



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

LANDING GEAR FREE-FALL CONDITION - INSPECTION/CHECK

EFFECTIVITY: ALL

1. General

- A. If a landing gear emergency extension has occurred, immediately accomplish the maintenance check described in this section before installation of landing gear safety pins. No person shall be allowed into the nose landing gear compartment before accomplishment of these actions.
- B. These procedures are necessary to make sure that there is no failure in the landing gear system.
- C. The aircraft must be reconfigured and examined for damage or functional disagreement of the landing gear system.
- D. 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
05-50-13-700-801-A	AIRCRAFT RECONFIGURATION - CHECK	ALL



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TASK 05-50-13-700-801-A

EFFECTIVITY: ALL

2. AIRCRAFT RECONFIGURATION - CHECK

A. General

- (1) This task gives the procedures to do an aircraft reconfiguration after the use of the landing gear free-fall system and subsequent landing gear operational check.
- (2) The results of these procedures will show if a specific troubleshooting is necessary.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM SDS 23-41-00/1	
AMM TASK 07-10-00-500-801-A/200	-
AMM TASK 07-10-00-500-802-A/200	-
AMM TASK 07-10-00-500-805-A/200	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-00-01-910-801-A/200	HYDRAULIC FLUID - DECONTAMINATION
AMM TASK 29-10-08-200-801-A/600	DIFFERENTIAL PRESSURE INDICATOR - INSPECTION
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
AMM TASK 32-33-02-000-801-A/400	NLG-DOOR SOLENOID-VALVE - REMOVAL
AMM TASK 32-34-00-700-801-A/500	LG EMERGENCY EXTENSION - OPERATIONAL AND FUNCTIONAL CHECKS

C. Zones and Accesses

Not Applicable

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



(Continued)

QTY	FUNCTION	PLACE
1	Helps the other technician	Area where the LG operates

I. Preparation

SUBTASK 841-002-A

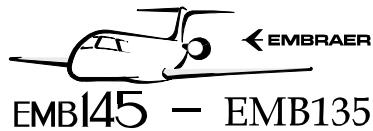
WARNING: ACCESS OF ANY PERSON TO THE NOSE LANDING GEAR COMPARTMENT, FOR ANY REASON, IS TO BE ALLOWED ONLY WITH HYDRAULIC SYSTEM No. 1 UNPRESSURIZED (I.E. ENGINE No. 1 NOT RUNNING AND ELECTRICAL MOTOR-DRIVEN PUMP No. 1 TURNED OFF).

- (1) Lift the aircraft on jacks (AMM TASK 07-10-00-500-801-A/200 or AMM TASK 07-10-00-500-805-A/200), as applicable.
- (2) Isolate the area of landing gear (RH MLG, LH MLG and NLG) operation with fences.
- (3) Energize the aircraft with the external DC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (4) Connect the ramp Interphone ([AMM SDS 23-41-00/1](#)).
- (5) On the front panel, make sure that the landing gear control lever is in the DOWN position ([Figure 602](#)).
- (6) On right side of the control pedestal, make sure that the override switch is in the NORMAL position ([Figure 602](#)).
- (7) On the EICAS, make sure that the three leg downlock indications show DN with green letters ([Figure 602](#)).
- (8) On the RMU Engine Back-up pager, make sure that the LGDN LOCKED message is shown ([Figure 602](#)).
- (9) On the overhead panel, make sure that pitot sensor pushbuttons are deenergized ([Figure 603](#)).
- (10) On the electrical panel, make sure that battery switches are in the OFF position (1 and 2) ([Figure 603](#)).
- (11) On the pedestal control, make sure that the stall protection pushbuttons (cutout 1 and cutout 2) are in the DISARM position ([Figure 603](#)).

J. Aircraft Reconfiguration - Check

SUBTASK 720-002-A

- (1) Release all pressure of hydraulic system 1 as follows:
 - (a) On the circuit breaker panel, open the ELECT PUMP 1 and attach a DO-NOT-CLOSE tag to them.
 - (b) Operate the rudder to the left and right position until the pressure of the hydraulic system is shown as zero PSI on the EICAS.



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- (c) Open access door 114CR of the nose hydraulic compartment (AMM MPP 06-41-01/100).
- (d) Release the pressure of the PAX door/LDG accumulator installed in the Nose Hydraulic Compartment. For this, open the discharge valve and monitor the pressure gage until it shows the nitrogen precharge.
- (2) Disconnect the NLG door actuator rod end from the NLG doors, as follows ([Figure 601](#)):
 - (a) Remove the cotter pin (2), nut (3), washer (4), bushing (5), and bolt (6).
 - (b) Remove the actuator rod end (7) from the NLG door lugs (8) and attach the actuator with tape so that it stays safety in case of actuating.

NOTE: Do not disconnect the hydraulic lines (1).
- (3) On the circuit breaker panel, close the ELECT PUMP 1 and pressurize the hydraulic system 1.
- (4) Return the FREE-FALL control actuating lever to the NORMAL position.
- (5) If the nose landing gear door actuators move up (to close doors position), replace the nose landing gear door solenoid valve ([AMM TASK 32-33-02-000-801-A/400](#)).
- (6) Pressurize the hydraulic system 1 and make sure that the NLG door actuators go to the extend position.
- (7) If necessary, refer to the FAULT ISOLATION MANUAL.

K. Landing Gear - Inspection

SUBTASK 720-003-A

- (1) Do a general inspection on the landing gear for the integrity of these items:
 - Articulations.
 - Attachments to the aircraft structure.
 - Uplock box.
 - Doors.
 - Actuators.
 - Hydraulic Lines.
 - Tires.
- (2) Do an inspection on the oil filters ([AMM TASK 29-10-08-200-801-A/600](#)).
- (3) If necessary, do the decontamination of the hydraulic system ([AMM TASK 29-00-01-910-801-A/200](#)).
- (4) Install the rod ends of the NLG door actuators on the NLG doors ([Figure 601](#)).



AIRCRAFT MAINTENANCE MANUAL

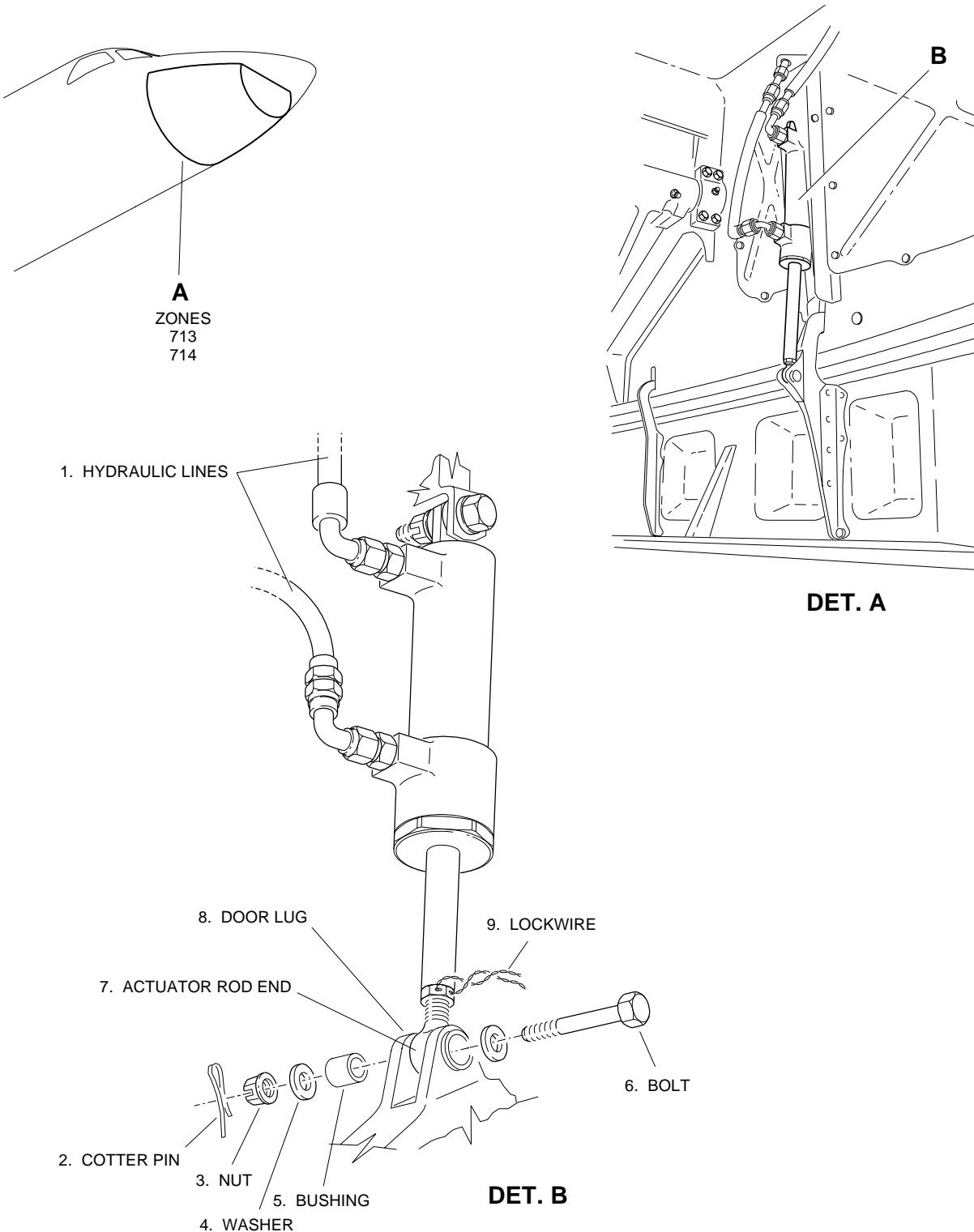
(5) Do the operational tests on the Landing Gears ([AMM TASK 32-30-00-700-801-A/500](#)) and ([AMM TASK 32-34-00-700-801-A/500](#)).

(6) If necessary, refer to the FAULT ISOLATION MANUAL.

L. Follow-on

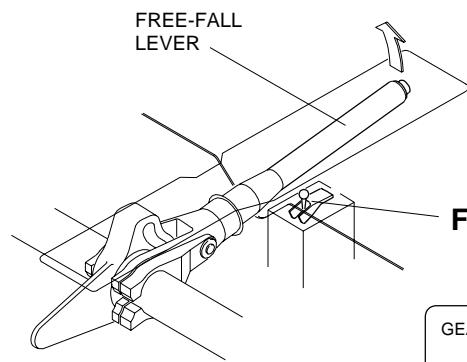
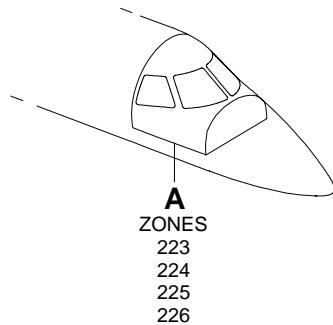
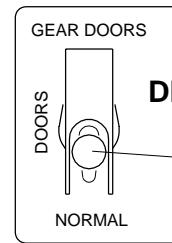
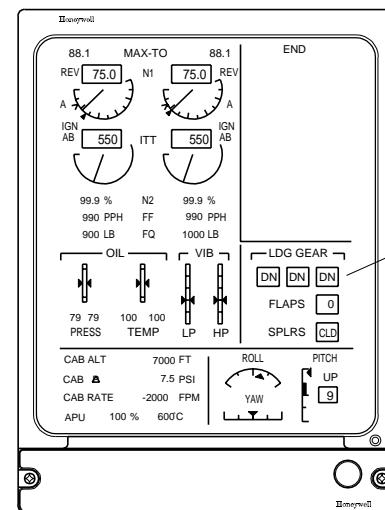
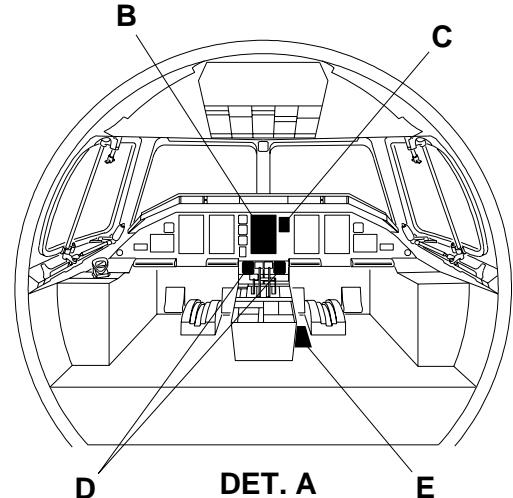
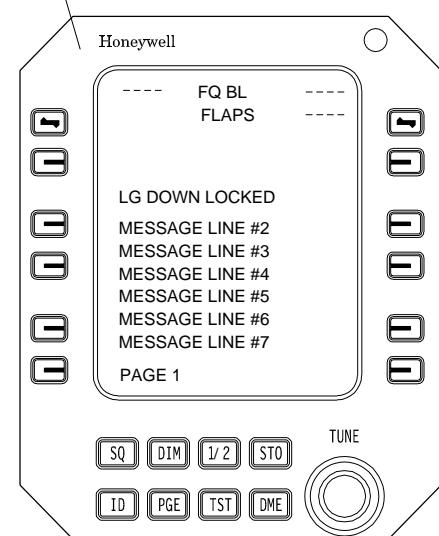
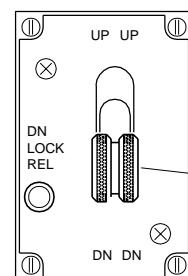
SUBTASK 842-002-A

- (1) Lower the aircraft and remove the jacks (AMM TASK 07-10-00-500-802-A/200).
- (2) Disconnect the Ramp Interphone.
- (3) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: ALL
NLG Door Actuator - Disconnection
Figure 601


145AMM320318B.MCE

EFFECTIVITY: ALL

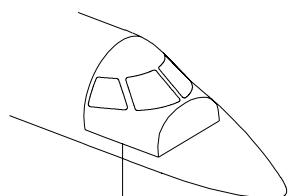
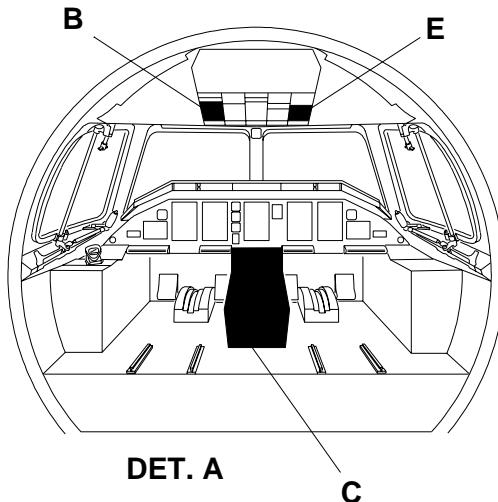
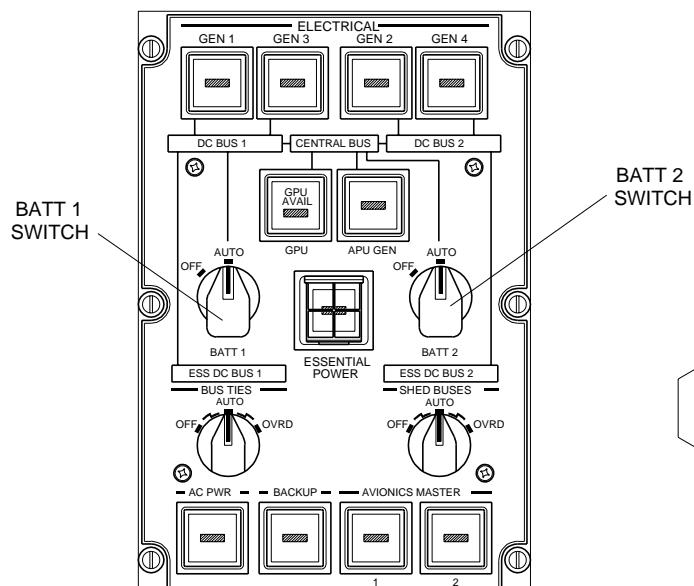
 Preparation for Aircraft Reconfiguration - I
 Figure 602

DET. E

 RMU
ENGINE BACKUP
PAGE 2

DET. B


145AMM050068.MCE A

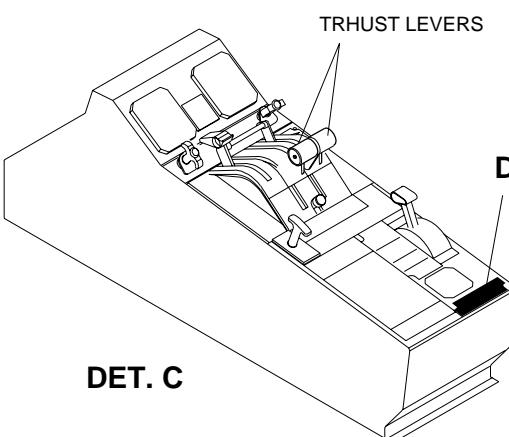
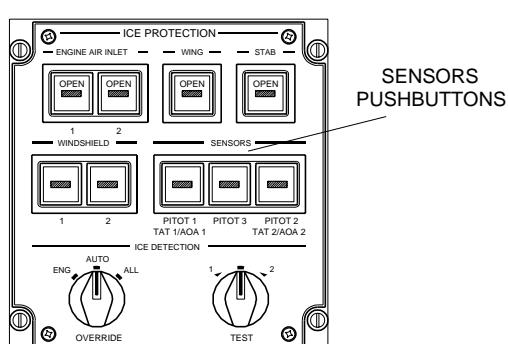
EFFECTIVITY: ALL

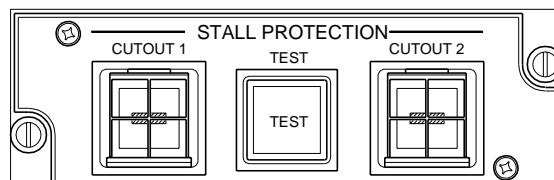
Preparation for Aircraft Reconfiguration - II

Figure 603


A
 ZONES
 223
 224
 225
 226

DET. A
C

DET. B

ELECTRICAL PANEL


DET. C

 SENSORS
 PUSHBUTTONS

DET. E
 ICE PROTECTION PANEL

DET. D

145AMM050069.MCE A