



## AIRCRAFT MAINTENANCE MANUAL

### LOCK OF MAIN-DOOR LOCKING MECHANISM - REMOVAL/INSTALLATION

EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR

#### 1. General

- A. This section gives the procedures to remove and install the lock of the main-door locking mechanism.
- B. These procedures are applicable to the two locks of the main door.
- C. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
52-11-06-000-801-A	LOCK OF MAIN-DOOR LOCKING MECHANISM - REMOVAL	AIRCRAFT WITH AIR-STAIRS DOOR
52-11-06-400-801-A	LOCK OF MAIN-DOOR LOCKING MECHANISM - INSTALLATION	AIRCRAFT WITH AIR-STAIRS DOOR



EMB145 – EMB135

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TASK 52-11-06-000-801-A

EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR

2. LOCK OF MAIN-DOOR LOCKING MECHANISM - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the lock of the main-door locking mechanism.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-45-00/100	- COMPONENT LOCATION
AMM SDS 52-10-00/1	
AMM TASK 52-00-00-910-801-A/200	MAIN-DOOR - SUPPORTING
AMM TASK 52-11-01-000-801-A/400	MAIN DOOR INTERNAL ACTUATING-HANDLE - REMOVAL
AMM TASK 52-11-01-400-801-A/400	MAIN DOOR INTERNAL ACTUATING HANDLE - INSTALLATION
IPC 52-11-00	MAIN DOOR - ACTUATING AND LOCKING MECHANISM
SB145-52-0021	-
SB145-52-0024	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
811		Airstairs door

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Hand-operated forming press	Install the bushings	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
TT-M-261	Methyl ethyl ketone (MEK)	AR
MEP 09-060	Non-Chromate Corrosion-Inhibiting Compound (CA-1000-NC)	AR



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G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Bushing	IPC 52-11-00	AR

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Main door
1	Helps the other technician	Main door

I. Preparation

SUBTASK 841-002-A

- (1) Open the main door ([AMM SDS 52-10-00/1](#)).
- (2) The door must be held with no interference of the step mechanism. Refer to [AMM TASK 52-00-00-910-801-A/200](#).
- (3) Have the cams controlled to the unlocked position (intermediate position). You can do this by hands (refer to Figure 202, [AMM TASK 52-00-00-910-801-A/200](#)).

**CAUTION: BE CAREFUL NOT TO PUSH THE DOOR AGAINST THE FUSELAGE.**

- (4) Put the internal handle in its closed position to keep the cables with no tension.
- (5) Keep the steps in the unfolded position.
- (6) Remove the internal handle ([AMM TASK 52-11-01-000-801-A/400](#)).
- (7) Remove lining panels 811CW, 811PW, and 811GW ([AMM MPP 06-45-00/100](#)).
- (8) Install the internal handle ([AMM TASK 52-11-01-400-801-A/400](#)) and make sure that it is in the closed position.

J. Removal ([Figure 401](#)) ([Figure 402](#)) ([Figure 403](#)) ([Figure 404](#)) ([Figure 405](#))

SUBTASK 020-002-A

- (1) Cut and remove the tiedown straps (1) (2 positions), if applicable (refer to [Figure 401](#)).
- (2) Remove the cables from the mixer support (12), as follows (refer to [Figure 402](#), [Figure 403](#), and [Figure 404](#)):
  - (a) Remove the cotter pin (3), nut (2), and washer (1).
  - (b) On aircraft PRE-MOD [SB145-52-0024](#) (refer to [Figure 402](#) and [Figure 403](#)), remove the spring (13) and, on aircraft POST-MOD SB 145-52-0024 (refer to [Figure 404](#)), remove the springs (13) and (14), which is/are attached to the bellcrank (11).
  - (c) Pull the bellcrank (11) from the mixer support (12).
  - (d) Remove the cotter pin (6), washer (5), and straight pin (4).

- (e) Remove the cable fork end-fitting attached to the bellcrank (11).
- (3) Remove the cables from the support (10) as follows (refer to [Figure 402](#), [Figure 403](#), and [Figure 404](#)):
  - (a) On aircraft POST-MOD [SB145-52-0021](#) (refer to [Figure 403](#)), cut the thinner lockwire (15) that attaches the cable cover to the support (10) and the thinner lockwire (16) that goes through the center holes, and remove the cable cover (14).
  - (b) On each side of the support (10), cut the lockwires (8) that safety the cable nuts (9) (2 positions).

**CAUTION: BE CAREFUL TO PREVENT DAMAGE TO THE PROTECTIVE BOOT.**

- (c) On aircraft POST-MOD [SB145-52-0024](#) (refer to [Figure 404](#)), loosen the tiedown straps (16) (4 positions) to permit the protective boot (15) (2 positions) movement.
- (d) Loosen the nuts (9) (2 positions).
- (e) Pull the cables (covered portion end) to permit their removal from the support (10).

**NOTE:** For steps 4 thru 13, refer to [Figure 401](#).

- (4) Remove the nuts (14) and the screws (3) (2 positions), and release the microswitch (2).
- (5) Remove the nut (21), washer (20), and bolt (18), and remove the cam (19) from the torque tube (4) end.
- (6) Release the nut (5), washer (6), and bolt (11) to loosen the clamp (12).
- (7) Remove the nut (9), washer (8), and bolt (10), and loosen the bellcrank (7).
- (8) Remove the nuts (23), washers (24), and bolts (25) (2 positions) that attach the lock box (13) to the support (17) at the door structure.
- (9) Remove the track (22) and the bearing support (26).
- (10) Move the torque tube (4) to get access to the washer (15) and the retaining ring (16).
- (11) Remove the retaining ring (16) and washer (15).
- (12) Remove the torque tube (4).
- (13) If necessary, replace the bushings of the cover box and lock box. Refer to item K of this task.

**K. Replacement of the Bushings of the Lock Box and Box Cover ([Figure 405](#))**

**SUBTASK 020-003-A**

**CAUTION: DO NOT USE SHARP-EDGED TOOLS NOT TO CAUSE DAMAGE TO THE HOLES OF THE LOCK BOX AND BOX COVER. HANDLE THE PARTS AND TOOLS CAREFULLY.**



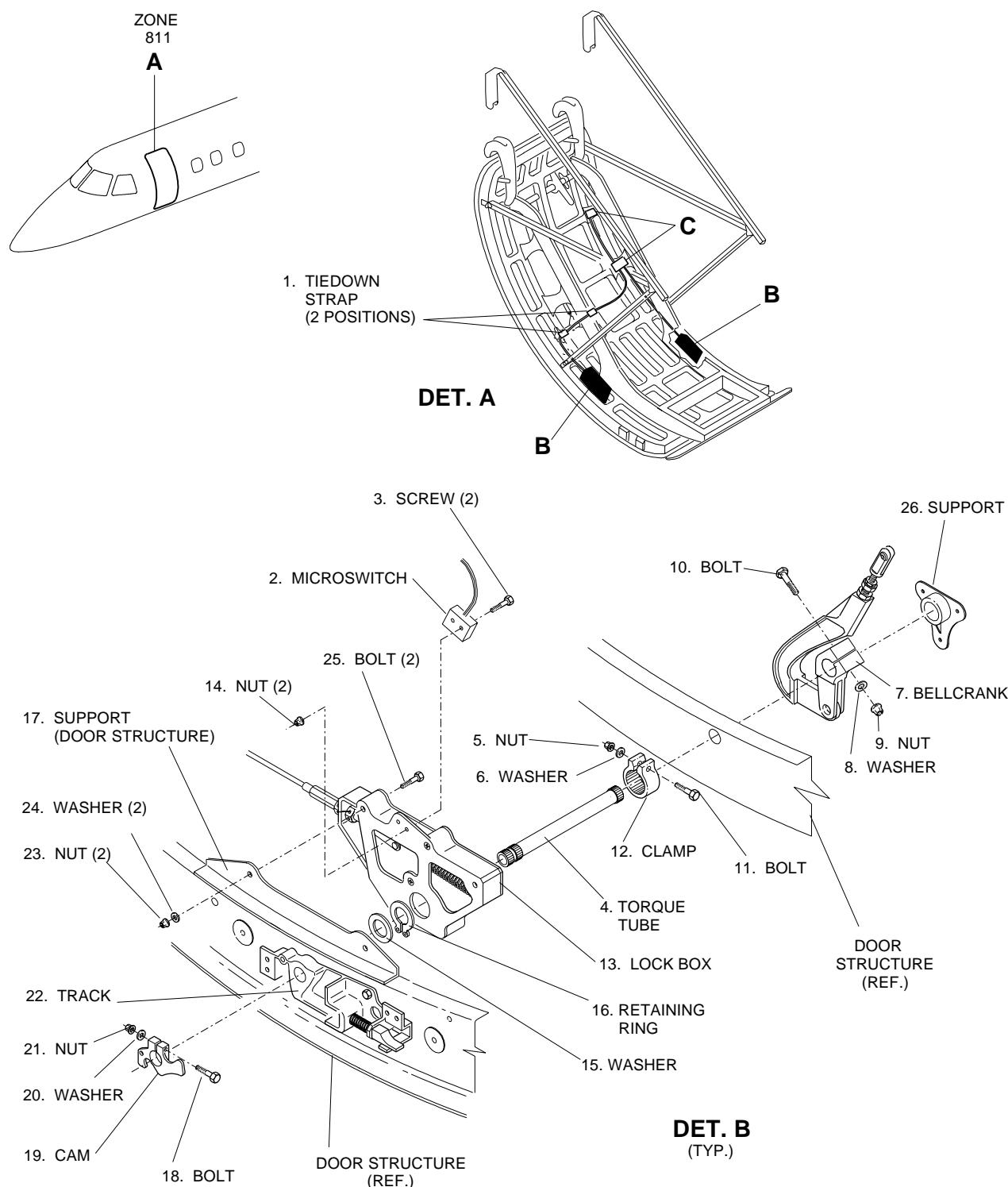
AIRCRAFT  
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- (1) Remove the screws (3) (3 positions) to remove the box cover.
- (2) Examine the bushings of the lock box and box cover for correct assembly, surface finishing, and alignment of the bushings of the box cover and the bushings of the lock box.
- (3) Remove the bushing with a pinpunch. Be careful not to cause damage to the holes.
- (4) Clean the bushing housing in the lock box and box cover with methyl ethyl ketone (MEK).
- (5) Apply corrosion-inhibiting sealant (CA-1000-NC) to the hole immediately before the assembly.
- (6) Install the bushings (1) and (2) with a hand-operated forming press.
- (7) Remove the excess sealant.
- (8) Make sure that the bushing flange is correctly seated.
- (9) Lubricate the movable components of the lock box with Aeroshell grease 7.
- (10) Install the screws (3) (3 positions) to attach the box cover to the lock box.

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**

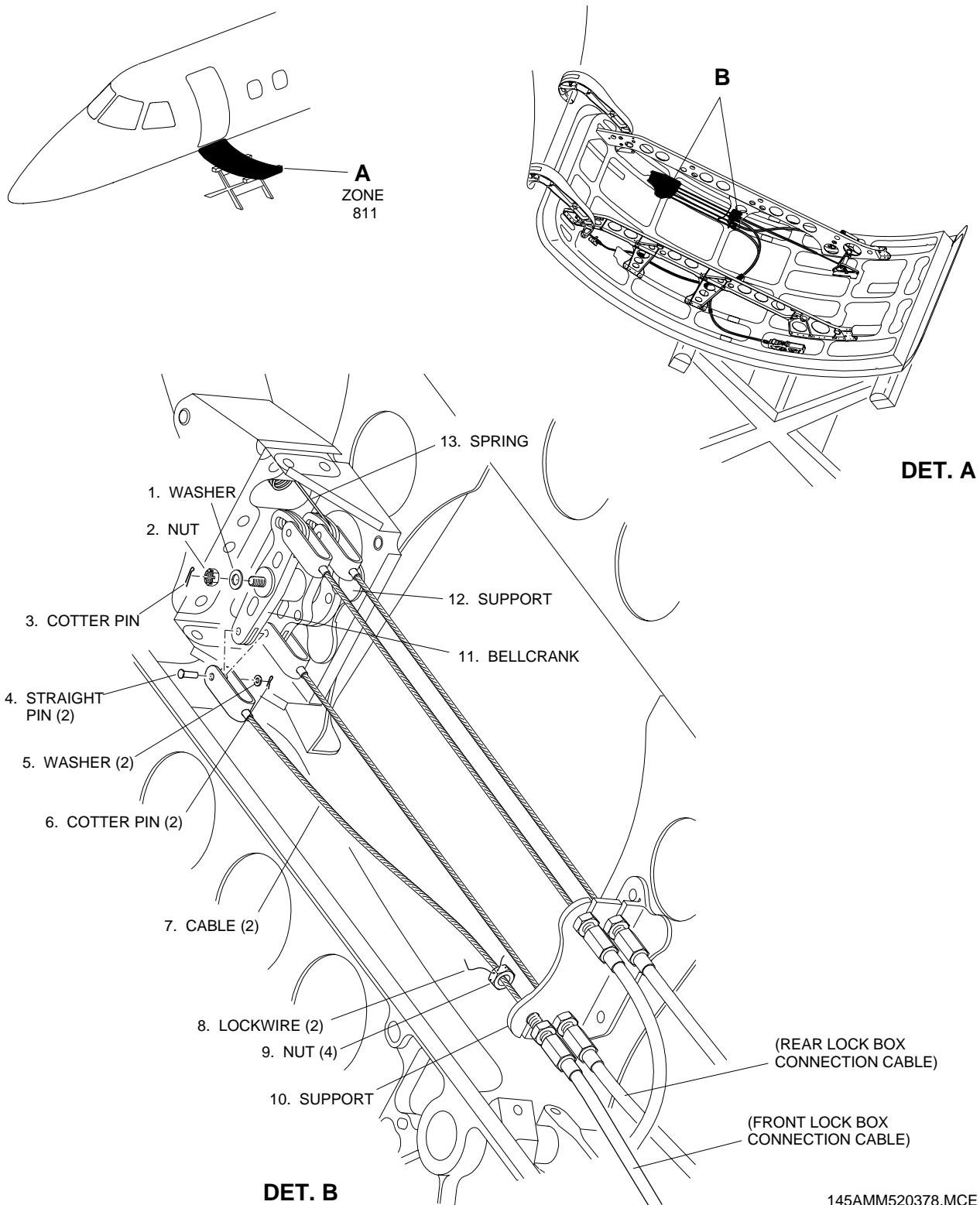
Lock - Removal/Installation

Figure 401



EM145AMM520560B.DGN

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**  
**Main-Door Connection Cables - Supports**  
**Figure 402**

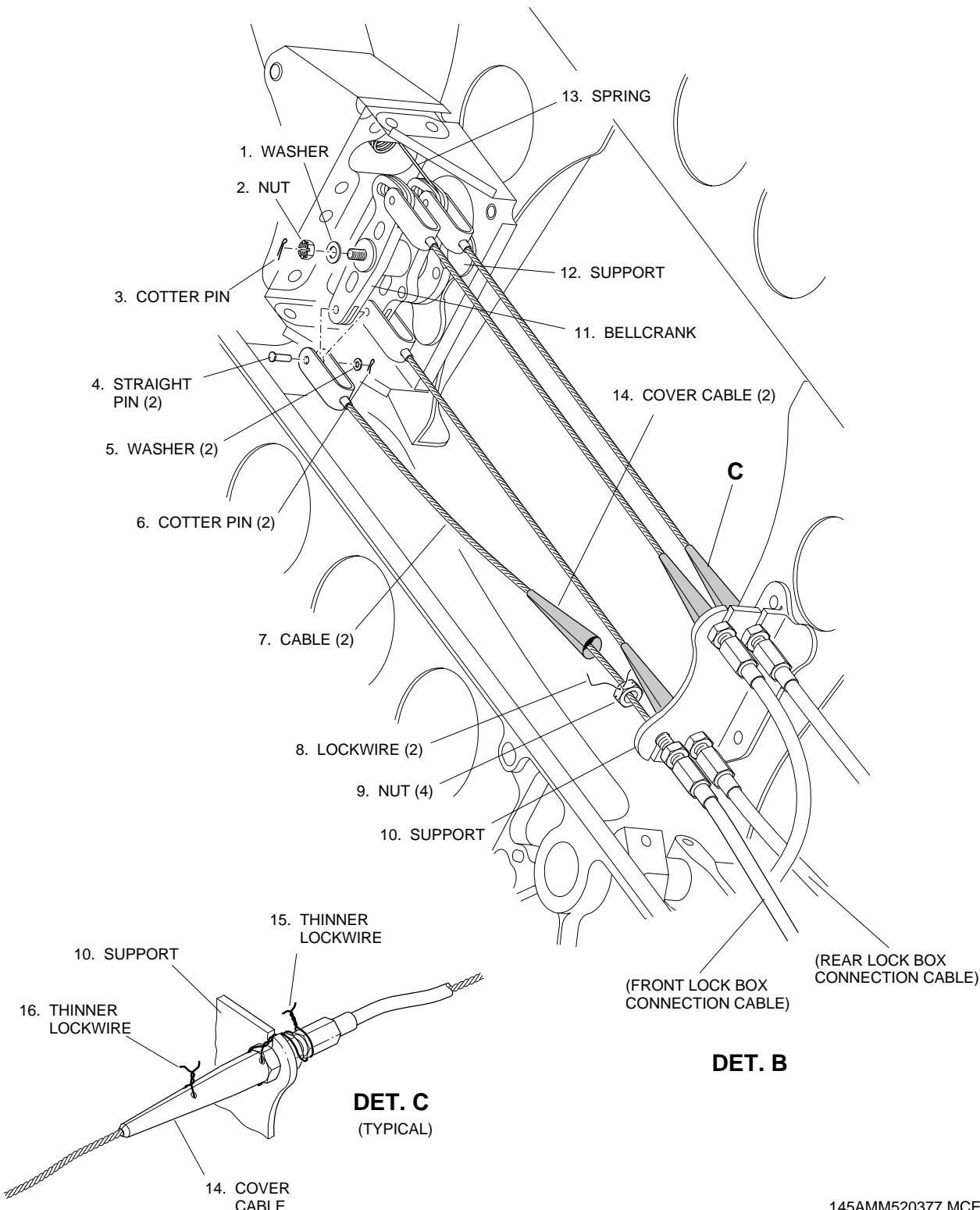


145AMM520378.MCE

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**

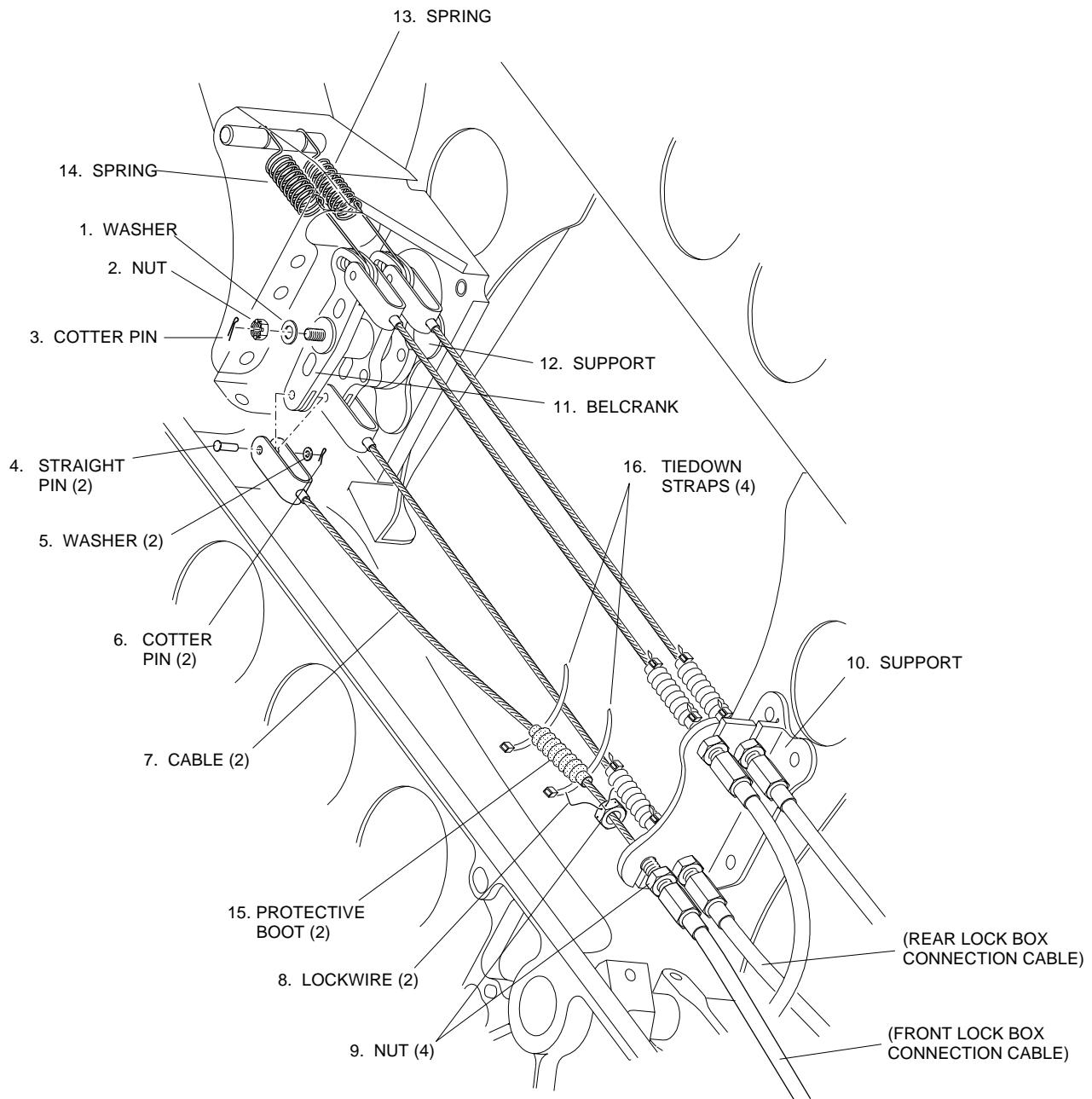
Main-Door Connection Cables - Supports

Figure 403



145AMM520377.MCE

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**  
**Main-Door Connection Cables - Supports**  
**Figure 404**



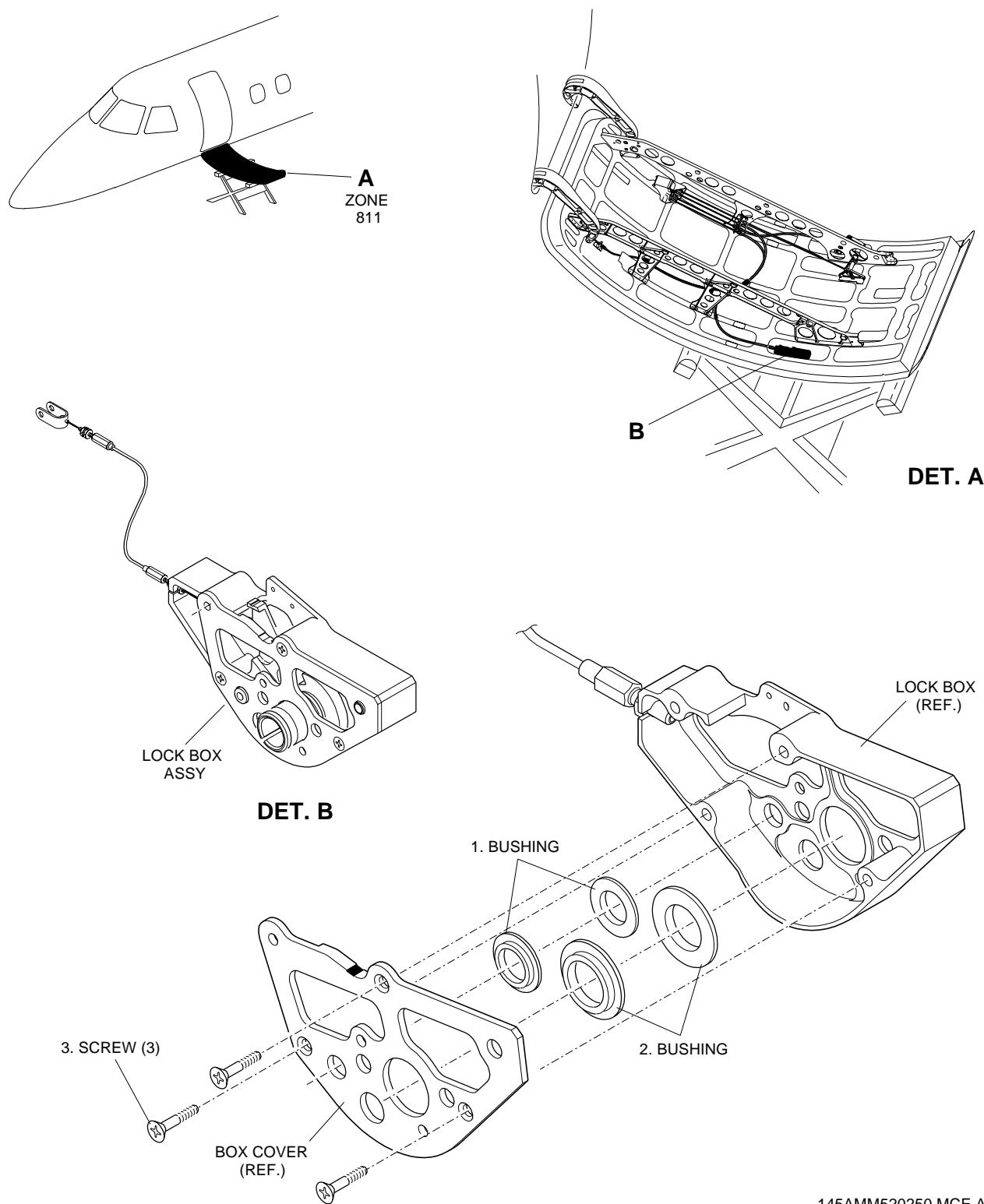
**DET. B**

EM145AMM520376A.DGN

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**

Replacement of the Bushings of the Lock Box and Box Cover

Figure 405



145AMM520250.MCE A

**TASK 52-11-06-400-801-A**

**EFFECTIVITY: AIRCRAFT WITH AIRSTAIRS DOOR**

**3. LOCK OF MAIN-DOOR LOCKING MECHANISM - INSTALLATION**

**A. General**

(1) This procedure gives the instructions to install the lock of the main-door locking mechanism.

**B. References**

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM MPP 06-45-00/100	- COMPONENT LOCATION
AMM SDS 52-10-00/1	
AMM TASK 52-00-00-910-801-A/200	MAIN-DOOR - SUPPORTING
AMM TASK 52-10-01-820-805-A/500	MAIN DOOR CABLES - ADJUSTMENT
AMM TASK 52-11-00-600-801-A/300	MAIN-DOOR ACTUATING AND LOCKING MECHANISM - LUBRICATION
AMM TASK 52-11-01-000-801-A/400	MAIN DOOR INTERNAL ACTUATING-HANDLE - REMOVAL
AMM TASK 52-11-01-400-801-A/400	MAIN DOOR INTERNAL ACTUATING HANDLE - INSTALLATION
AMM TASK 52-73-00-700-801-A/500	AIRSTAIRS MAIN DOOR WARNING MESSAGE - OPERATIONALLY CHECK
IPC 52-11-00	MAIN DOOR - ACTUATING AND LOCKING MECHANISM
SB145-52-0021	-
SB145-52-0024	-

**C. Zones and Accesses**

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
811		Airstairs door

**D. Tools and Equipment**

Not Applicable

**E. Auxiliary Items**

Not Applicable

**F. Consumable Materials**

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
MS3367-4-9	Tiedown strap	AR
MS20995-C20	Lockwire	AR
MIL-G-23827	Aeroshell grease 7	AR
MIL-G-46886	Molykote grease	AR



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## G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 52-11-00	AR

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Main door
1	Helps the other technician	Main door

## I. Installation (Figure 401) (Figure 402) (Figure 403) (Figure 404) (Figure 405)

### SUBTASK 420-002-A

NOTE: For steps 1 thru 14, refer to (Figure 401).

- (1) Hold the lock box (13) in its original position and insert the torque tube (4) to install the retaining ring (16) and washer (15).
- (2) Install the retaining ring (16) and washer (15).
- (3) Put the lock box (13) on the support (17) at the door structure.
- (4) Install the bolts (25), washers (24), and nuts (23) (2 positions) to attach the lock box (13) to the support (17).
- (5) Install the track (22).
- (6) Pull the torque tube (4) until it goes through the track (22).
- (7) Put the clamp (12) and bellcrank (7) on the torque tube (4).
- (8) Tighten the bolt (11), washer (6), and nut (5) to attach the clamp (12) to the torque tube (4).
- (9) Install the bolt (10), washer (8), and nut (9) to attach the bellcrank (7) to the torque tube (4).
- (10) Install the bearing support (26).
- (11) Put the cam (19) on the torque tube (4) end-fitting.
- (12) Install the bolt (18), washer (20), and nut (21) to attach the cam (19) to the torque tube (4) end - fitting.
- (13) Put the microswitch (2) on the lock box (13).
- (14) Install the screws (3) (2 positions) and nuts (14) (2 positions) to attach the microswitch (2) to the lock box (13).
- (15) Install cable (7) on the support (10) as follows (refer to (Figure 402), (Figure 403), and (Figure 404):

- (a) Put cable (7) (covered portion end) on the support (10).

NOTE: For a preadjustment, approximately half of the threads must stay on one side of the support and the other half, on the other side.

- (b) Put the nuts (9) (2 positions) so as to obey the condition above.

- (16) Install the cable (7) on the mixer support (12) as follows (refer to (Figure 402), (Figure 403), and (Figure 404)):

- (a) With the bellcrank (11) out of this correct position, put the cable fork end-fitting on the bellcrank (11).
- (b) Install the straight pin (4), washer (5), and cotter pin (6).
- (c) Put the bellcrank (11) on the support (10).
- (d) Install the washer (1), nut (2), and cotter pin (3).
- (e) Install the spring (13) on aircraft PRE-MOD [SB145-52-0024](#) (refer to (Figure 402) and (Figure 403) or springs (13) and (14) on aircraft POST-MOD SB 145-52-0024 (refer to (Figure 404) on the bellcrank (11)).

- (17) Adjust the lock box cables of the main door ([AMM TASK 52-10-01-820-805-A/500](#)).

CAUTION: MAKE SURE THAT THE STEPS ARE UNFOLDED, THE INTERNAL HANDLE IS IN THE OPEN POSITION, THE FOLD-OUT ROD IS INSTALLED, AND THE CAMS ARE IN THE LOCKED POSITION.

- (18) Hold the door while you remove the bench and get the door down slowly.
  - (19) Do an operational check of the main door ([AMM SDS 52-10-00/1](#)).
  - (20) Do an operational check of the main - door warning message ([AMM TASK 52-73-00-700-801-A/500](#)).
  - (21) On aircraft POST-MOD [SB145-52-0024](#), do as follows (refer to (Figure 404)):
    - (a) Connect the protective boot (15) end with the cable (covered portion end) near the support (10).
    - (b) With the tiedown strap (16), attach the protective boot (15) end nearer the nut (9).
    - (c) Lubricate the protective boot (15) ([AMM TASK 52-11-00-600-801-A/300](#)).
    - (d) Attach the other ends of the protective boot (15) with tiedown strap (16).
  - (22) On aircraft POST-MOD [SB145-52-0021](#), do as follows (refer to Figure 403):
    - (a) Attach the cable cover (14) on the cable (covered portion end) near the support (10).
    - (b) Attach one end of the cable cover (14) near the nut (9) with the thinner lockwire (15) (refer to detail C).
- CAUTION: DO NOT CHANGE THE LOCKWIRE OF THE NUTS.



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- (c) Fully fill the cable cover (14) with Molykote grease through its lateral opening.
- (d) Install the thinner lockwire (16) through the holes at the center position of the cable cover (refer to detail C).
- (e) Add a large quantity of Molykote grease to the exterior of the cable cover.

### J. Follow-on

#### SUBTASK 842-002-A

- (1) The door must be held with no interference of the steps mechanism. Refer to [AMM TASK 52-00-00-910-801-A/200](#).
- (2) Remove the internal handle ([AMM TASK 52-11-01-000-801-A/400](#)).
- (3) Install lining panels 811CW, 811PW, and 811GW ([AMM MPP 06-45-00/100](#)).
- (4) Install the internal handle ([AMM TASK 52-11-01-400-801-A/400](#)) and make sure that it is in the correct position.
- (5) Connect the fold-out rod [AMM TASK 52-00-00-910-801-A/200](#).
- (6) Put the internal handle in its open position and have the cams controlled to the locked position (intermediate position). You can do this by hand (refer to Figure 202, [AMM TASK 52-00-00-910-801-A/200](#)).

**CAUTION:** MAKE SURE THAT THE STEPS ARE UNFOLDED, THE INTERNAL HANDLE IS IN THE OPEN POSITION, THE FOLD-OUT ROD IS INSTALLED, AND THE CAMS ARE IN THE LOCKED POSITION.

- (7) Hold the door while you remove the bench and get the door down slowly.
- (8) Close the main door ([AMM SDS 52-10-00/1](#)).