



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**NOSE-UP SPRING - REMOVAL/INSTALLATION**

*EFFECTIVITY: ALL*

1. General

- A. This section gives the procedures to remove and install the nose-up springs of the elevator system.
- B. There are two nose-up springs: one for the pilot control column and other for the copilot control column.
- 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
27-31-09-000-801-A	SPRING NOSE-UP - REMOVAL	ALL
27-31-09-400-801-A	SPRING NOSE-UP - INSTALLATION	ALL



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 27-31-09-000-801-A

EFFECTIVITY: ALL

2. SPRING NOSE-UP - REMOVAL

A. General

- (1) This task gives the procedures to remove the nose-up springs of the elevator system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
<a href="#">AMM TASK 25-11-01-000-801-A/400</a>	PILOT SEAT - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor
221	221EF	Cockpit
222	222FF	Cockpit

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

I. Preparation

SUBTASK 841-002-A

- (1) Remove the cockpit underfloor access hatch 123BL (AMM MPP 06-41-01/100).
- (2) Remove the pilot and copilot seats ([AMM TASK 25-11-01-000-801-A/400](#)).
- (3) Remove floor panels 221EF and 222FF (AMM MPP 06-41-02/100).



J. Removal ([Figure 401](#))

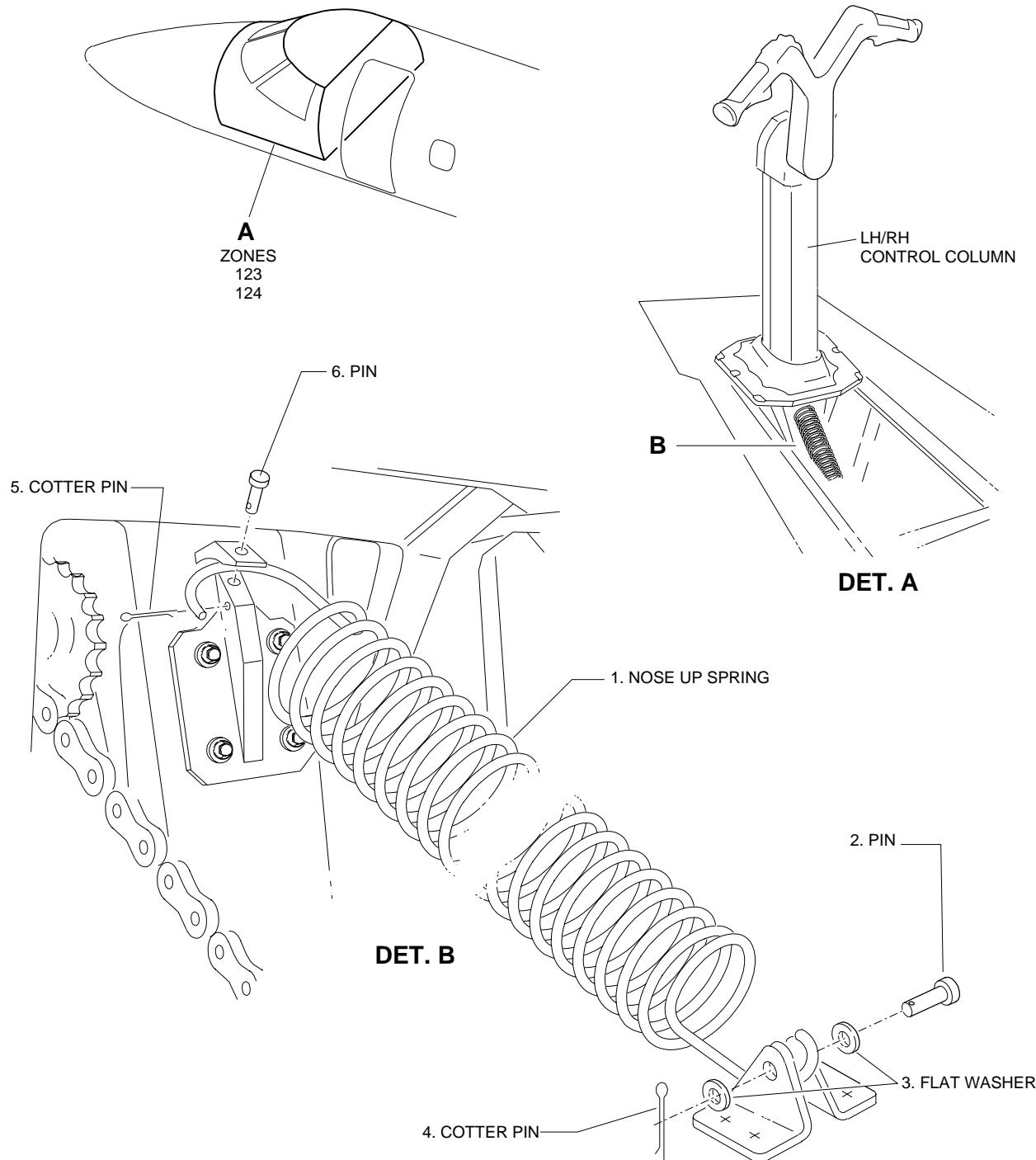
SUBTASK 020-002-A

- (1) Do this step to release the nose-up spring from the control column:
  - (a) Remove and discard the cotter pin (5).
  - (b) Use a pair of pliers to tightly hold the nose-up spring (1) with the control column in the nose-up position.
  - (c) Remove the pin (6) to release the nose-up spring (1) from the control column.
- (2) Remove and discard the cotter pin (4).
- (3) Remove the flat washers (3) (two positions) and pin (2) to release the nose-up spring from the structure.

**EFFECTIVITY: ALL**

Nose-up Spring - Removal/Installation

Figure 401



145AMM270496.MCE



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 27-31-09-400-801-A

EFFECTIVITY: ALL

3. SPRING NOSE-UP - INSTALLATION

A. General

(1) This task gives the procedures to install the nose-up springs of the elevator system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
<a href="#">AMM TASK 25-11-01-000-801-A/400</a>	PILOT SEAT - REMOVAL
AMM TASK 28-41-00-200-801-A/600	-
IPC 27-31-00	ELEVATOR PRIMARY MECHANICAL CONTROL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor
221	221EF	Cockpit
222	222FF	Cockpit

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-31-00	01/LRU
Cotter pin	IPC 27-31-00	01/LRU

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

I. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Install the nose-up spring (1) to the fuselage structure. Use pin (2), flat washers (3) (two positions), and cotter pin (4).
- (2) With the control column in the nose-up position, tightly hold the nose-up spring (1) to install it in the control column. Use the pin (6) and cotter pin (5).

J. Follow-on

SUBTASK 842-002-A

- (1) Do an inspection on the fuel quantity-indication harness (AMM TASK 28-41-00-200-801-A/600).

**NOTE:** The inspection of fuel quantity indication harness is part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Aircraft Maintenance Program.

- (2) Install cockpit underfloor access hatch 123BL (AMM MPP 06-41-01/100).
- (3) Install floor panels 221EF and 222FF (AMM MPP 06-41-02/100).
- (4) Install the pilot and copilot seats ([AMM TASK 25-11-01-000-801-A/400](#)).