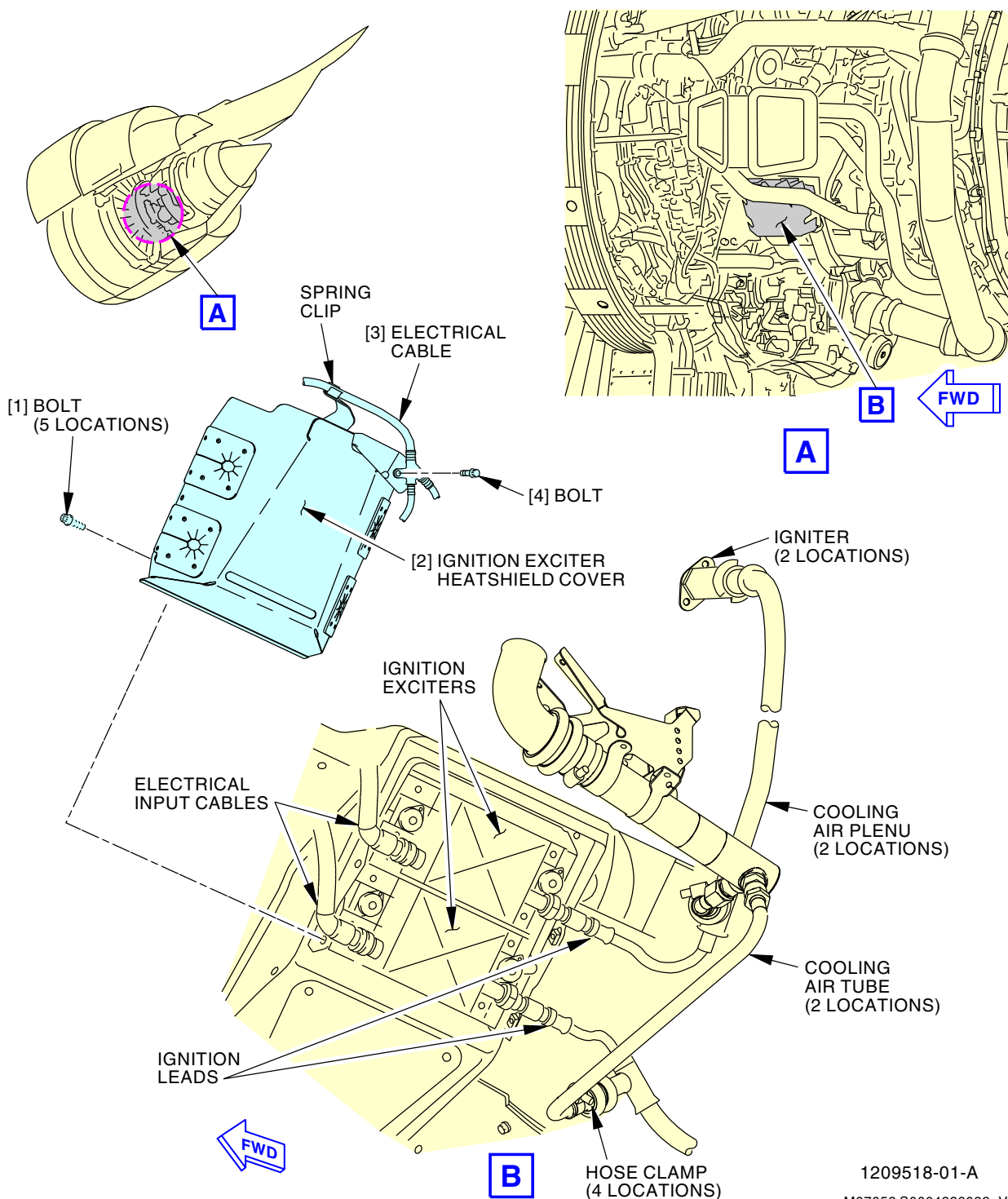
- (3) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

————— END OF TASK —————

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High Tension Distribution Inspection
Figure 601/74-21-00-990-801-H01

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IGNITION LEAD - REMOVAL/INSTALLATION

1. General

A. This procedure has two tasks:

- (1) A removal of the system 1 (upper) or system 2 (lower) ignition lead
- (2) An installation of system 1 or system 2 the ignition lead.

TASK 74-21-01-000-801-H01**2. Ignition Lead (System 1 or System 2) Removal**

(Figure 401)

A. General

- (1) The task provides the instructions to remove the ignition lead.
- (2) Each engine has two ignition leads which connect the system 1 (upper) and system 2 (lower) ignition exciters to the system 1 (upper) and system 2 (lower) igniters. The connections are:
 - (a) The system 1 (upper) igniter (at 9:00 o'clock position) to the system 1 (upper) ignition exciter
 - (b) The system 2 (lower) igniter (at 8:30 o'clock position) to the system 2 (lower) ignition exciter.
- (3) You can use this procedure for the removal of either a single Ignition lead or both ignition leads.
- (4) To remove the applicable ignition lead, you must do as follows:
 - (a) Open the circuit breakers for the ignition system.
 - (b) Do the deactivation procedure for the leading edge slats.
 - (c) Do the deactivation procedure for the thrust reversers.
 - (d) Open the left fan cowl panel and the left thrust reverser.
 - (e) Disconnect the ignition lead from the system 1 or system 2 exciter and the igniter.

B. References

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
70-00-01-400-807-H01	Electrical Connector - Disconnect and Connect (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Location Zones

Zone	Area
411	Engine, Left
421	Engine, Right

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E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

F. Prepare for the Removal

SUBTASK 74-21-01-865-001-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-01-865-002-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-01-010-003-H01



DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

Number	Name/Location
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

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AIRCRAFT MAINTENANCE MANUAL****G. Ignition Lead (System 1 or System 2) Removal**

SUBTASK 74-21-01-010-002-H01

- (1) Remove the ignition exciter heatshield cover [13].
 - (a) Remove the five bolts [12] that attach the ignition exciter heatshield cover [13] to the lower heatshield.
 - (b) Remove the ignition exciter heatshield cover [13].

SUBTASK 74-21-01-030-001-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



USE TEFLON-JAWED PLIERS TO LOOSEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (2) Use teflon-jawed pliers, STD-664 to disconnect the applicable electrical input cable connector [18] from the system 1 or system 2 ignition exciter (TASK 70-00-01-400-807-H01).
 - (a) Disconnect the electrical input cable connector [18] from the exciter.
 - (b) Put the protective covers on the electrical input cable connector [18] and the ignition exciter connection.
 - (c) Move the electrical input cable connector [18] away from the ignition exciter.

SUBTASK 74-21-01-020-001-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



DO NOT TWIST OR BEND THE IGNITION LEAD. YOU CAN CAUSE DAMAGE TO THE LEAD.

- (3) Remove the applicable ignition lead [1] from the system 1 or system 2 exciter and from the applicable igniter.
 - (a) Disconnect the ignition lead [1] (upper) as follows:
 - 1) Disconnect the hinged clamp [2], which attaches the ignition lead [1] (upper) to the bracket [9].

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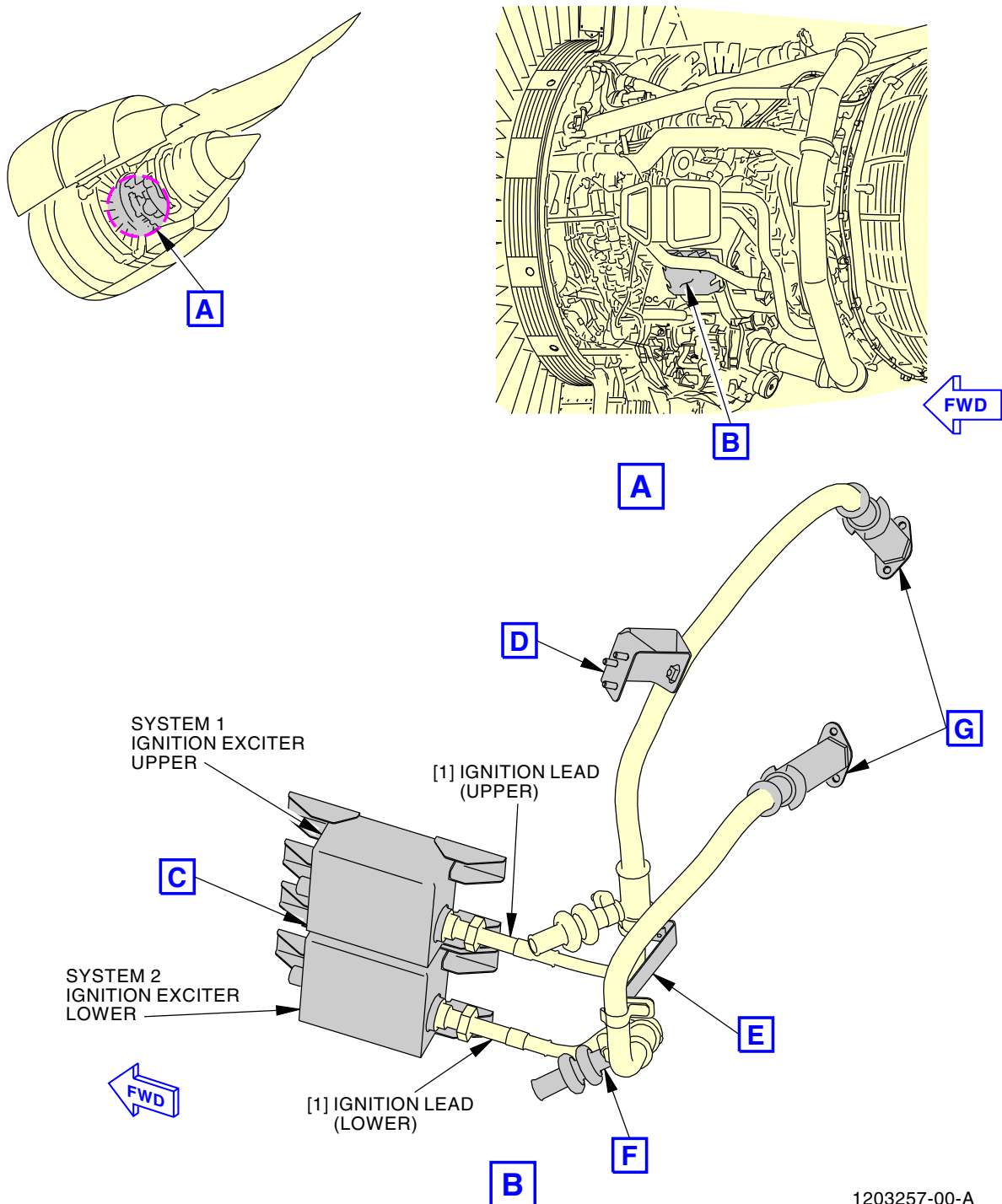
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- a) Remove the bolt [3] from the hinged clamp [2].
 - 2) Disconnect the hinged clamp [5], which attaches the ignition lead [1] (upper) to bracket [4].
 - a) Remove the bolt [6] from the hinged clamp [5]
 - (b) Disconnect the ignition lead [1] (lower) as follows:
 - 1) Disconnect the hinged clamp [10] at the ignition lead [1] (lower).
 - a) Remove the bolt [11] from the hinged clamp [10].
 - 2) Disconnect the hinged clamp [7] which attaches the ignition lead [1] (lower) to bracket [9].
 - a) Remove the bolt [8] from the hinged clamp [7].

NOTE: If both ignition leads are removed, remove the bracket [9].
 - (c) Loosen the hose clamps [14] which attach the flexible joint [15] to the cooling air plenum [16].
 - (d) Remove the flexible joint [15] from the cooling air plenum [16].
 - (e) Remove the hose clamps [14] from the flexible joint [15].
 - (f) Put the protective covers on the flexible joint [15] and the cooling air plenum [16].
 - (g) Remove the hose clamp [20] which attaches the cooling air shroud halves [19] to the ignition lead [1].
 - 1) Remove the cooling air shroud halves [19].
 - (h) Disconnect the ignition lead [1] from the applicable ignition exciter.
 - (i) Move the ignition lead [1] away from the ignition exciter and igniter.
 - (j) Put the protective covers on the ignition lead [1] connector, the igniter, and the ignition exciter connection.
 - (k) Remove the chamfered silicone washer from the ignition lead to the igniter input tip.
- NOTE: Keep the spring assembly with the ignition lead.
- 1) Discard the chamfered silicone washer.

———— **END OF TASK** ————

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Ignition Lead Installation
Figure 401/74-21-01-990-801-H01 (Sheet 1 of 4)

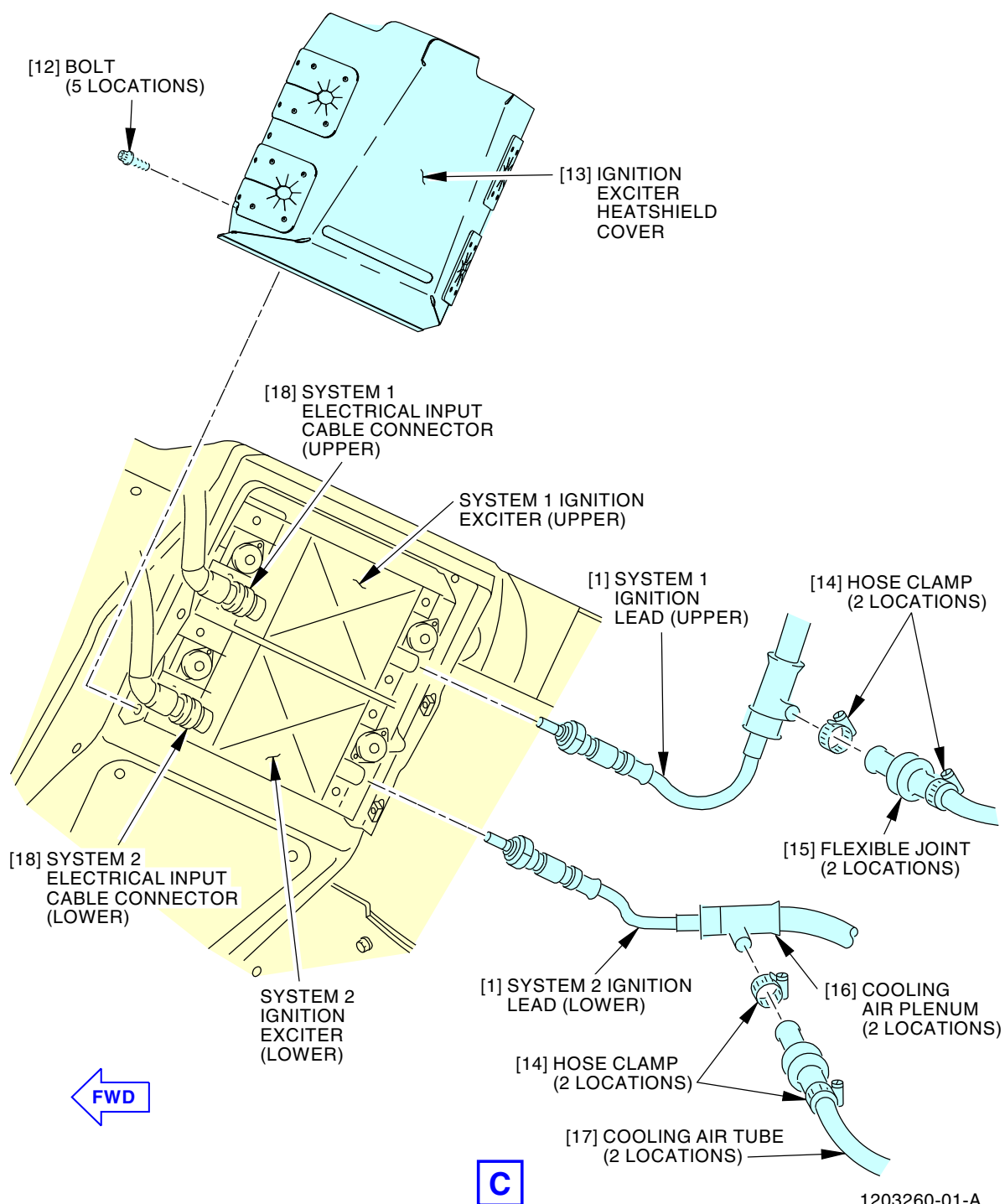
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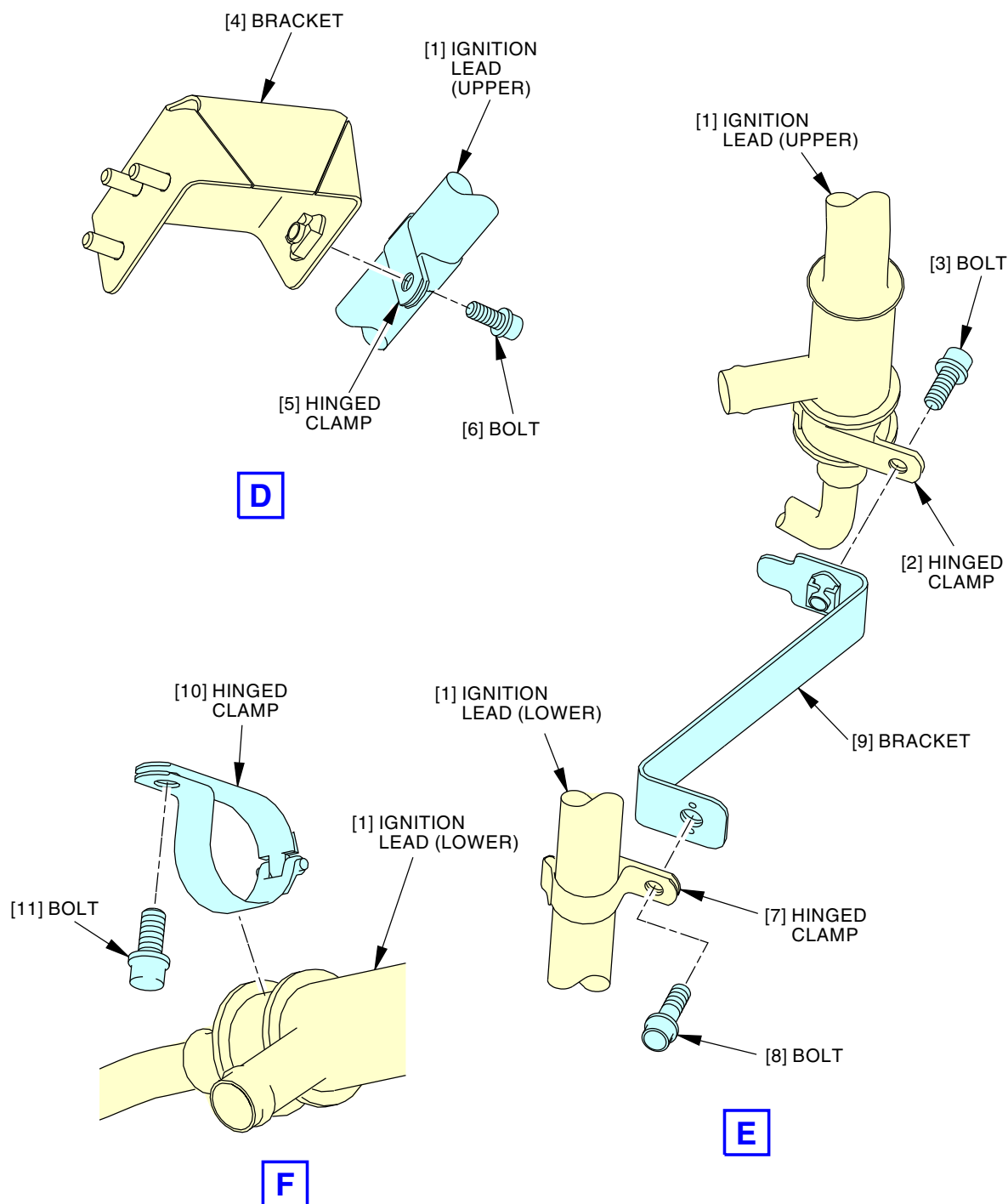
Ignition Lead Installation
Figure 401/74-21-01-990-801-H01 (Sheet 2 of 4)

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Ignition Lead Installation
Figure 401/74-21-01-990-801-H01 (Sheet 3 of 4)

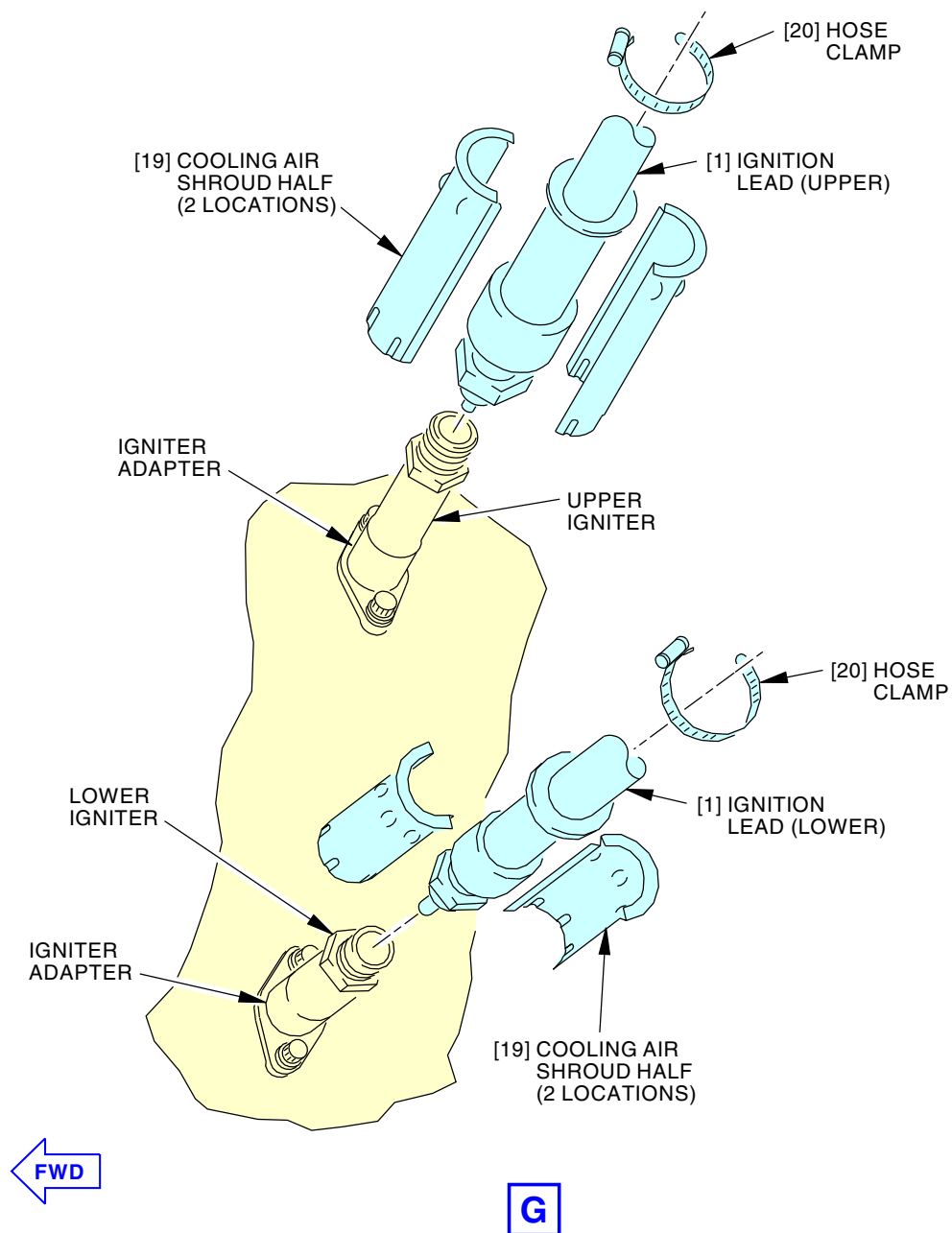
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Ignition Lead Installation
Figure 401/74-21-01-990-801-H01 (Sheet 4 of 4)

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TASK 74-21-01-400-801-H01

3. Ignition Lead (System 1 or System 2) Installation

(Figure 401)

A. General

- (1) The task provides the instructions to install the ignition lead.
- (2) Each engine has two ignition leads. The ignition leads are installed on the left side of the engine from the system 1 (upper) and system 2 (lower) exciters to the system 1 (upper) and system 2 (lower) igniters.
- (3) You can use this procedure for the installation of either a single ignition lead or both ignition leads.
- (4) To install the ignition lead, you must do these steps:
 - (a) Connect the ignition lead to the ignition exciter.
 - (b) Connect the ignition lead to the igniter.
 - (c) Install the heatshield cover.
 - (d) Close the left thrust reverser.
 - (e) Do the activation procedure for the thrust reversers.
 - (f) Close the left fan cowl panel.
 - (g) Do the activation procedure for the leading edge slats.
- (5) Do the necessary test for the ignition system.

B. References

Reference	Title
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
70-00-01-400-807-H01	Electrical Connector - Disconnect and Connect (P/B 201)
71-00-00-800-833-H00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Ignition lead	74-21-01-03-055	ARO ALL
22	Chamfered silicone washer	74-21-01-03-060	ARO ALL

E. Location Zones

Zone	Area
411	Engine, Left
421	Engine, Right

F. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine

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(Continued)

Number	Name/Location
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

G. Ignition Lead (System 1 or System 2) Installation

SUBTASK 74-21-01-420-001-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE BEFORE YOU INSTALL THE IGNITION LEAD. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



MAKE SURE THAT THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. DIRTY ELECTRICAL CONNECTORS CAN CAUSE THRUST REVERSER CONTROL AND INDICATION PROBLEMS



USE TEFLON-JAWED PLIERS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.



DO NOT TWIST OR BEND THE IGNITION LEAD. YOU CAN CAUSE DAMAGE TO THE LEAD.

- (1) Install the applicable ignition lead [1] on the ignition system 1 or system 2 exciter and the igniter:

NOTE: The ignition lead (upper) for the igniter (upper) at the 9:30 o'clock location connects to the system 1 (upper) ignition exciter. The ignition lead (lower) for the igniter (lower) at the 8:00 o'clock location connects to the system 2 (lower) ignition exciter.

- (a) Remove the protective covers from the ignition lead [1] connector, the igniter, and the ignition exciter connection.
- (b) Put new chamfered silicone washer [22] (or seal) on igniter input tip.
- (c) Insert the ignition lead ceramic tip into the igniter.
 - 1) Hand tighten the ignition lead [1] connector.
- (d) Insert the ignition lead silicon rubber tip into the ignition exciter.
 - 1) Make sure the cooling air plenum [16] is in the correct position before you tighten the ignition lead [1].
 - 2) Hand tighten the ignition lead [1] connector.



MAKE SURE THE IGNITION LEAD COUPLING NUT AT THE IGNITION EXCITER ARE TIGHTENED. A LOOSE COUPLING NUT CAN CAUSE AIRPLANE RADIO INTERFERENCE.

- (e) Tighten the ignition lead [1] coupling nut at the applicable exciter to 140-160 pound-inches (15.8-18.0 Newton-meters).

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- (f) Tighten the ignition lead [1] coupling nut at the applicable igniter to 260-290 pound-inches (29.4-32.8 Newton-meters).
- (g) Put the cooling air shroud halves [19] around the igniter and the ignition lead [1].
- (h) Install the hose clamp [20] on the cooling air shroud halves [19].
 - 1) Tighten the hose clamp [20] to 30-40 pound-inches (3.4-4.5 Newton-meters).
- (i) Remove the protective covers from the cooling air plenum [16] and the flexible joint [15].
- (j) Put the hose clamps [14] around the flexible joint [15].
- (k) Connect the flexible joint [15] to the cooling air plenum [16].
- (l) Install the hose clamps [14] on the cooling air tube [17].
 - 1) Tighten the hose clamps [14] to 30-40 pound-inches (3.4-4.5 Newton-meters).
- (m) Connect the the ignition lead [1] (upper) as follows:

NOTE: If you removed both ignition leads, install bracket [9] to the applicable hinged clamps.

 - 1) Connect the hinged clamp [2] which attaches the ignition lead [1] (upper) to the bracket [9].
 - a) Tighten bolt [3] to 55-70 pound-inches (6.2-7.9 Newton-meters).
 - 2) Connect the hinged clamp [5] which attaches the ignition lead [1] (upper) to bracket [4].
 - a) Tighten bolt [6] to 55-70 pound-inches (6.2-7.9 Newton-meters).
- (n) Connect the ignition lead [1] (lower) as follows:

NOTE: If you removed both ignition leads, install bracket [9] to the applicable hinged clamps.

 - 1) Connect the hinged clamp [10] at the ignition lead [1] (lower).
 - a) Tighten bolt [11] to 55-70 pound-inches (6.2-7.9 Newton-meters).
 - 2) Connect hinged clamp [7] which attaches the ignition lead [1] (lower) to bracket [9].
 - a) Tighten bolt [8] to 55-70 pound-inches (6.2-7.9 Newton-meters).

SUBTASK 74-21-01-430-001-H01



MAKE SURE THAT THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. DIRTY ELECTRICAL CONNECTORS CAN CAUSE THRUST REVERSER CONTROL AND INDICATION PROBLEMS



USE TEFLON-JAWED PLIERS TO TIGHTEN THE ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (2) Use teflon-jawed pliers, STD-664 to connect the applicable electrical input cable connector [18] (TASK 70-00-01-400-807-H01):
 - (a) Remove the protective covers from the electrical input cable connector [18] and the connection.
 - (b) Connect the electrical input cable connector [18] to the ignition exciter.
 - 1) Tighten the electrical input cable connector [18].

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SUBTASK 74-21-01-410-001-H01

- (3) Install the ignition exciter heatshield cover [13] on the ignition exciter:
- (a) Put the ignition exciter heatshield cover [13] on the ignition exciter and the lower heatshield.
 - (b) Align the ignition exciter heatshield cover [13] holes.
 - (c) Install the five bolts [12] that attach the ignition exciter heatshield cover [13] to the lower heatshield.
 - (d) Tighten the bolts [12] to 110-125 pound-inches (12.4-14.1 Newton-meters).

H. Put the Airplane Back to its Usual Condition

SUBTASK 74-21-01-865-003-H01

- (1) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-01-865-004-H01

- (2) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-01-410-003-H01



DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:

- (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.

- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

- (b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.

- 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

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- (c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.
- (d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

I. Ignition Lead Test

SUBTASK 74-21-01-710-002-H01

- (1) Do the tests listed in the Power Plant Test Reference Table (TASK 71-00-00-800-833-H00).

————— **END OF TASK** —————

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IGNITER - REMOVAL/INSTALLATION

1. General

A. This procedure has two tasks:

- (1) A removal of the system 1 (upper) or system 2 (lower) igniter
- (2) An installation of the system 1 or system 2 igniter.

TASK 74-21-02-000-801-H01

2. Igniter (System 1 or System 2) Removal

(Figure 401)

A. **General**

- (1) The task provides the instructions to remove the system 1 (upper) or system 2 (lower) igniter.
- (2) Each engine has two igniters. The system 1 and system 2 igniters are installed at the 9:00 and 8:30 o'clock position, respectively, on the left side of the combustor.
- (3) You can use this procedure for the removal of either a single igniter or both igniters.
- (4) To remove the igniter, you must do as follows:
 - (a) Open the circuit breakers for the ignition system.
 - (b) Do the deactivation procedure for the leading edge slats.
 - (c) Do the deactivation procedure for the thrust reversers.
 - (d) Open the left fan cowl panel and the left thrust reverser.
 - (e) Disconnect the system 1 or system 2 ignition lead from the system 1 or system 2 igniter.

B. **References**

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

C. **Access Panels**

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

D. **Prepare for the Removal**

SUBTASK 74-21-02-865-005-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

Row	Col	Number	Name
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1

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Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-02-865-006-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-02-010-004-H01

**WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

E. Igniter (System 1 or System 2) Removal

SUBTASK 74-21-02-020-001-H01

- (1) Remove the system 1 or system 2 igniter cooling air shroud [9]:
- (a) Remove the hose clamp [10] which attaches the igniter cooling air shroud [9] halves to the ignition lead [4].
 - (b) Remove the igniter cooling air shroud [9] halves.

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SUBTASK 74-21-02-020-002-H01

**WARNING**

MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE FOR FIVE MINUTES BEFORE YOU REMOVE THE COMPONENT. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.

**CAUTION**

DO NOT TWIST OR BEND THE IGNITION LEAD. YOU CAN CAUSE DAMAGE TO THE LEAD.

- (2) Disconnect the system 1 (upper) or system 2 (lower) ignition lead [4] from the system 1 (upper) or system 2 (lower) igniter [11].
 - (a) Disconnect the ignition lead [4] from the igniter [11].
 - (b) Remove the old silicone washer [12] from the igniter insulator of the ignition lead [4].
 - 1) Discard the silicone washer [12].
 - (c) Put the protective covers on the ignition lead [4] connector.
 - (d) Move the ignition lead [4] away from the igniter [11].

SUBTASK 74-21-02-020-003-H01

- (3) Remove the system 1 (upper) or system 2 (lower) igniter [11] as follows:
 - (a) Put the protective covers over the fuel manifold adjacent to the ignitor.

NOTE: Do not remove the igniter adapter, or the igniter plug bushing.
 - (b) Remove the igniter [11] and the spacing gasket [15] from the igniter plug bushing [16]

NOTE: Use a 15.0-18.0 inch (381-457 mm) extension attached to a deep wall socket to remove the igniter or to tighten the igniter plug bushing.

NOTE: Do not remove the igniter adapter, or the igniter plug bushing.

 - 1) Do a check of the igniter plug bushing [16] for looseness. If the bushing is loose, tighten the igniter plug bushing [16] to 385-445 pound-inches or 32.1-37.1 pound-foot (43.5-50.3 Newton-meters).
 - (c) Alternative procedure available: If it is not possible to remove the igniter without removing the igniter plug bushing [16] do the procedure as follows:
 - 1) Remove the igniter [11] and the igniter plug bushing [16].
 - 2) Record the number of igniter plug gaskets installed with the igniter plug bushing [16] and the igniter adapter when it is removed.
 - 3) Remove the igniter [11] and the spacing gasket [15] from the igniter plug bushing [16].
 - (d) Remove the protective covers from the fuel manifold.

————— **END OF TASK** —————

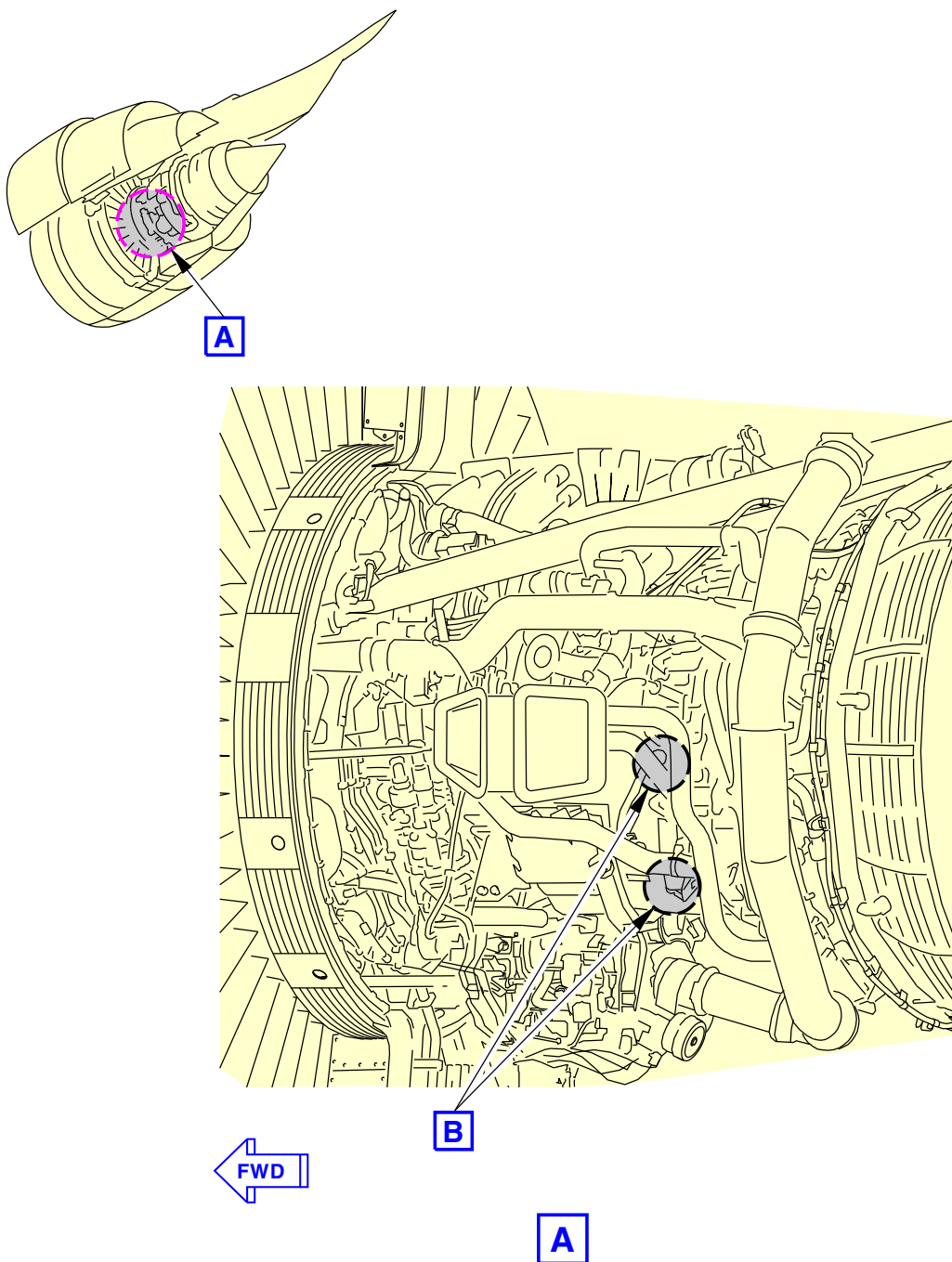
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Igniter Installation
Figure 401/74-21-02-990-801-H01 (Sheet 1 of 3)

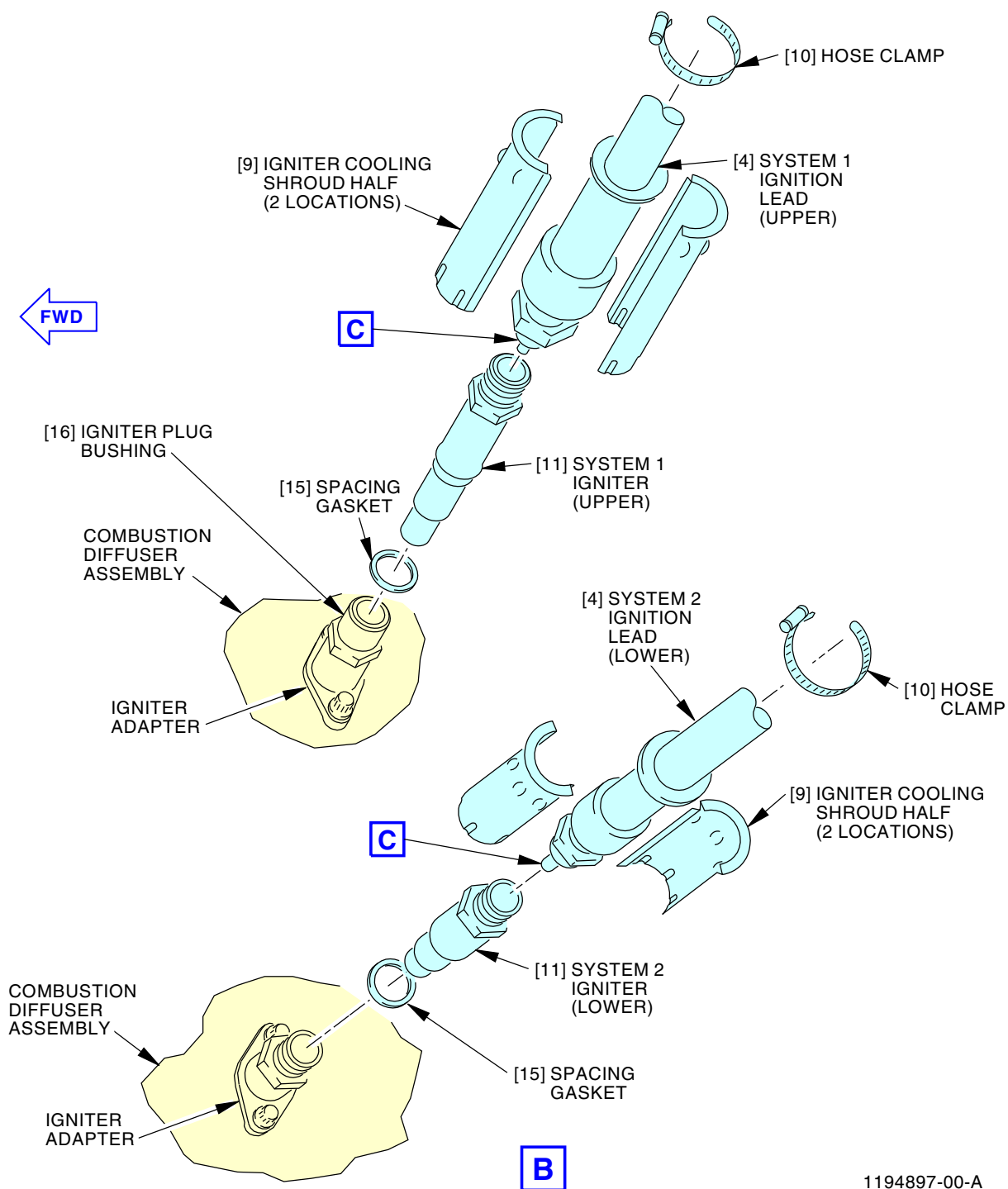
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Igniter Installation
Figure 401/74-21-02-990-801-H01 (Sheet 2 of 3)

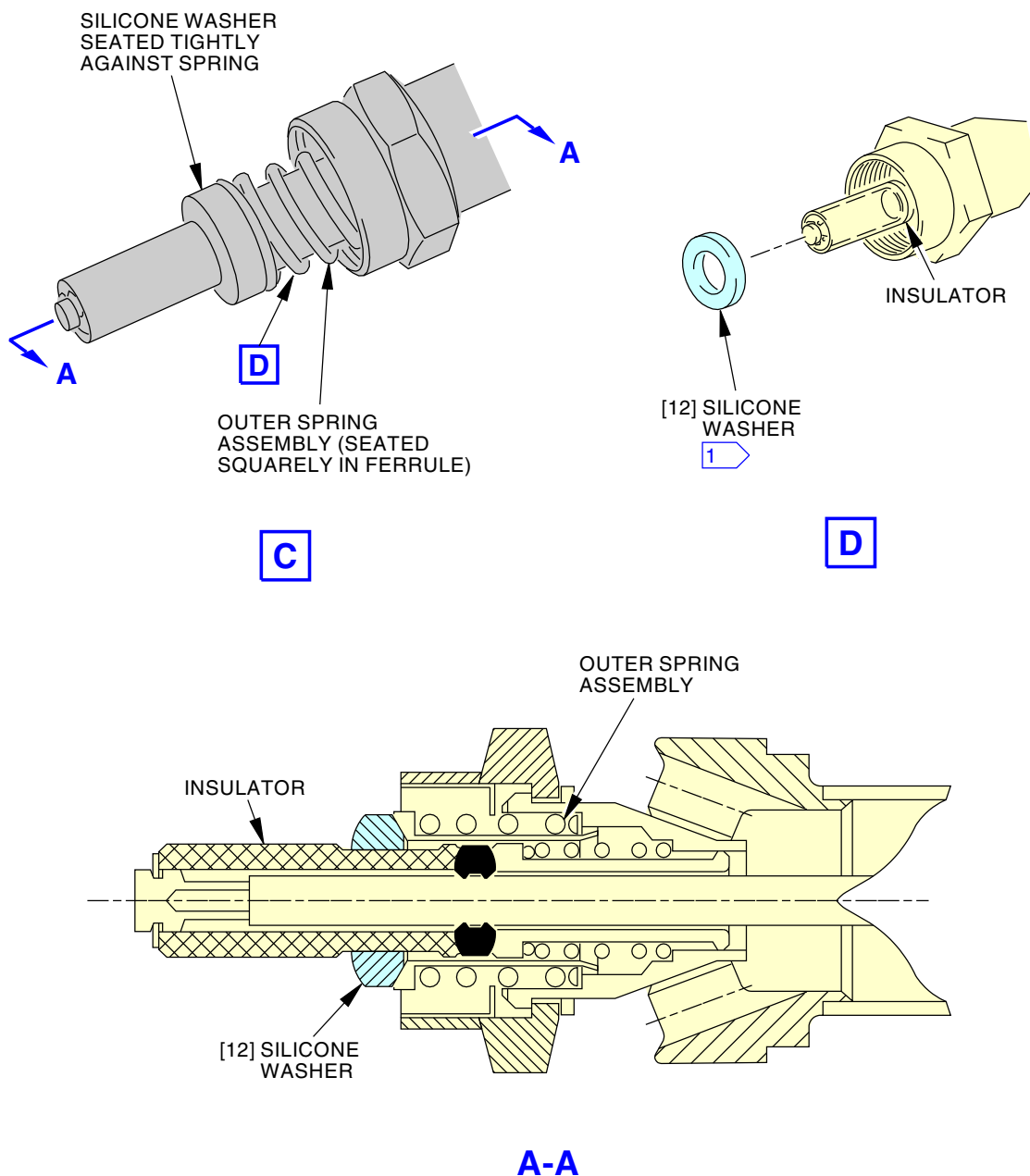
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1 REPLACE EACH TIME LEAD IS REMOVED.

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Igniter Installation
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TASK 74-21-02-400-801-H01

3. Igniter (System 1 or System 2) Installation

(Figure 401)

A. General

- (1) The task provides the instructions to install the system 1 (upper) or (lower) system 2 igniter.
- (2) You can use this procedure for the installation of either a single igniter or both igniters.
- (3) To install the igniter, you must do these steps:
 - (a) Install the igniter on the igniter adapter.
 - (b) Connect the ignition lead to the igniter.
 - (c) Close the left thrust reverser.
 - (d) Do the activation procedure for the thrust reversers.
 - (e) Close the left fan cowl panel.
 - (f) Do the activation procedure for the leading edge slats.
- (4) Do the necessary test for the ignition system.

B. References

Reference	Title
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
71-00-00-800-833-H00	Power Plant Test Reference Table (P/B 501)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. Consumable Materials

Reference	Description	Specification
D50017 [C02-071]	Compound - Antiseize And Lubricating - Pure Nickel Special Grade	GE Spec D6Y28C1 or A50TF198
D50043 [C02-058]	Compound - Antiseize, Acheson GP460 (For Threaded Fasteners 0.250 Inches Diameter Or Larger, C02-079 Is An Alternative)	GE A50TF201 Class A

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
11	Igniter	74-21-02-03-015	ARO ALL
12	Washer	74-21-01-03-060	ARO ALL

E. Location Zones

Zone	Area
411	Engine, Left
421	Engine, Right

F. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

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G. Igniter (System 1 or System 2) Installation

SUBTASK 74-21-02-420-001-H01

- (1) Install the igniter [11] system 1 (upper) or system 2 (lower) as follows:
 - (a) Put protective covers over the fuel manifold adjacent to the igniter [11].
 - (b) Apply Acheson GP460 compound, D50043 [C02-058] or pure nickel special compound, D50017 [C02-071] to the threads that will engage the igniter plug bushing [16].
 - (c) Alternative procedure available: If the igniter plug bushing [16] was removed during the removal of the igniter [11] do the procedure as follows:
 - 1) Apply Acheson GP460 compound, D50043 [C02-058] or pure nickel special compound, D50017 [C02-071] to the threads that will engage the igniter plug bushing [16] with the igniter adapter and the igniter [11] system 1 (upper) or system 2 (lower).
 - 2) Install the igniter plug bushing [16] on the igniter adapter using the same igniter plug gaskets number that were installed when the igniter plug bushing [16] was removed.
 - 3) Tighten the igniter plug bushing [16] to 385 in-lb (43.5 N·m)-445 in-lb (50.3 N·m).
 - (d) Install the spacing gasket [15] on the igniter [11].
 - (e) Install the igniter [11] into the igniter plug bushing [16].

NOTE: Use a 15.0-18.0 inch (381-457 mm) extension attached to a deep well socket to install the igniter.
 - (f) Tighten the igniter [11] to 260-290 pound-inches (29.4-32.8 Newton-meters).

SUBTASK 74-21-02-420-002-H01



MAKE SURE THAT THE IGNITION SYSTEM DOES NOT OPERATE BEFORE YOU INSTALL THE IGNITION COMPONENTS. IGNITION VOLTAGE IS DANGEROUSLY HIGH AND CAN CAUSE INJURY TO PERSONS.



DO NOT TWIST OR BEND THE IGNITION LEAD. YOU CAN CAUSE DAMAGE TO THE LEAD.

- (2) Install the system 1 (upper) or system 2 (lower) ignition lead [4] on the (system 1 or system 2) igniter [11]:

NOTE: The system 1 ignition lead for the system 1 igniter at the 9:30 o'clock location installs to the system 1 (upper) ignition exciter. The system 2 ignition lead for the system 2 igniter at the 8:00 o'clock location installs to the system 2 (lower) ignition exciter.

- (a) Remove the protective covers from the ignition lead [4].
- (b) Install a new silicone washer [12] over the igniter insulator [20] of the ignition lead [4].
 - 1) Push the silicone washer [12] on the lead insulator until the small end seats firmly in the recessed flange of the outer spring assembly.
- (c) Make sure the lead terminal is clean and free of all contaminants to decrease the possibility of electrical flashover.
- (d) Insert the ignition lead ceramic tip into the ignition igniter [11].

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**CAUTION**

DO NOT PUT ACHESON COMPOUND ON THE IGNITER TO IGNITION LEAD THREADS OR THE IGNITION LEAD COUPLING NUT THREADS. DAMAGE TO THE IGNITION LEAD OR IGNITER CAN OCCUR.

- (e) Connect the (system 1 or system 2) ignition lead [4] to the (system 1 or system 2) igniter [11]:
- 1) Hand tighten the (system 1 or system 2) ignition lead [4] connector.

**CAUTION**

MAKE SURE THE IGNITION LEAD COUPLING NUT AT THE IGNITION EXCITER IS TIGHTENED. A LOOSE COUPLING NUT CAN CAUSE AIRPLANE RADIO INTERFERENCE.

- (f) Tighten the (system 1 or system 2) ignition lead [4] coupling nut to 260-290 pound-inches (29.4-32.8 Newton-meters).

SUBTASK 74-21-02-420-003-H01

- (3) Install the system 1 (upper) or system 2 (lower) igniter cooling air shroud [9]:
- (a) Put the hose clamp [10] for the igniter cooling air shroud [9] around the igniter adapter.
 - (b) Put the igniter cooling air shroud [9] halves around the igniter [11] and the ignition lead [4].
 - (c) Move the hose clamp [10] to the top of the igniter cooling air shroud [9] halves.
 - (d) Tighten the hose clamp [10] to 30-40 pound-inches (3.4-4.5 Newton-meters).

H. Put the Airplane Back to its Usual Condition

SUBTASK 74-21-02-865-007-H01

- (1) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-02-865-008-H01

- (2) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-02-410-004-H01

**WARNING**

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:

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(a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.

1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

(b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.

1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

(c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.

(d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

I. Igniter (System 1 or System 2) Test

SUBTASK 74-21-02-710-002-H01

(1) Do the tests listed in the Power Plant Test Reference Table (TASK 71-00-00-800-833-H00).

————— **END OF TASK** —————

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IGNITER - INSPECTION/CHECK

1. General

- A. This procedure has one task.
- (1) An inspection of the igniter.

TASK 74-21-02-200-801-H01

2. Igniter (System 1 or System 2) Inspection

(Figure 601)

A. **General**

- (1) The igniter inspection includes these checks:
- (a) Examine the igniter input terminal well for damage.
 - (b) Examine the igniter firing tip for erosion and indications of damage.
 - (c) Examine the outside of the igniter for an indication of damage.

B. **References**

Reference	Title
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
74-21-02-000-801-H01	Igniter (System 1 or System 2) Removal (P/B 401)
74-21-02-400-801-H01	Igniter (System 1 or System 2) Installation (P/B 401)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. **Consumable Materials**

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G01659	Swab - Cotton Or Rayon, (Disposable)	

D. **Location Zones**

Zone	Area
411	Engine, Left
421	Engine, Right

E. **Access Panels**

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine

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F. Prepare for the Inspection

SUBTASK 74-21-02-865-001-H01

- (1) For the left engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

SUBTASK 74-21-02-865-002-H01

- (2) For the right engine, open these circuit breakers and install safety tags:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

SUBTASK 74-21-02-010-005-H01



WARNING

DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO OPEN THE THRUST REVERSER(S). IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR

- (3) Do these tasks in sequence to safely open the left thrust reverser on the applicable engine:

- (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
- (b) Do this task: Leading Edge Slat - Deactivation, TASK 27-81-00-040-801.
- (c) Do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.
- (d) For the left fan cowl panel, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

- (e) For the left thrust reverser, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine

SUBTASK 74-21-02-020-004-H01

- (4) Do this task: Igniter (System 1 or System 2) Removal, TASK 74-21-02-000-801-H01.

G. Igniter (System 1 or System 2) Inspection

SUBTASK 74-21-02-220-001-H01

- (1) Examine the igniter input terminal well for indications of damage:

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- (a) Cracks in the ceramic insulator:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
- (b) Scratches in the ceramic insulator:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
- (c) Missing pieces from the ceramic insulator:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
- (d) Looseness of ceramic insulator or contact button:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
- (e) Signs of burns in the ceramic insulator:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
- (f) Signs of carbon tracks in the ceramic insulator:
 - 1) Make a swab, G01659 moist with the alcohol, B00130.
 - 2) Clean the carbon tracks of the ceramic insulator.
 - 3) Dry the alcohol, B00130 from the insulator with a cotton wiper, G00034.
 - 4) If you can not remove the carbon tracks, replace the igniter (TASK 74-21-02-400-801-H01)..
- (g) Minor chips around upper edge of the ceramic are acceptable if each chip is not more than the radial width of 0.020 inch (0.05 cm).

SUBTASK 74-21-02-220-002-H01

- (2) Examine the firing tip for erosion and indications of damage:
 - (a) Click sound is permitted.
NOTE: You may hear a click sound when you move the igniter.
 - (b) Examine the insulator for cracks:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
 - (c) Examine the insulator for missing pieces:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
 - (d) Examine the outside of the shell for cracks:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
 - (e) Examine the outside of the igniter for holes:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
 - (f) Examine the igniter shell for wear from contact with the combustion chamber ferrule:
 - 1) Maximum wear permitted is a 0.030 inch (0.762 mm) decrease in shell diameter.
 - 2) If the shell wear dimension is more than 0.030 inch (0.762 mm), replace the igniter (TASK 74-21-02-400-801-H01).
 - (g) Measure the igniter center electrode for erosion.
 - 1) Measure the distance from the flat surface of the firing tip to the top of the center electrode.
 - a) If the dimension measured is more than 0.300 inch (7.60 mm), replace the igniter (TASK 74-21-02-400-801-H01).
 - (h) Measure the firing tip shell for erosion:

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- 1) If the inside diameter of the shell is eroded more than 0.100 inch (2.50 mm), replace the igniter (TASK 74-21-02-400-801-H01).

SUBTASK 74-21-02-220-003-H01

- (3) Examine the outside of the igniter for indications of damage.
 - (a) Galled or crossed threads:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).
 - (b) Damaged igniter hex nut flats where you will not be sure of installation torque:
 - 1) None permitted. Replace the igniter (TASK 74-21-02-400-801-H01).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 74-21-02-420-004-H01

- (1) Do this task: Igniter (System 1 or System 2) Installation, TASK 74-21-02-400-801-H01.

SUBTASK 74-21-02-410-005-H01



DO ALL OF THE SPECIFIED TASKS IN THE CORRECT SEQUENCE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do these tasks in sequence to safely close the left thrust reverser on the applicable engine:
 - (a) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00.
 - 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
415AL	Left Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
 - (b) Do this task: Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00.
 - 1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
413AL	Left Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
 - (c) Do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.
 - (d) Do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

SUBTASK 74-21-02-865-003-H01

- (3) For the left engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C74401	L ENG STBY IGN 1
A	2	C74407	L ENG STBY IGN 2
E	1	C74403	L ENG IGN 1
E	14	C74405	L ENG IGN 2

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SUBTASK 74-21-02-865-004-H01

- (4) For the right engine, remove the safety tags and close these circuit breakers:

Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C74400	R ENG STBY IGN 1
A	15	C74406	R ENG STBY IGN 2
E	2	C74404	R ENG IGN 2
E	15	C74402	R ENG IGN 1

———— **END OF TASK** ————

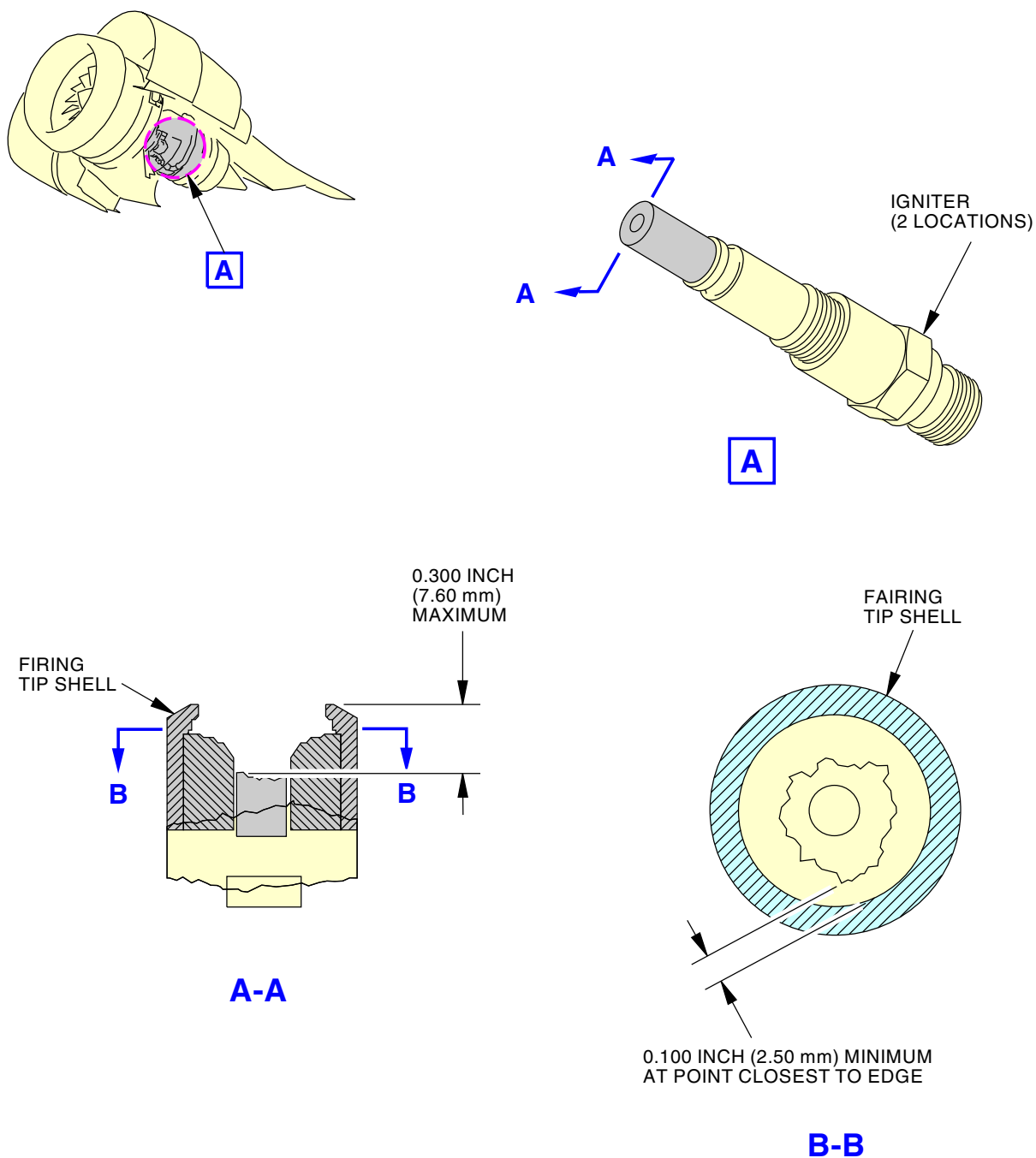
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Igniter (Firing Tip Shell) Inspection
Figure 601/74-21-02-990-802-H01

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