



AIRCRAFT MAINTENANCE MANUAL

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



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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
AMM TASK 25-11-01-000-801-A/400	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
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

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](#))

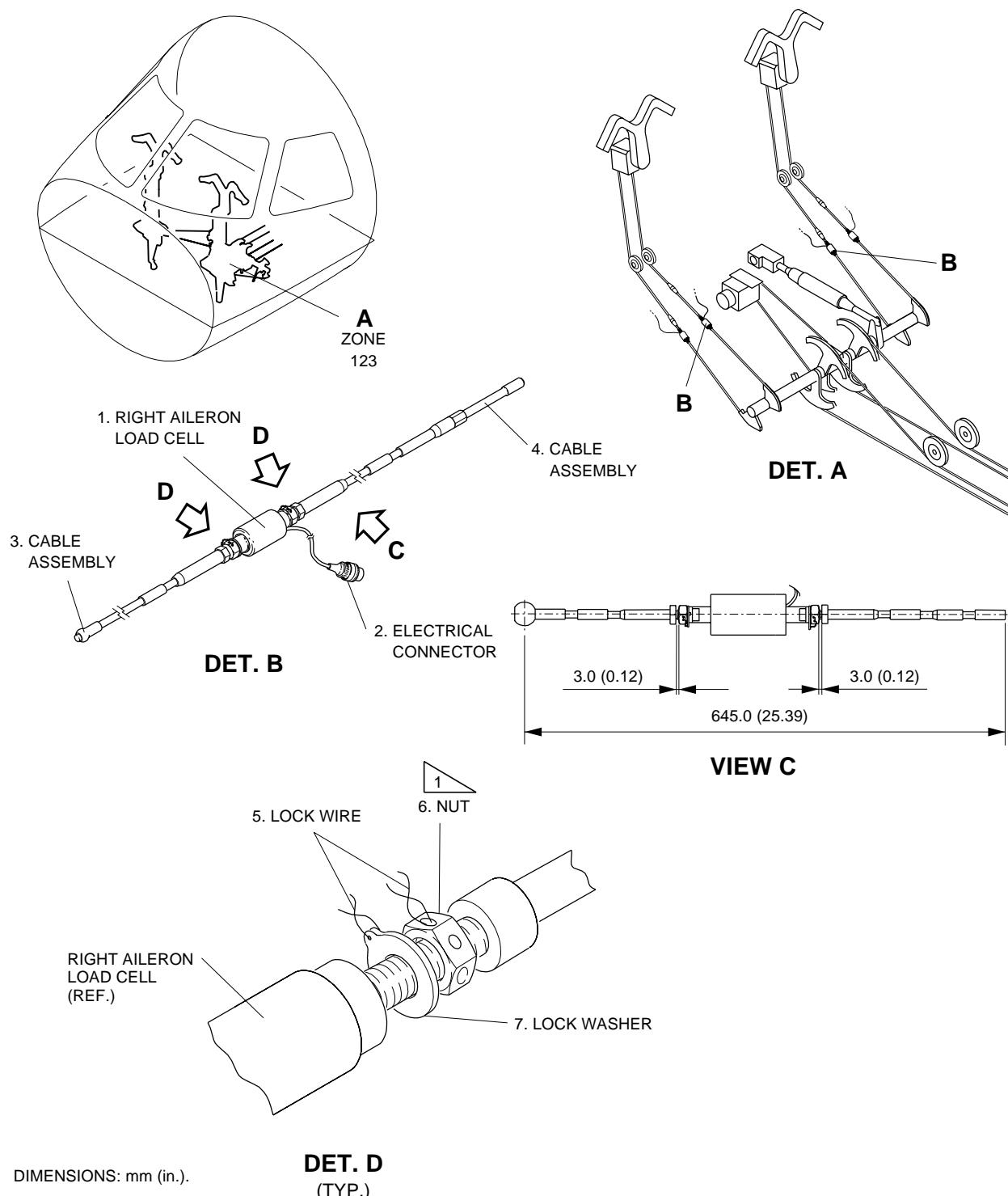
SUBTASK 020-002-A

- (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



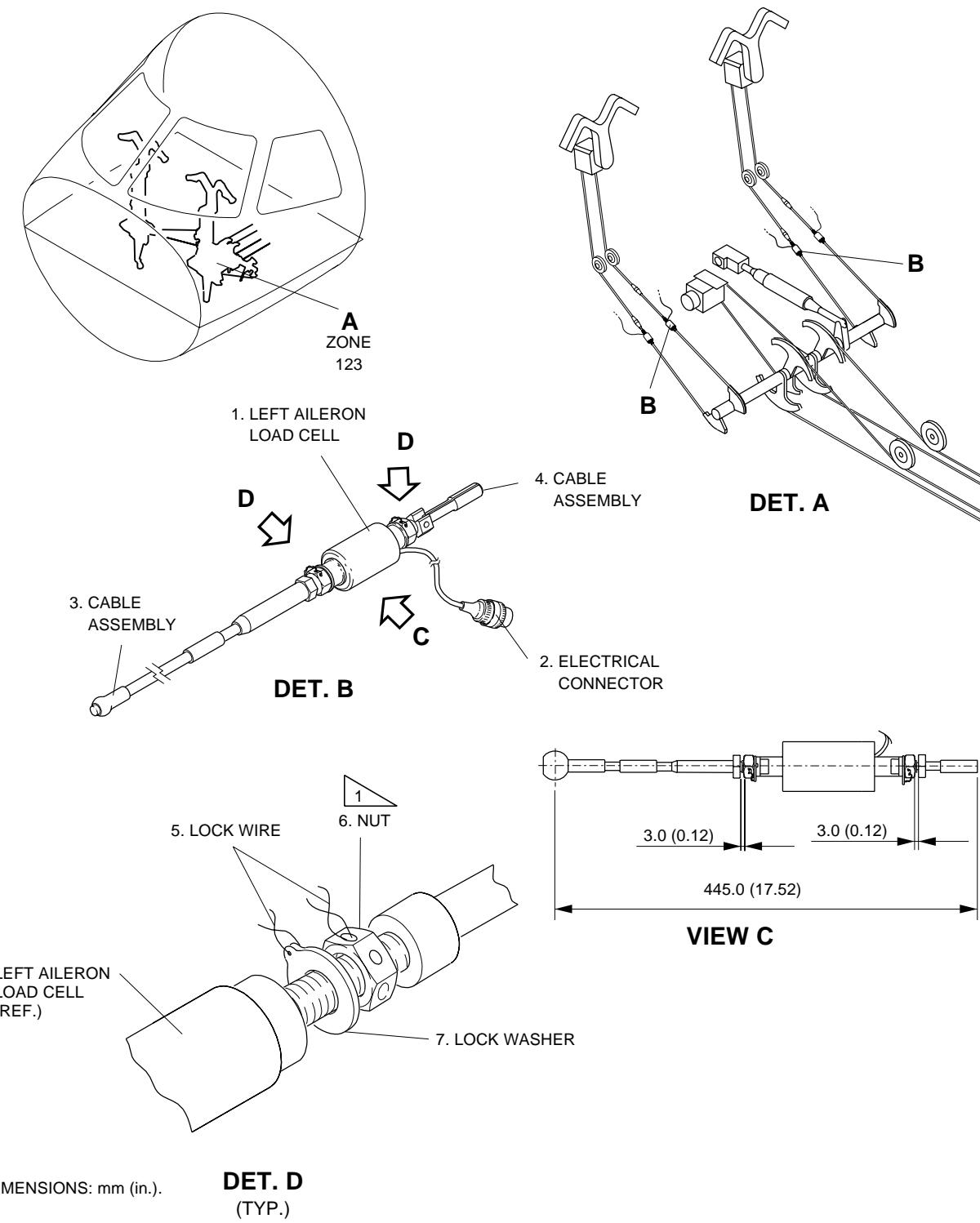
 TORQUE: 2.3 N.m (20 lb.in) MAXIMUM

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EFFECTIVITY: ONLY FOR AIRCRAFTS WITH LOAD CELLS

Left Aileron Load Cell - Removal/Installation

Figure 402





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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 below 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](#).



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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](#)).