

## AILERON LOAD CELL - REMOVAL/INSTALLATION

*EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS*

### 1. General

- A. This section gives the procedures to remove and install the aileron load cell.
- B. These procedures are applicable to the LH and RH assemblage.
- 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
27-15-03-000-801-A	AILERON LOAD CELL - REMOVAL	ONLY FOR AIR-CRAFTS WITH LOAD CELLS
27-15-03-400-801-A	AILERON LOAD CELL - INSTALLATION	ONLY FOR AIR-CRAFTS WITH LOAD CELLS

TASK 27-15-03-000-801-A

EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS

## 2. AILERON LOAD CELL - REMOVAL

### A. General

- (1) This procedure gives the instructions to remove the aileron load cell that is assembled on the aileron control cable between the control column and the forward torque tube.

### B. References

REFERENCE	DESIGNATION
<a href="#">AMM TASK 25-11-01-000-801-A/400</a>	PILOT SEAT - REMOVAL
T.P. 145/1754	-

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor
220	221EF	Cockpit LH upper side
220	222FF	Cockpit RH upper side

### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 058</a>	Kit, rig pins, flight controls	To lock the aileron control system in the neutral position	

### 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	Below the cockpit floor

### I. Preparation

**SUBTASK 841-002-A**

- (1) Make sure that the aircraft is de-energized and safe for maintenance.
- (2) Remove the pilot seat ([AMM TASK 25-11-01-000-801-A/400](#)).
- (3) Install the rig pins to the aileron control system to lock it in the neutral position.

J. Removal (Figure 401) (Figure 402)

*SUBTASK 020-002-A*

- (1) Do the procedure described below to the pilot and copilot right aileron load cells (1) (Figure 401):
  - (a) Disconnect the electrical connector (2).
  - (b) Release the tension on the aileron control cables.

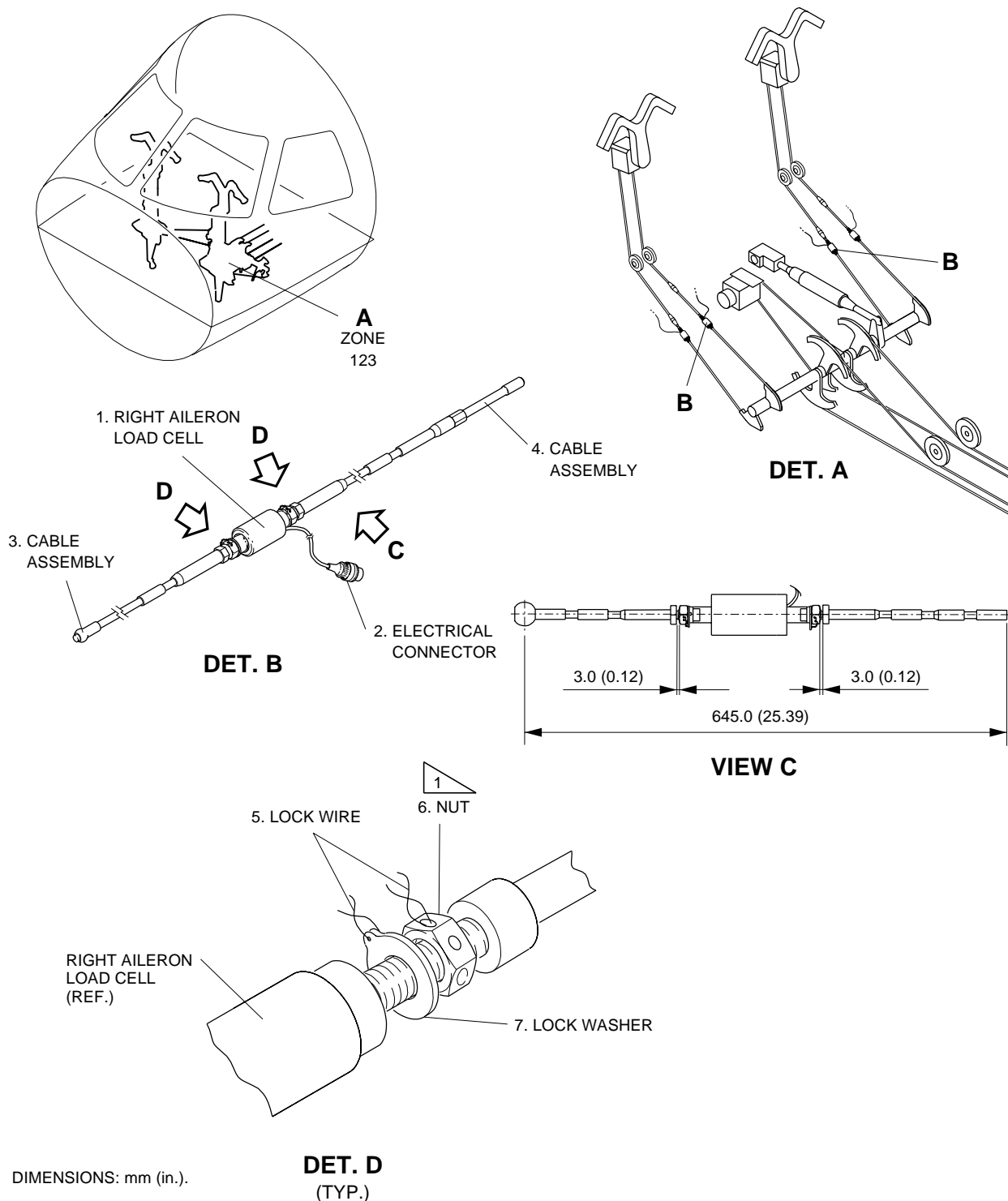
NOTE: If necessary, identify the load cell to make its installation easier.
  - (c) Disconnect cable assemblies (3) and (4).
  - (d) Remove the load cell attached to the cable assemblies.
  - (e) To disconnect and release the load cell (1) refer to T.P. 145/1754.
- (2) Do the procedure described below to the pilot and copilot left aileron load cells (1) (Figure 402):
  - (a) Disconnect the electrical connector (2).
  - (b) Release the tension on the aileron control cables.

NOTE: If necessary, identify the load cell to make its installation easier.
  - (c) Disconnect cable assemblies (3) and (4).
  - (d) Remove the load cell attached to the cable assemblies.
  - (e) To disconnect and release the load cell (1) refer to T.P. 145/1754.

EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS

Right Aileron Load Cell - Removal/Installation

Figure 401

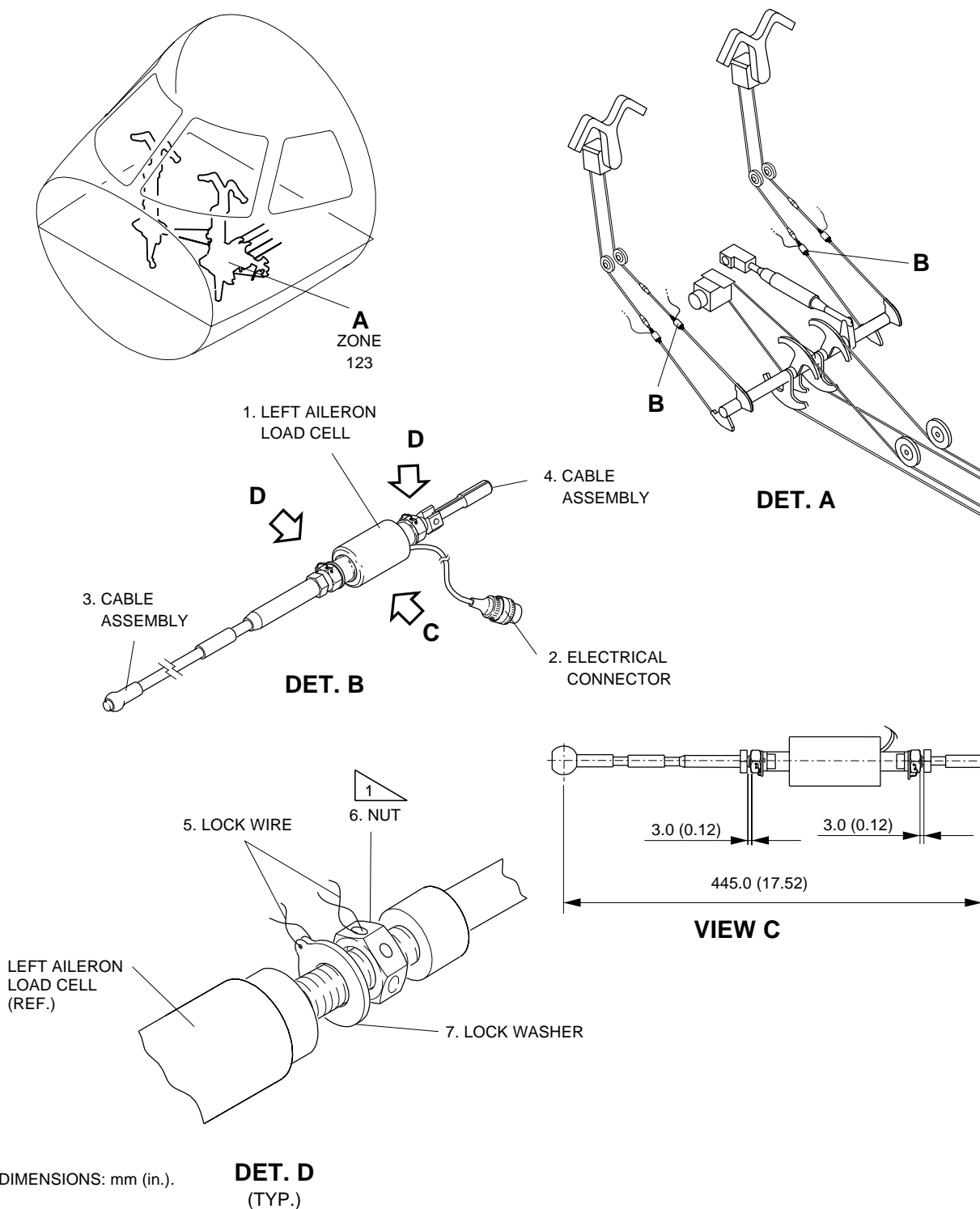


EM145AMM270798B.DGN

EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS

Left Aileron Load Cell - Removal/Installation

Figure 402



EM145AMM270619B.DGN

TASK 27-15-03-400-801-A

**EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS**

### 3. AILERON LOAD CELL - INSTALLATION

#### A. General

- (1) This procedure gives the instructions to install the aileron load cell that is assembled on the aileron control cable between the control column and the forward torque tube.

#### B. References

REFERENCE	DESIGNATION
AMM MPP 20-10-01/200	- MAINTENANCE PRACTICES
AMM TASK 25-11-01-400-801-A/400	PILOT SEAT - INSTALLATION
AMM TASK 27-11-01-700-801-A/500	-
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 31-31-00-700-804-A/500	FLIGHT DATA RECORDER - FUNCTIONAL TEST
IPC 27-11-00	AILERON PRIMARY MECHANICAL CONTROL
T.P. 145/1754	-

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
123	123BL	Area below the cockpit floor
220	221EF	Cockpit LH upper side
220	222FF	Cockpit RH upper side

#### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 058	Kit, rig pins, flight controls	To lock the aileron control system in the neutral position	

#### E. Auxiliary Items

Not Applicable

#### F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C20	Lockwire	AR

#### G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-11-00	2

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Below the cockpit floor

I. Installation (Figure 401) (Figure 402)

SUBTASK 420-002-A

- (1) Do the steps bellow to install the pilot and copilot right aileron load cells (1) (Figure 401):

- (a) Make sure that the dimension of the load cell is as given in (Figure 401), to make the installation easier. If it is not, adjust the load cell as follows:

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- 1 Remove and discard the lockwire (5).
- 2 Loosen the nut (6) and the lock washer (7).
- 3 Adjust the load cell (1) to get the correct dimension.
- 4 Put the lock washer (7) in the correct position in the load cell (1).
- 5 Apply a maximum torque of 2.3 N.m (20 lb.in) to the nut (6).

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- 6 Safety the nut (6) and lock washer (7) with lockwire (5) [AMM MPP 20-10-01/200](#).
- (b) Connect the load cell (1) to the cable assemblies (3) and (4) (Refer to T.P. 145/1754).
- (c) Put the load cell (1) in its installation position and try to attach it to the aileron control cable.
- 1 If the load cell (1) is not in the correct length, adjust the load cell as follows:

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- a Remove and discard the lockwire (5).
- b Loosen the nut (6) and the lock washer (7).
- c Adjust the load cell (1) to get the correct dimension.
- d Put the lock washer (7) in the correct position in the load cell (1).
- e Apply a maximum torque of 2.3 N.m (20 lb.in) to the nut (6).

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- f Safety the nut (6) and lock washer (7) with lockwire (5) [AMM MPP 20-10-01/200](#).

2 If the load cell (1) is in the correct length, go to step (d).

- (d) Install the load cell (1) attached to the cable assemblies (3) and (4) to the aileron control cable.
- (e) Connect the electrical connector (2).

(2) Do the steps bellow to install the pilot and copilot left aileron load cells (1) (Figure 402):

- (a) Make sure that the dimension of the load cell is as given in (Figure 402), to make the installation easier. If it is not, adjust the load cell as follows:

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- 1 Remove and discard the lockwire (5).
- 2 Loosen the nut (6) and the lock washer (7).



- 3 Adjust the load cell (1) to get the correct dimension.
- 4 Put the lock washer (7) in the correct position in the load cell (1).
- 5 Apply a maximum torque of 2.3 N.m (20 lb.in) to the nut (6).

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- 6 Safety the nut (6) and lock washer (7) with lockwire (5) [AMM MPP 20-10-01/200](#).
- (b) Connect the load cell (1) to the cable assemblies (3) and (4) (Refer to T.P. 145/1754).
- (c) Put the load cell (1) in its installation position and try to attach it to the aileron control cable.

- 1 If the load cell (1) is not in the correct length, adjust the load cell as follows:

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- a Remove and discard the lockwire (5).
- b Loosen the nut (6) and the lock washer (7).
- c Adjust the load cell (1) to get the correct dimension.
- d Put the lock washer (7) in the correct position in the load cell (1).
- e Apply a maximum torque of 2.3 N.m (20 lb.in) to the nut (6).

**WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL A LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.**

**CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRES STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO REMOVE THEM.**

- f Safety the nut (6) and lock washer (7) with lockwire (5) [AMM MPP 20-10-01/200](#).

2 If the load cell (1) is in the correct length, go to step (d).

- (d) Install the load cell (1) attached to the cable assemblies (3) and (4) to the aileron control cable.
- (e) Connect the electrical connector (2).

J. Follow-on

*SUBTASK 842-002-A*

- (1) Remove the rig pins from the aileron control system.
- (2) Do the aileron control cables adjustment (AMM TASK 27-11-01-700-801-A/500).
- (3) Do the load cell functional test ( [AMM TASK 31-31-00-700-804-A/500](#)).
- (4) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

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

- (5) Install the pilot seat ([AMM TASK 25-11-01-400-801-A/400](#)).