

## LOWER COWLING - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

### 1. General

- A. This section gives the procedures to open/close the engine lower cowl. These procedures are applicable to the LH and RH engine lower cowlings.
- B. This section gives the procedures to remove/install the engine lower cowl. These procedures are applicable to the LH and RH engine lower cowlings.
- 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
71-12-01-000-801-A	ENGINE LOWER COWLING - OPENING	ALL
71-12-01-400-801-A	ENGINE LOWER COWLING - CLOSING	ALL
71-12-01-000-802-A	ENGINE LOWER COWLING - REMOVAL	ALL
71-12-01-400-802-A	ENGINE LOWER COWLING - INSTALLATION	ALL

TASK 71-12-01-000-801-A  
EFFECTIVITY: ALL

## 2. ENGINE LOWER COWLING - OPENING

### A. General

(1) Obey the instructions below to open the engine lower cowl.

### B. Zones and Accesses

Not Applicable

### C. Tools and Equipment

Not Applicable

### D. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the work area	1

### E. Consumable Materials

Not Applicable

### F. Expandable Parts

Not Applicable

### G. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Engine nacelle

### H. Preparation

SUBTASK 841-003-A

(1) Put the workstand in position, and get access to the engine nacelle.

### I. Opening (Figure 401)

SUBTASK 010-002-A

**WARNING: THE TWO HOLD OPEN RODS MUST BE ENGAGED WHILE THE LOWER DOOR IS OPEN.**

**WARNING: DO NOT OPEN THE COWLING WHEN THE WIND SPEED IS 50 KNOTS OR MORE. THE WIND CAN MOVE THE COWLING AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.**

(1) Release the latches No. 1, 2, and 4. Lock the hook (10) in the latches.

**NOTE:** In order to make easier, latch No. 3 (viewed from front to rear) must be the last one to be open, during lower cowl opening procedure.

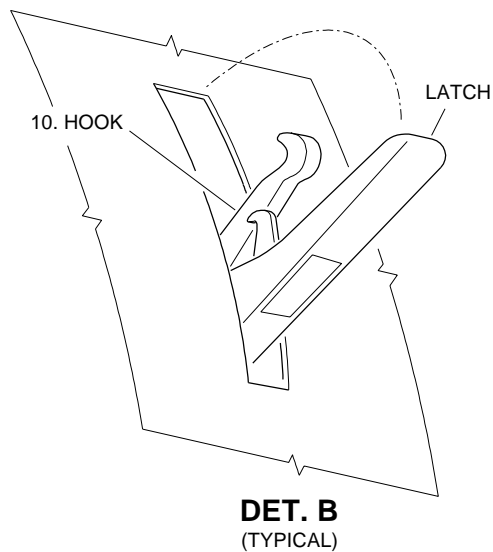
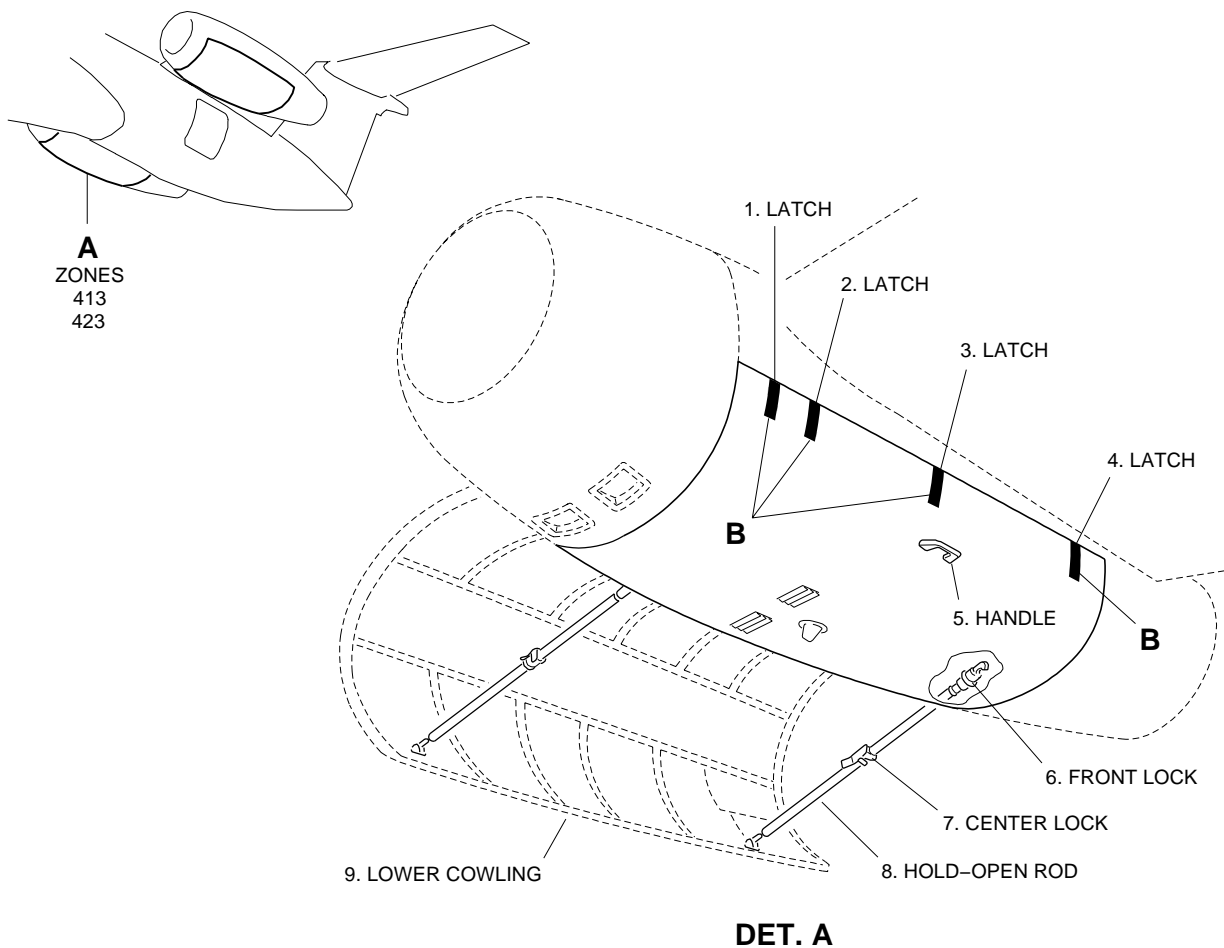
(2) Hold the lateral handle (5) of the lower cowl (9). Release the latch No. 3. Lock the hook (10) to the latch.

- (3) Let the lower cowling go down slowly.
- (4) Release the front locks (6) and release the hold-open rods (8) from their place.
- (5) Release the center lock (7) of the telescopic hold-open rods and extend the rods only as sufficient to attach the hold-open rods to the engine front frame and rear mount ring attachment points.
- (6) Push the lower cowling rearwards until the center locks (7) lock in the open condition.

**EFFECTIVITY: ALL**

Lower Cowling - Opening/Closing

Figure 401



EM145AMM710014B.DGN

TASK 71-12-01-400-801-A

EFFECTIVITY: ALL

### 3. ENGINE LOWER COWLING - CLOSING

#### A. General

(1) Obey the instructions below to close the engine lower cowl.

#### B. Zones and Accesses

Not Applicable

#### C. Tools and Equipment

Not Applicable

#### D. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the work area	1

#### E. Consumable Materials

Not Applicable

#### F. Expandable Parts

Not Applicable

#### G. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Engine nacelle

#### H. Closing (Figure 401)

##### SUBTASK 410-002-A

**NOTE:** In order to make easier, first close latch No. 3 (viewed from front to rear), during lower cowl closing operation.

- (1) Release the center locks (7) and let the door come down.
- (2) Pull the front locks (6) of the hold-open rods (8) rearwards. Remove the hold-open rods (8) from the engine front frame and rear mount ring attachment points.
- (3) Retract the telescopic rods and lock the hold-open rods (8) to the lower cowl (9).
- (4) Release the hook (10) from the latch No. 3. Close the lower cowl (9) with the lateral handle (5) and lock the latch No. 3 to the apron keeper.
- (5) Release the hooks (10) from the latches No. 1, 2, and 4, and lock the latches to the apron keepers.
- (6) Make sure that the latches are aligned with the cowl skin.

I. Follow-on

*SUBTASK 842-003-A*

- (1) Remove the workstand from the work area.

TASK 71-12-01-000-802-A

EFFECTIVITY: ALL

#### 4. ENGINE LOWER COWLING - REMOVAL

##### A. General

(1) Obey the instructions below to remove the engine lower cowl.

##### B. References

REFERENCE	DESIGNATION
<a href="#">AMM TASK 71-12-01-000-801-A/400</a>	ENGINE LOWER COWLING - OPENING

##### C. Zones and Accesses

Not Applicable

##### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 151</a>	LH/RH Upper and Lower Sling	To remove the lower cowl	

##### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the work area	1
Commercially available	Hoist	To hoist the cowl	1

##### F. Consumable Materials

Not Applicable

##### G. Expandable Parts

Not Applicable

##### H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	Engine nacelle

##### I. Preparation

**SUBTASK 841-002-A**

(1) Put the workstand in position, and get access to the engine nacelle.

##### J. Removal ([Figure 402](#))

**SUBTASK 020-002-A**

**WARNING: DO NOT TOUCH THE ENGINE COMPONENTS UNTIL THEY ARE COOL. TEMPERATURE CAN STAY HOT AFTER THE ENGINE STOPS.**

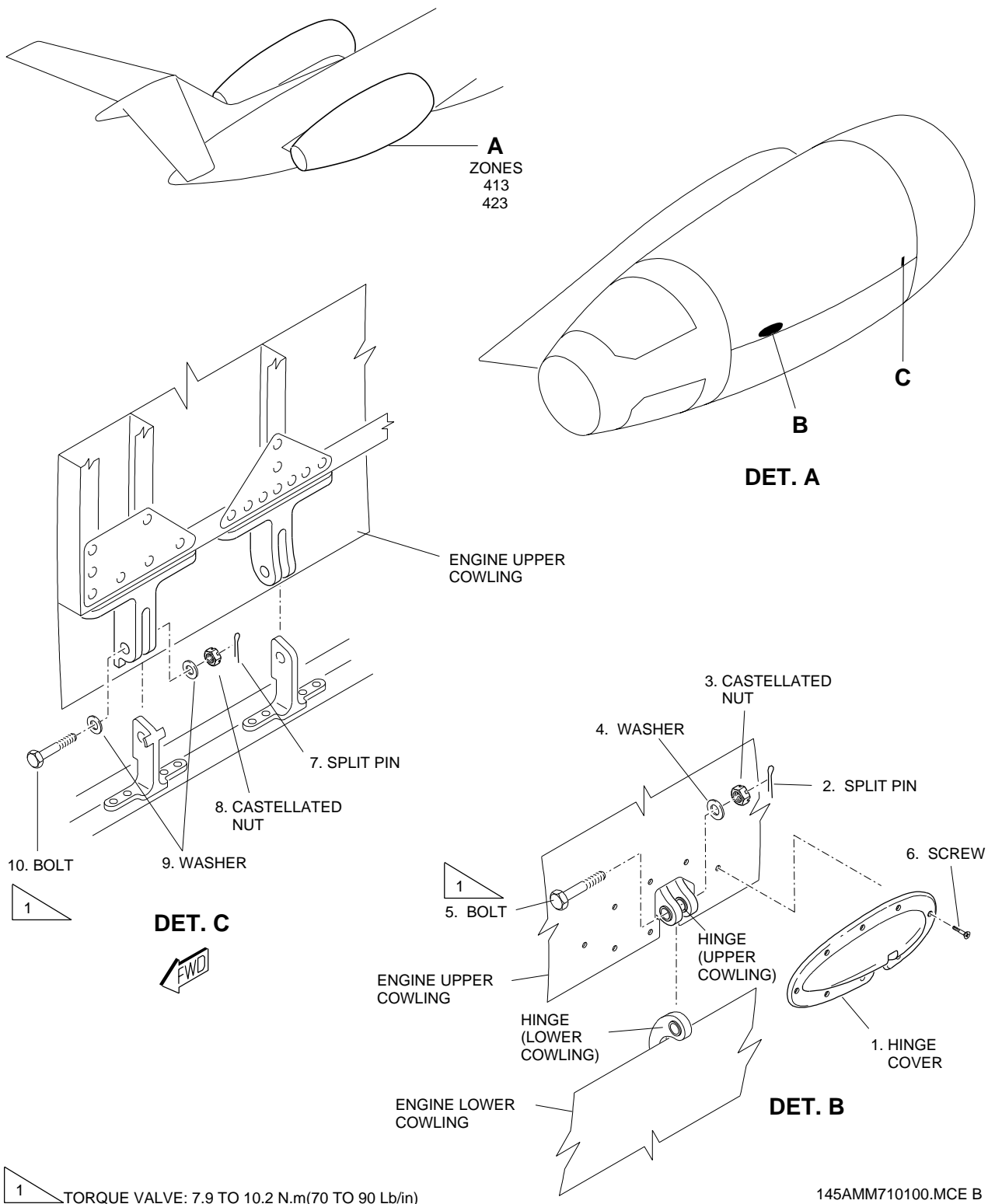
- (1) Remove the screws (6), and remove the hinge cover (1).
- (2) Remove the split pin (2), castellated nut (3), washers (4), and bolt (5).
- (3) Open the engine lower cowling ( [AMM TASK 71-12-01-000-801-A/400](#)).
- (4) Remove the split pin (7), castellated nut (8), washers (9), and bolt (10).
- (5) Install the LH/RH Upper and Lower Sling to the hoisting points. Install the hoist to the LH/RH Upper and Lower Sling and carefully adjust the height.
- (6) Loosen the front and rear quick release pin (12).
- (7) Release the hold-open rods and store them at the engine lower cowling (11).
- (8) Remove the engine lower cowling (11) and put it on a cradle.



EFFECTIVITY: ALL

Engine Lower Cowling - Removal/Installation

Figure 402 - Sheet 1

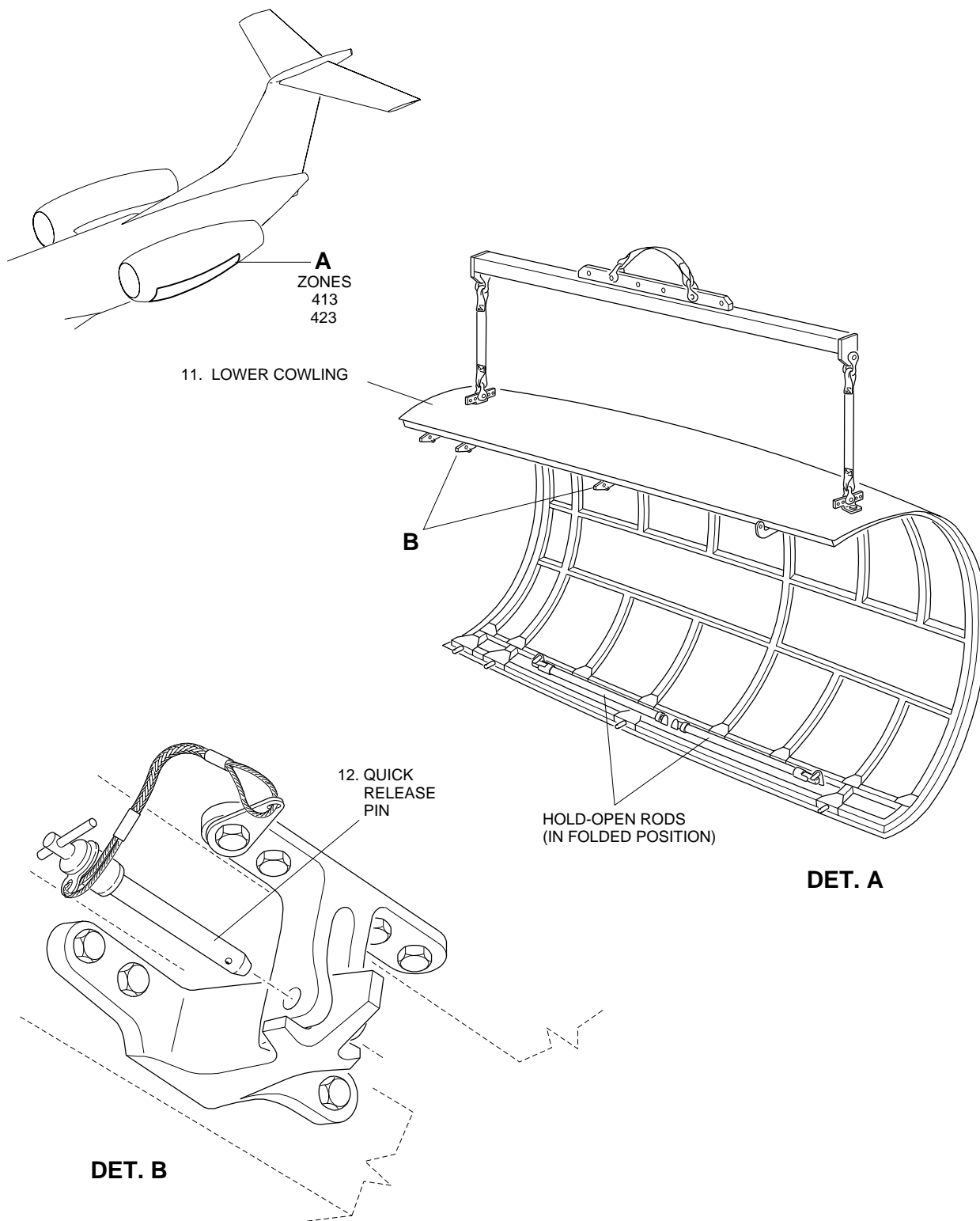


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EFFECTIVITY: ALL

Engine Lower Cowling - Removal/Installation

Figure 402 - Sheet 2



145AMM710015.MCE C

TASK 71-12-01-400-802-A

EFFECTIVITY: ALL

5. ENGINE LOWER COWLING - INSTALLATION

A. General

(1) Obey the instructions below to install the engine lower cowl.

B. References

REFERENCE	DESIGNATION
<a href="#">AMM TASK 71-12-01-400-801-A/400</a>	ENGINE LOWER COWLING - CLOSING
IPC 54-15-00	COWLING EQUIPPED

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 151</a>	LH/RH Upper and Lower Sling	To install the lower cowl	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the work area	1
Commercially available	Hoist	To lift the cowl	1

F. Consumable Materials

Not Applicable

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Split pins	IPC 54-15-00	2

H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	Engine nacelle

I. Installation (Figure 402)

**SUBTASK 420-002-A**

- (1) Install the LH/RH Upper and Lower Sling to the lower cowl (11). Connect the hoist to the LH/RH Upper and Lower Sling.

- (2) Lift the lower cowling (11) and carefully align the cowling hinges with the upper cowling.
- (3) Install the front and rear quick release pin (12).
- (4) Fully open the lower cowling (11) and lock it with the hold-open rods.
- (5) Install the bolt (10), washers (9), castellated nut (8), and split pin (7).  
NOTE: Refer to Figure 401 for torque value.
- (6) Install the bolt (5), washers (4), castellated nut (3), and split pin (2).  
NOTE: Refer to Figure 401 for torque value.
- (7) Remove the hoist and LH/RH Upper and Lower Sling from the engine lower cowling.
- (8) Close the engine lower cowling ( [AMM TASK 71-12-01-400-801-A/400](#)).
- (9) Install the hinge cover (1) with screws (6).

J. Follow-on

*SUBTASK 842-002-A*

- (1) Remove the workstand from the work area.