LANDING-GEAR PROXIMITY SWITCH - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

   A. This section gives the procedure to do the specific test of the proximity switches of the landing gear system and also to do the clearance (gap) adjustment between the proximity switch and its target.

   B. 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*
32-63-05-700-801-A	PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK	ALL
32-63-05-700-802-A	PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK - ALTERNATIVE PROCEDURE	ALL
32-63-05-700-803-A	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT	ALL
32-63-05-700-804-A	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT - ALTERNATIVE PROCEDURE	ALL

TASK 32-63-05-700-801-A
EFFECTIVITY: ALL

2. PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK

A. General

(1) This procedure makes it easier to find a failure in the landing-gear proximity switch.

(2) The adjustment of the clearance (gap) between the proximity switch and its target is not usually necessary, but if the proximity switch and its target show signs of damage or displacement from correct relative position, do the adjustment procedure with the aid of the related GSE in AMM TASK 32-63-05-700-803-A/500 or the adjustment procedure with the aid of the Feeler Gage in AMM TASK 32-63-05-700-804-A/500.

(3) If the electrical connector, with the inclusion of its electrical pins and adjacent areas, shows signs of damage, contamination or corrosion, do the maintenance procedures as follows:

CAUTION: DO NOT USE OTHER PROCEDURE AND/OR CONTACT CLEANER TO CLEAN THE PROXIMITY SWITCHES TO PREVENT DAMAGE TO ELECTRICAL PINS AND SEALS.

(a) To clean the wiring side of the electrical connector, refer to WM 20-50-00/201 standard practices.

(b) To replace the wiring side of the electrical connector, use the repair kit; refer to IPC 32-50-00 or IPC 32-61-00 or IPC 32-63-00. Obey the instructions of the applicable wiring manual, chapter WM 20-50-00/201, Standard Practices.

(c) To clean the proximity switch (including its electrical connector) and/or replace the proximity switch seals, refer to task AMM TASK 32-63-05-300-801-A/800.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
AMM TASK 32-60-00-910-801-A/200	LANDING GEAR PROXIMITY SWITCH AND HARNESS ELECTRICAL CONNECTORS - RESTORATION AND PROTECTION
AMM TASK 32-63-05-300-801-A/800	PROXIMITY SWITCH - REPAIR
AMM TASK 32-63-05-700-803-A/500	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT
AMM TASK 32-63-05-700-804-A/500	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT - ALTERNATIVE PROCEDURE
IPC 32-50-00	NOSE WHEEL STEERING SYSTEM
IPC 32-61-00	LDG INDICATION
IPC 32-63-00	-

(Continued)

REFERENCE	DESIGNATION
S.B.145-32-0036	-
S.B.145-32-0046	-
SB145-32-0036	-
SWPM 20-50-00	-
WM 20-50-00/201	-
WM 32-33-50	-
WM 32-60-50	-
WM 32-61-50	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 541	Test Box	To do a test of the proximity switch	
GSE 543	Test Gauge	To do a test of the proximity switch	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Goggles, resistant to phosphate ester-base fluid	Protection for Eyes	1
Commercially available	Rubber Gloves, resistant to phosphate ester-base fluid	Protection for Hands	1
Commercially available	Plate - Aluminum (not alloy), 1 mm thickness maximum	Metalic target to simulate FAR target condition	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-L-87177A	Lektro-Tech SUPER CORR-A	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Landing gear
1	Helps the other technician	Area of operation of the LG

I. Preparation

SUBTASK 841-002-A

(1) On aircraft PRE-MOD. S.B.145-32-0036, make sure that the pressure in hydraulic system No. 1 is totally released (AMM TASK 29-10-00-860-802-A/200).

(2) On aircraft POST-MOD. S.B.145-32-0036, install the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

(3) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

WARNING: IF IT IS NECESSARY TO ENERGIZE THE AIRCRAFT WHILE IT IS IN THE IN-FLIGHT CONDITION, MAKE SURE THAT THE WEATHER RADAR BUTTON IS IN THE OFF POSITION ON WEATHER RADAR CONTROLLER IN THE COCKPIT. FAILURE TO DO THIS LETS THE RADAR BE OPERATIONAL AND INJURY TO PERSONS IN THE ADJACENT AREA CAN OCCUR.

(4) It is recommended that you do this test with the aircraft de-energized, but if it is necessary, do this test with the aircraft energized (AMM TASK 20-40-01-860-801-A/200).

J. Functional Check of the Proximity Switches

SUBTASK 710-002-A

(1) If you will do this test with the aircraft energized, do as follows:

(a) Open the circuit breaker related to the proximity switch (sensor) that you will test. Refer to Table 501 and to WM 32-60-50 and WM 32-61-50 and WM 32-33-50.

NOTE: It is necessary to de-energize the proximity switch before disconnect its electrical connection.

CAUTION: BE CAREFUL WHEN YOU REMOVE THE HEAT-SHRINKABLE BOOT TO PREVENT DAMAGE TO THE ELECTRICAL CABLE AND ITS CONNECTOR.

(2) For the connector that already has heat-shrinkable boot, remove it with a cutting tool.

(3) Disconnect the applicable proximity switch connector. Refer to Table 501.

WARNING: MAKE SURE THAT THE CONNECTION BETWEEN PLUG AND RECEPTACLE HAVE A GOOD MATING. IT IS NECESSARY TO MAKE SURE THAT THE PLUG COMPLETELY COVERS THE RED STRIPE ON THE RECEPTACLE BODY. IF YOU NOT OBEY THIS PROCEDURE, DAMAGE AND/OR CORROSION TO THE PROXIMITY SWITCH CAN OCCUR.

(4) Connect the electrical connector of the test box - GSE 541 to the proximity sensor electrical connector that will be tested.

NOTE: If it is not possible to install the GSE 541, you must rotate the nose landing gear 45 degrees, to get access to the proximity sensor electrical connector.

(5) For the test of the WOW or NLG DOOR-OPEN proximity switches, do as follows:

(a) With your hands, put the "FAR" side of the test gauge - GSE 543, against the proximity switch face.

1 It means that the word "NEAR" will be visible in the opposite side of the proximity switch face.

(b) Push the test box fixture POWER switch.

(c) Make sure that the ACTUATION led is lit.

1 It means that the proximity switch sensor is good for a "NEAR" target condition.

(d) With your hands, put "NEAR" side of the test gauge - GSE 543, against the proximity switch face.

1 It means that the word "FAR" will be visible in the opposite side of the proximity switch face.

(e) Push the test box fixture POWER switch.

(f) Make sure that the ACTUATION led is NOT lit.

1 It means that the proximity switch sensor is good for a "FAR" target condition.

(6) For the test of the NLG DOOR SEQUENCE proximity switch, do as follows:

NOTE: This test does not use the test gauge - GSE 543.

(a) With your hands, move the uplock box hook to simulate an uplock condition ("FAR" target condition).

(b) Push the test box fixture POWER switch.

(c) Make sure that the ACTUATION led is NOT lit.

1 It means that the switch sensor is good for a "FAR" target condition.

(d) Pull the free-fall lever to put the uplock box hook back into the unlock condition.

1 Make sure that the uplock hook is on the unlock condition.

(e) Push the test box fixture POWER switch.

(f) Make sure that the ACTUATION led is lit.

1 It means that the proximity switch sensor is good for a "NEAR" target condition.

(7) For the test of the DOWN LOCK proximity switches, do as follows:

NOTE: This test does not use the test gauge - GSE 543.

(a) Push the test box fixture POWER switch.

(b) Make sure that the ACTUATION led is lit.

1 It means that the proximity switch sensor is good for a "NEAR" target condition.

(c) With your hands, put a metallic target (aluminum, not alloy) against the proximity switch face (between proximity switch and target) to simulate a "FAR" target condition.

(d) Push the test box fixture POWER switch.

(e) Make sure that the ACTUATION led is NOT lit.

1 It means that the switch sensor is good for a "FAR" target condition.

(8) For the test of the UP LOCK proximity switches, do as follows:

NOTE: This test does not use the test gauge - GSE 543.

(a) Move the uplock box hook manually to simulate an uplock condition ("NEAR" target condition).

(b) Push the test box fixture POWER switch.

(c) Make sure that the ACTUATION led is lit.

1 It means that the proximity switch sensor is good for a "NEAR" target condition.

(d) Pull the free-fall lever to put the uplock box hook back into the unlock condition ("FAR" target condition).

1 Make sure that the uplock hook is on the unlock condition.

(e) Push the test box fixture POWER switch.

(f) Make sure that the ACTUATION led is NOT lit.

1 It means that the proximity switch sensor is good for a "FAR" target condition.

Table 501 - CIRCUIT BREAKERS

PROXIMITY SWITCH	POSITION	CONNECTOR	CIRCUIT BREAKER
WOW	LEFT - 1	P0261[1]	AIR/GND A
WOW	LEFT - 1	P2833[1]	AIR/GND A
WOW	LEFT - 2	P1192[1]	AIR/GND B
WOW	LEFT - 2	P2835[1]	AIR/GND B
WOW	RIGHT - 1	P0261[1]	AIR/GND C
WOW	RIGHT - 1	P2833[1]	AIR/GND C

[1] APPLICABLE TO EMB-145ER/EP/EU/MP AND EMB-135ER MODELS
[2] APPLICABLE TO EMB-145LR/LU AND EMB-135LR MODELS
[3] APPLICABLE TO AIRCRAFT 055 - 489
[4] APPLICABLE TO JAA-CERTIFICATED AIRCRAFT
[5] APPLICABLE TO AIRCRAFT PRE-MOD S.B.145-32-0046
[6] APPLICABLE TO AIRCRAFT POST-MOD S.B.145-32-0046
[7] APPLICABLE TO AIRCRAFT 503 - 682

Table 501 - CIRCUIT BREAKERS (Continued)

PROXIMITY SWITCH	POSITION	CONNECTOR	CIRCUIT BREAKER
WOW	RIGHT - 2	P1192[1]	AIR/GND D
WOW	RIGHT - 2	P2835[1]	AIR/GND D
WOW	NOSE	P0262[1]	AIR/GND D
WOW	NOSE	P2834[1]	AIR/GND D
DOWN LOCK	LEFT - 1	P0045	IND 1
DOWN LOCK	LEFT - 2	P0044[1]	IND 2
DOWN LOCK	LEFT - 2	P2037[1]	IND 2
DOWN LOCK	RIGHT - 1	P0045	IND 1
DOWN LOCK	RIGHT - 2	P2037	IND 2
DOWN LOCK	NOSE - 1	P0039	IND 1
DOWN LOCK	NOSE - 2	P0040	IND 2
UP LOCK	LEFT - 1	P0047	IND 1
UP LOCK	LEFT - 2	P0048	IND 2
UP LOCK	RIGHT - 1	P0047	IND 1
UP LOCK	RIGHT - 2	P0048	IND 2
UP LOCK	NOSE - 1	P0042	IND 1
UP LOCK	NOSE - 2	P0043	IND 2
UP LOCK	NOSE - 3	P2040	IND 2[1]
			DOOR CMD[1]
DOOR-OPEN[1]	NOSE - 1	P1941	IND 1
DOOR-OPEN[1]	NOSE - 2	P1940	IND 2

[1] APPLICABLE TO EMB-145ER/EP/EU/MP AND EMB-135ER MODELS
[2] APPLICABLE TO EMB-145LR/LU AND EMB-135LR MODELS
[3] APPLICABLE TO AIRCRAFT 055 - 489
[4] APPLICABLE TO JAA-CERTIFICATED AIRCRAFT
[5] APPLICABLE TO AIRCRAFT PRE-MOD S.B.145-32-0046
[6] APPLICABLE TO AIRCRAFT POST-MOD S.B.145-32-0046
[7] APPLICABLE TO AIRCRAFT 503 - 682

(9) Remove the test box - GSE 541 and GSE 543 if applicable.

WARNING: DO NOT LET LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A GET IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. PUT ON A PROTECTIVE SPLASH GOGGLE AND GLOVES WHEN YOU USE LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A. KEEP LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A AWAY FROM SPARKS, FLAME, AND HEAT. LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A IS A POISONOUS AND FLAMMABLE SUBSTANCE.

(10) Do the protection of the proximity switch and the harness electrical connector against corrosion. Refer to AMM TASK 32-60-00-910-801-A/200.

WARNING: **MAKE SURE THAT THE CONNECTION BETWEEN PLUG AND RECEPTACLE HAVE A GOOD MATING. IT IS NECESSARY TO MAKE SURE THAT THE PLUG COMPLETELY COVERS THE RED STRIPE ON THE RECEPTACLE BODY. IF YOU DO NOT OBEY THIS PROCEDURE, DAMAGE AND/OR CORROSION TO THE PROXIMITY SWITCH CAN OCCUR.**

(11) Connect the electrical connector of the proximity switch. Refer to SWPM 20-50-00.

K. Follow-on

SUBTASK 842-002-A

(1) Make sure that all circuit breakers used are closed, on the circuit breaker panel.

(2) The adjustment of the clearance (gap) between the proximity switch and its target is not usually necessary, but if the proximity switch and its target show signs of damage or displacement from correct relative position, do the adjustment procedure with the GSE in AMM TASK 32-63-05-700-803-A/500 or the adjustment procedure with the Feeler Gage in AMM TASK 32-63-05-700-804-A/500.

(3) On aircraft POST-MOD SB145-32-0036, remove the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

(4) Remove all metallic targets from the front of proximity switches, if the target was used.

(5) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

(6) De-energize the aircraft.

TASK 32-63-05-700-802-A
EFFECTIVITY: ALL

3. PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK - ALTERNATIVE PROCEDURE

A. General

(1) This procedure makes it easier to find a failure in the landing-gear proximity switch with the aid of the BREAK OUT BOX TEST.

(2) The adjustment of the clearance (gap) between the proximity switch and its target is not usually necessary, but if the proximity switch and its target show signs of damage or displacement from correct relative position, do the adjustment procedure with the aid of the GSE in AMM TASK 32-63-05-700-803-A/500 or the adjustment procedure with the aid of the feeler gage in AMM TASK 32-63-05-700-804-A/500.

(3) If the electrical connector, with the inclusion of its electrical pins and adjacent areas, shows signs of damage, contamination or corrosion, do the maintenance procedures as follows:

CAUTION: DO NOT USE OTHER PROCEDURE AND/OR CONTACT CLEANER TO CLEAN THE PROXIMITY SWITCHES TO PREVENT DAMAGE TO ELECTRICAL PINS AND SEALS.

(a) To clean the wiring side of the electrical connector, refer to WM 20-50-00/201 standard practices.

(b) To replace the wiring side of the electrical connector, use the repair kit, refer to IPC 32-50-00 or IPC 32-61-00 or IPC 32-63-00. Obey the instructions of the applicable wiring manual, chapter WM 20-50-00/201, Standard Practices.

(c) To clean the proximity switch (including its electrical connector) and/or replace the proximity switch seals, refer to task AMM TASK 32-63-05-300-801-A/800.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
AMM TASK 32-50-06-700-801-A/500	7-DEGREE PROXIMITY SWITCH - FUNCTIONAL CHECK
AMM TASK 32-60-00-910-801-A/200	LANDING GEAR PROXIMITY SWITCH AND HARNESS ELECTRICAL CONNECTORS - RESTORATION AND PROTECTION
AMM TASK 32-63-05-300-801-A/800	PROXIMITY SWITCH - REPAIR
AMM TASK 32-63-05-700-803-A/500	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT

(Continued)

REFERENCE	*DESIGNATION*
AMM TASK 32-63-05-700-804-A/500	PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT - ALTERNATIVE PROCEDURE
CMM 32-63-05 T.P. 145/1522	-
IPC 32-50-00	NOSE WHEEL STEERING SYSTEM
IPC 32-61-00	LDG INDICATION
IPC 32-63-00	-
S.B.145-32-0036	-
SB145-32-0036	-
SWPM 20-50-00	-
WM 20-50-00/201	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 344	Proximity Switch Break Out Box Test	To do a test of the proximity switch	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Rubber Goggles resistant to phosphate ester-base fluid	Protection for Eyes	1
Commercially available	Rubber Gloves resistant to phosphate ester-base fluid	Protection for Hands	1

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MIL-L-87177	Lektro-Tech Super Corr-A	As necessary

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Landing gear
1	Helps the other technician	Area of operation of the LG

I. Preparation

SUBTASK 841-003-A

(1) On aircraft PRE-MOD. S.B.145-32-0036, make sure that the pressure in hydraulic system No. 1 is totally released (AMM TASK 29-10-00-860-802-A/200).

(2) On aircraft POST-MOD. S.B.145-32-0036, install the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

(3) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

WARNING: IF IT IS NECESSARY TO ENERGIZE THE AIRCRAFT WHILE IT IS IN THE IN-FLIGHT CONDITION, MAKE SURE THAT THE WEATHER RADAR BUTTON IS IN THE OFF POSITION, ON THE WEATHER RADAR CONTROLLER IN THE COCKPIT. FAILURE TO DO THIS LETS THE RADAR BE OPERATIONAL AND INJURY TO PERSONS IN THE ADJACENT AREA CAN OCCUR.

(4) Energize the aircraft (AMM TASK 20-40-01-860-801-A/200).

(5) For the test of the air/ground (WOW) proximity switches, open the AIR/GND A, B, C, and D circuit breakers, on the circuit breaker panel.

(6) For the test of the UP LOCK/DOWN LOCK/DOOR-OPEN proximity switches, open the CMD, DOOR CMD, DOWN OVRD, IND 1, and IND 2 circuit breakers, on the circuit breaker panel.

J. Functional Check of the Proximity Switches with BREAK OUT BOX TEST

SUBTASK 710-003-A

(1) For the test of the Main Landing Gear (MLG) AIR/GROUND (WOW), UP LOCK, DOWN LOCK proximity switches, do as follows:

(a) Open the IND 1, IND 2, AIR/GND A, B, C, and D circuit breakers, on the circuit breaker panel.

(b) On the LGEU, disconnect connector P7163 and connector P7164 (Figure 501).

(c) Connect the connector of the BREAK OUT BOX (GSE 344) to the LGEU and connectors P7163 and P7164 to the BREAK OUT BOX (Figure 501).

(d) Close the IND 1, IND 2, AIR/GND A, B, C, and D circuit breakers, on the circuit breaker panel.

(e) Turn "ON" the BREAK OUT BOX and make sure that the power light is "ON" (DET. C of Figure 502).

(f) Push the pushbutton to do the self-test (DET. C of Figure 502).

NOTE: While you do the self test of the pushbutton, all lights of the BREAK OUT BOX must be "ON". If there are problems with the BREAK OUT BOX, refer to CMM 32-63-05 T.P. 145/1522.

(g) For the test of the MLG AIR/GROUND (WOW) proximity switches, attach a metallic target in front of the related proximity switch. Look at the BREAK OUT BOX to make sure that the related light comes on correctly. Refer to Table 502.

NOTE: The result is the same for the WOW proximity switches of the Trailing Arm and for the WOW proximity switches of the Shock Absorber of the left and the right main landing gears.

Table 502 - BREAK OUT BOX LIGHT STATUS

BREAK OUT BOX LIGHT STATUS:	TARGET NEAR TO PROXIMITY SWITCH	TARGET AWAY FROM PROXIMITY SWITCH	CONDITIONS OF PROXIMITY SWITCH
DOWN LOCK proximity switches	LIGHT ON	LIGHT OFF	GOOD
UP LOCK proximity switches	LIGHT ON	LIGHT OFF	GOOD
MLG WOW proximity switches	LIGHT ON	LIGHT OFF	GOOD
NLG Door Sequence (3rdUP LOCK) proximity switch	LIGHT ON	LIGHT OFF	GOOD
NLG WOW proximity switches	LIGHT ON	LIGHT OFF	GOOD

(h) For the test of the DOWN LOCK proximity switches, retract and extend the landing gear (AMM TASK 32-30-00-700-801-A/500). Look at the BREAK OUT BOX to make sure that the related light comes on correctly. Refer to Table 502.

NOTE:
- The result is the same for channel A and for channel B of the left main landing gear, right main landing gear, and nose landing gear.
- It is necessary to retract the landing gear to examine and make sure that the DOWN LOCK proximity switches are in good conditions. When the LG is retracted, the DOWN LOCK lights on the BREAK OUT BOX must be "OFF".

(i) For the test of the UP LOCK, do as follows:

NOTE: To do the step (1), the aircraft must be on the ground (unjacked).

1 On aircraft PRE-MOD SB145-32-0036, make sure that the pressure in hydraulic system No. 1 is fully released (AMM TASK 29-10-00-860-802-A/200). Or, on aircraft POST-MOD SB 145-32-0036, make sure that the safety pin of the NLG door solenoid valve is installed (AMM TASK 32-00-02-910-801-A/200).

For the applicable proximity switches, move the uplock box hook manually to simulate an uplock condition (target near proximity switch) and use the free-fall lever to put the uplock box hook back into the unlock condition (target away from proximity switch). Look at the BREAK OUT BOX to make sure that the related light comes on. Refer to Table 502.

2 As an alternative procedure for the test of the UP LOCK proximity switches do as follow:

On the aircraft POST-MOD SB145-32-0036, remove the safety pin of the NLG door solenoid valve (AMM TASK 32-00-02-910-801-A/200).

Retract and extend the landing gear (AMM TASK 32-30-00-700-801-A/500). Look at the BREAK OUT BOX to make sure that the related light comes on. Refer to Table 502.

NOTE: The result is the same to channel A and to channel B, either for left MLG , NLG and right MLG .

(j) Open the IND 1, IND 2, AIR/GND A, B, C and D circuit breakers, on the circuit breaker panel.

(k) Turn "OFF" the BREAK OUT BOX (DET. C of Figure 502).

(l) On the LGEU, disconnect the BREAK OUT BOX (GSE 344) connectors and reconnect connector P7163 and connector P7164 (Figure 501).

(m) Close the IND 1, IND 2, AIR/GND A, B, C and D circuit breakers, on the circuit breaker panel.

(2) For the test of the Nose Landing Gear (NLG) Door Sequence (3rd UP LOCK) proximity switch and Nose Landing Gear (NLG) AIR/GROUND (WOW) proximity switch, do as follows:

(a) Open the DOOR CMD, IND 1, IND 2, AIR/GND A, B, C and D circuit breakers on the circuit breaker panel.

(b) On aircraft PRE-MOD SB145-32-0036, make sure that the pressure in hydraulic system No. 1 is fully released (AMM TASK 29-10-00-860-802-A/200).

On aircraft POST-MOD SB145-32-0036, install the safety pin of the NLG door solenoid valve (AMM TASK 32-00-02-910-801-A/200).

(c) On the NLG bay, disconnect connector P0774 to do the check of the NLG Door Sequence (3rd UP LOCK) proximity switch. And/or disconnect connector P0775 to do the check of the NLG WOW proximity switch (Figure 502).

(d) Connect connectors P0774 and P0775 to the related connector of the BREAK OUT BOX (GSE 344). Connect the connector of the BREAK OUT BOX to connectors J0774 and J0775 (to find the male connector in the aircraft, refer to Figure 502).

(e) Close the DOOR CMD, IND 1, IND 2, AIR/GND A, B, C, and D circuit breakers, on the circuit breaker panel.

(f) Turn "ON" the BREAK OUT BOX and make sure that the power light comes "ON" (Figure 502).

(g) Push the pushbutton to do the self-test (Figure 502).

NOTE: While you do the test of the pushbutton, all lights of the BREAK OUT BOX must be on. If there are problems with the BREAK OUT BOX, refer to CMM 32-63-05 T.P. 145/1522.

(h) For the test of the NLG Door Sequence (3rd UP LOCK) proximity switch, move the uplock box hook manually to simulate an uplock condition (target away from proximity switch) and use the free-fall lever to put the uplock box hook back into the unlock condition (target near the proximity switch). Then look at the BREAK OUT BOX to make sure that the related light comes on correctly. Refer to Table 502.

(i) For the test of the NLG AIR/GROUND (WOW) proximity switch, attach a metallic target in front of the proximity switch. Then look at the BREAK OUT BOX to make sure that the related light comes on correctly. Refer to Table 502.

NOTE: For the test of the NLG WOW proximity switch, it is necessary that the aircraft be on the ground (unjacked).

(j) Open the DOOR CMD, IND 1, IND 2, AIR/GND A, B, C, and D circuit breakers on the circuit breaker panel.

(k) On aircraft PRE-MOD SB145-32-0036, make sure that the pressure in hydraulic system No. 1 is fully released (AMM TASK 29-10-00-860-802-A/200).

On aircraft POST-MOD SB145-32-0036, install the safety pin of the NLG door solenoid valve (AMM TASK 32-00-02-910-801-A/200).

(l) Turn "OFF" the BREAK OUT BOX (Figure 502).

(m) On the NLG bay, disconnect the BREAK OUT BOX connectors and connect connectors P0774 and P0775 again to connectors J0774 and J0775, respectively (Figure 502).

WARNING: DO NOT LET LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A GET IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. PUT ON A PROTECTIVE SPLASH GOGGLE AND GLOVES WHEN YOU USE LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A. KEEP LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A AWAY FROM SPARKS, FLAME, AND HEAT. LUBRICANT AND ANTICORROSIVE FILM PN LEKTRO-TECH SUPER CORR-A IS A POISONOUS AND FLAMMABLE SUBSTANCE.

(n) Do the protection of the proximity switch and the electrical connector against corrosion. Refer to AMM TASK 32-60-00-910-801-A/200.

WARNING: MAKE SURE THAT THE CONNECTION BETWEEN PLUG AND RECEPTACLE HAVE A GOOD MATING. IT IS NECESSARY TO MAKE SURE THAT THE PLUG COMPLETELY COVERS THE RED STRIPE ON THE RECEPTACLE BODY. IF YOU NOT OBEY THIS PROCEDURE, DAMAGE AND/OR CORROSION TO THE PROXIMITY SWITCH CAN OCCUR.

(o) Connect the electrical connector of the proximity switch. Refer to SWPM 20-50-00.

(p) Close the DOOR CMD, IND 1, IND 2, AIR/GND A, B, C, and D circuit breakers, on the circuit breaker panel.

(3) For the test of the Nose Wheel Steering 7-Degree Proximity Switch, refer to AMM TASK 32-50-06-700-801-A/500.

K. Follow-on

SUBTASK 842-003-A

(1) Make sure that all circuit breakers used are closed, on the circuit breaker panel.

(2) The adjustment of the clearance (gap) between the proximity switch and its target is not usually necessary, but if the proximity switch and its target show signs of damage or displacement from correct relative position, do the adjustment procedure with the aid of the GSE in AMM TASK 32-63-05-700-803-A/500 or if the adjustment procedure with the aid of the Feeler Gage in AMM TASK 32-63-05-700-804-A/500.

(3) On aircraft POST-MOD SB145-32-0036, remove the safety pin from the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

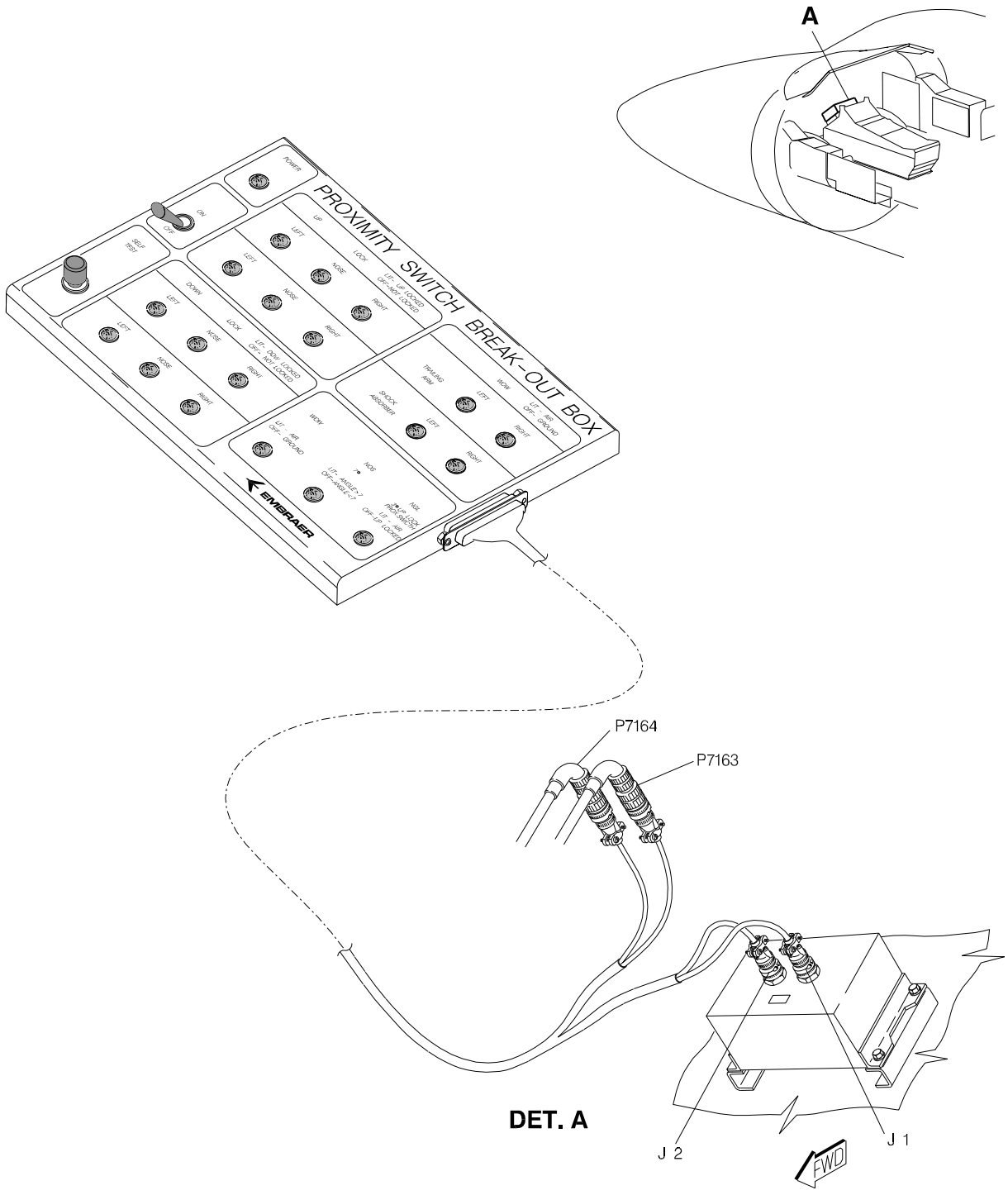
(4) Remove all metallic targets from the front of proximity switches, if the target was used.

(5) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

(6) De-energize the aircraft.

EFFECTIVITY: ALL

Connection of the BRAKE OUT BOX to the LGEU
Figure 501



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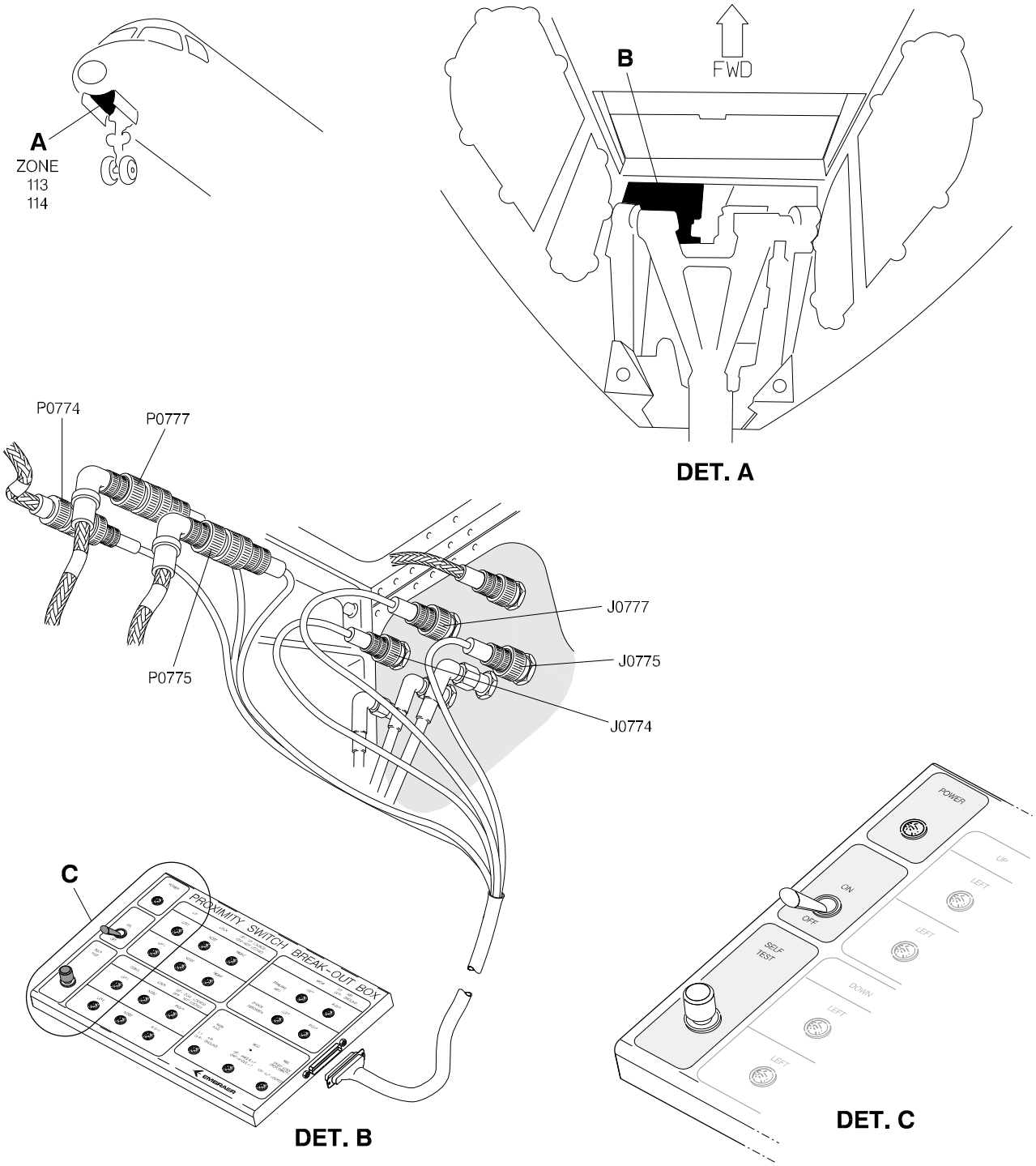
EFFECTIVITY: ALL

Connection of the BRAKE OUT BOX to the Sensor Connector in the NLG Bay
Figure 502



AMM320408.MCE

TASK 32-63-05-700-803-A
EFFECTIVITY: ALL

4. PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT

A. General

(1) This procedure gives the instructions to adjust the clearance (gap) between the proximity switch and its target, applicable to downlock, Air/ground (WOW), NLG door sequence, and NLG door open systems with adjusting tool (dummy sensor - GSE) instead of the proximity switch.

(2) It is necessary to lift the aircraft on jacks only to adjust the clearance (gap) between the Air/ground (WOW) proximity switch and its target.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 07-10-00-500-801-A/200	-
AMM TASK 07-10-00-500-802-A/200	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
AMM TASK 32-61-02-000-801-A/400	DOWNLOCK PROXIMITY SWITCH - REMOVAL
AMM TASK 32-61-02-400-801-A/400	DOWNLOCK PROXIMITY SWITCH - INSTALLATION
AMM TASK 32-63-01-000-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF MLG - REMOVAL
AMM TASK 32-63-01-400-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF MLG - INSTALLATION
AMM TASK 32-63-02-000-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF NLG - REMOVAL
AMM TASK 32-63-02-400-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF NLG - INSTALLATION
AMM TASK 32-63-03-000-801-A/400	DOOR-SEQUENCE PROXIMITY SWITCH OF THE NLG - REMOVAL
AMM TASK 32-63-03-400-801-A/400	DOOR-SEQUENCE PROXIMITY SWITCH OF THE NLG - INSTALLATION
AMM TASK 32-63-04-000-801-A/400	NLG DOOR-OPEN PROXIMITY SWITCH - REMOVAL
AMM TASK 32-63-04-400-801-A/400	NLG DOOR-OPEN PROXIMITY SWITCH - INSTALLATION
SB145-32-0036	-
SB145-32-0050	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 098	Adjusting Tool	To adjust the distance between proximity switch face and its target - PRE-MOD SB145-32-0050	
GSE 185	Wrench	To assemble and disassemble the target lever on the nose landing gear	
GSE 214	Adjusting Tool	To adjust the distance between proximity switch face and its target - POST-MOD SB145-32-0050	
GSE 136	Adjusting Tool	To adjust the distance between proximity switch face and its target	
Commercially available	Feeler gage	To adjust the distance between proximity switch face and its target	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MIL-S-81733, type II - 1/2	Sealant	AR
MS20995C32	Lockwire	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Landing gear

I. Preparation

SUBTASK 841-004-A

(1) On aircraft PRE-MOD SB145-32-0036, make sure that the pressure in hydraulic system No. 1 is fully released (AMM TASK 29-10-00-860-802-A/200).

(2) On aircraft POST-MOD SB145-32-0036, install the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

(3) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

(4) For the adjustment of the Air/ground (WOW) proximity switch lift the aircraft on jacks. Refer to AMM TASK 07-10-00-500-801-A/200.

(5) Remove the proximity switch from its support. For the position adjustment, refer to the applicable task as follows:

AMM TASK 32-61-02-000-801-A/400 - Downlock Proximity Switch - Removal.

AMM TASK 32-63-01-000-801-A/400 - MLG Air/ground (WOW) - Removal.

AMM TASK 32-63-02-000-801-A/400 - NLG Air/ground (WOW) - Removal.

AMM TASK 32-63-03-000-801-A/400 - NLG Door sequence - Removal.

AMM TASK 32-63-04-000-801-A/400 - NLG Door open - Removal.

J. Adjustment of the Clearance (Gap) Between Proximity Switch and its Target with Adjusting Tool (Dummy Sensor - GSE)

SUBTASK 710-004-A

(1) Downlock proximity switch. Refer to Figure 503, sheet 1 for NLG, and sheet 2 for MLG.

(a) Loosen the bolts (1) in such a manner as to allow the free adjustment of switch target (2) of the MLG or switch support (2) of the NLG, as applicable.

(b) Install the adjusting tool GSE 098 to the support of the proximity switch.

(c) Adjust the target (2) (MLG) or support (2) (NLG) position, as applicable so that adjusting tool face can touch the target.

NOTE: Do the steps (b), and (c) for both downlock proximity switches.

(d) Keep this position and tighten the bolts (1) to lock the target or support, as applicable.

(e) For MLG, apply a torque of 2.5 to 3.0 N.m (23 to 26 lb.in) on nut (3).

For NLG, apply a torque of 1.50 to 2.0 N.m (13 to 18 lb.in) on nut (3).

(f) Make sure that there is no clearance between the target and the adjusting tool.

(g) Remove the adjusting tool GSE 098.

(h) Install the proximity switch. Refer to AMM TASK 32-61-02-400-801-A/400.

(i) Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely, but, without clearance between the target and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(j) For MLG, install the cotter pin and apply sealant on the nut (3) and bolt (1) again.

For NLG, safe and apply sealant on the bolt (1) again.

(2) Main Landing Gear Air/ground (WOW) proximity switch. Refer to Figure 504 and Figure 505.

(a) Front proximity switch. Refer to Figure 504.

1 Remove the lockwire and loosen the bolts (2) in such a manner as to allow the free adjustment of the target (1).

2 For aircraft PRE-MOD SB145-32-0050, install the adjusting tool GSE 098 to the support of the proximity switch.

For aircraft POST-MOD SB145-32-0050, install the adjusting tool GSE 214 to the support of the proximity switch.

3 Adjust the target (1) position so that the adjusting tool face can touch the target.

4 Keep this position and tighten the bolts (2) to lock the target.

5 Apply a torque of 3.0 to 5.0 N.m (26 to 44 lb.in) on bolts (2).

6 Make sure that there is no clearance between the target and the adjusting tool.

7 Remove the adjusting tool.

8 Install the proximity switch. Refer to AMM TASK 32-63-01-400-801-A/400.

9 Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely, but, without clearance between the target and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in) for PRE-MOD SB145-32-0050 or 2.0 to 2.4 mm (0.078 to 0.094 in) for POST-MOD SB 145-32-0050.

10 Safety with lockwire and apply sealant on the bolts (2).

(b) Rear proximity switch. Refer to Figure 505.

1 Remove the cotter pin (1) and loosen the nut (2) in such a manner as to allow the free adjustment of support (3).

2 For aircraft PRE-MOD SB145-32-0050, install the adjusting tool GSE 098 to the support of the proximity switch (3).

For aircraft POST-MOD SB145-32-0050, install the adjusting tool GSE 214 to the support of the proximity switch (3).

3 Adjust the support (3) position so that the adjusting tool face can touch the shock absorber cylinder.

4 Keep this position and tighten the nut (2) to lock the support.

5 Apply a torque of 5.0 to 6.5 N.m (44 to 57 lb.in) on nut (2).

6 Make sure that there is no clearance between the shock absorber cylinder and the adjusting tool.

7 Remove the adjusting tool.

8 Install the proximity switch. Refer to AMM TASK 32-63-01-400-801-A/400.

9 Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely, but, without clearance between the shock absorber and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in) for PRE-MOD SB145-32-0050 or 2.0 to 2.4 mm (0.078 to 0.094 in) for POST-MOD SB 145-32-0050.

10 Install the cotter pin (1) and apply the sealant on the bolt head (4) and nut (2).

(3) Nose Landing Gear Air/ground (WOW) proximity switch. Refer to Figure 506.

(a) Make sure that the piston tube (1) is extended and at 0° position.

(b) Unfold tabs of the lock washer (3) and loosen the nut (4) with GSE 185 in such a manner as to allow the free adjustment of target lever (2).

(c) Install adjusting tool GSE 136 to the support of the proximity switch.

(d) Set the target lever to the inner edge of the GSE 136. Refer to Figure 506 DET. C.

(e) Keep this position and tighten the nut (4) with GSE 185 to lock the target lever (2).

(f) Apply a torque of 15 to 18 N.m (133 to 159 lb.in) on nut (4) with GSE 185.

NOTE: Make sure that the target lever does not turn when you apply the torque.

(g) Make sure that there is no clearance between the target lever and the adjusting tool.

(h) Bend the tabs of the lock washer (3) to lock the nut (4).

(i) Remove the adjusting tool GSE 136.

(j) Install the proximity switch. Refer to AMM TASK 32-63-02-400-801-A/400.

(k) Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the target and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(l) Apply the sealant on the lock washer tabs.

(4) Nose-landing-gear door-sequence proximity switch. Refer to Figure 507.

(a) Make sure that the hook of the NLG uplock box is in unlock position.

(b) Loosen the bolts (2) in such a manner as to allow the free adjustment of the support (1).

(c) Install adjusting tool GSE 098 to the support (1).

(d) Adjust the support position so that the adjusting tool face can touch the uplock box hook.

(e) Keep this position and tighten the bolts (2) to lock the support.

(f) Apply a torque of 2.5 to 3.0 N.m (22 to 26 lb.in) on bolts (2).

NOTE: Make sure that the support does not turn when you apply the torque.

(g) Make sure that there is no clearance between the uplock hook and the adjusting tool face.

(h) Remove the adjusting tool GSE 098.

(i) Install the proximity switch. Refer to AMM TASK 32-63-03-400-801-A/400.

(j) Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the uplock hook and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(k) Apply the sealant on the head of the bolts (2).

(5) Nose-landing-gear door-open proximity switch. Refer to Figure 508, and Figure 509.

(a) Disconnect the NLG door actuator rod end from the NLG doors, as follows: (See Figure 509).

1 Remove the cotter pin (2), nut (3), washer (4), bushing (5), and bolt (6).

2 Remove the actuator rod end (7) from the NLG door lugs (8) and attach the actuator housing with tape so that it stays safe during actuation.

NOTE: Do not disconnect the hydraulic lines (1).

(b) Retract the landing gear. Refer to AMM TASK 32-30-00-700-801-A/500. Keep the landing gear in the up position.

(c) Make sure that the pressure in hydraulic system 1 is fully released.

(d) On the circuit breaker panel, open the ELEC PUMP 1; CMD; and DOOR CMD circuit breakers and attach a DO-NOT-CLOSE tag to them.

(e) Attach a DO-NOT-ACTUATE tag on the free fall control lever and at the landing gear control lever.

(f) Loosen the bolts (1) in such a manner as to allow the free adjustment of the support (2).

(g) Install adjusting tool GSE 098 to the support (2).

(h) Manually close one side of the NLG door and adjust the support position so that the adjusting tool face can touch the target (3).

(i) Keep this position and tighten the bolts (1) to lock the support (2).

(j) Apply a torque of 2.5 to 3.0 N.m (22 to 26 lb.in) on bolt (1).

NOTE: Make sure that the support does not turn when you apply the torque.

(k) Make sure that there is no clearance between the target and the adjusting tool surface.

(l) Remove the adjusting tool GSE 098.

(m) Install the proximity switch. Refer to AMM TASK 32-63-04-400-801-A/400.

(n) Do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the target and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(o) Apply the sealant on the head of the bolts (1).

(p) Repeat the steps (f) thru (n) for both sides of the NLG door.

(q) Extend the landing gear. Refer to AMM TASK 32-30-00-700-801-A/500.

(r) On the circuit breaker panel, close the ELEC PUMP 1; CMD; and DOOR CMD circuit breakers and remove the DO-NOT-CLOSE tag from them.

(s) Remove the DO-NOT-ACTUATE tag from the free fall control lever and landing gear control lever.

(t) Do the steps (1) to (3) of the subtask I. "Preparation", again.

(u) Install the rod ends of the NLG door actuators on the NLG doors as follows: (See Figure 509).

1 Install the actuator rod end (7) between the NLG door lugs (8).

2 Install bolt (6), bushing (5), washer (4), nut (3), and cotter pin (2).

K. Follow-on

SUBTASK 842-004-A

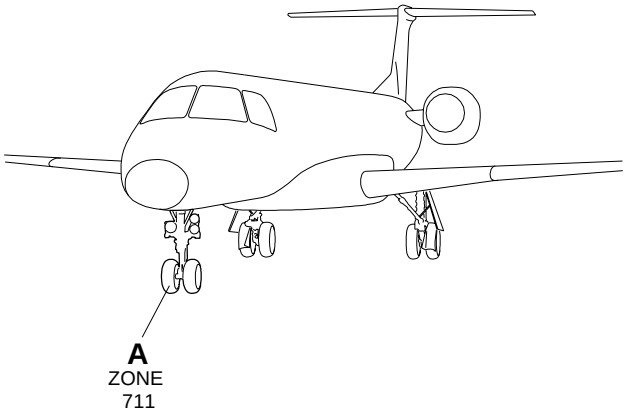
(1) On aircraft POST-MOD SB145-32-0036, remove the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

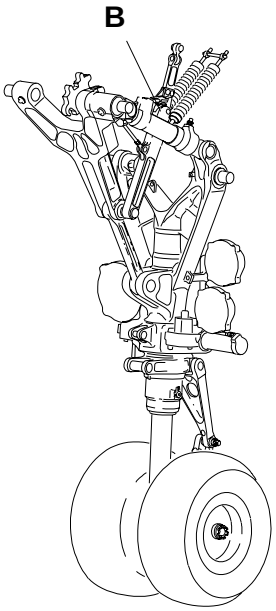
(2) For the adjustment of the Air/ground (WOW) proximity switch, lower the aircraft and remove the jacks. Refer to AMM TASK 07-10-00-500-802-A/200.

(3) De-energize the aircraft. Refer to AMM TASK 20-40-01-860-801-A/200.

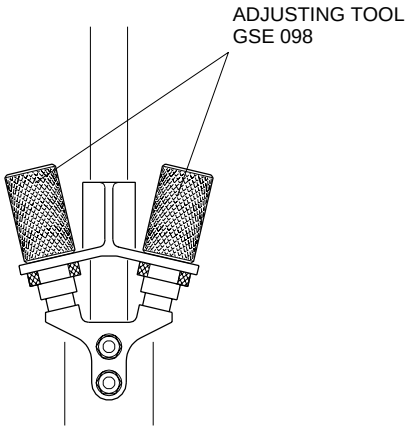
EFFECTIVITY: ALL

Downlock Proximity Switch - Clearance Adjustment
Figure 503 - Sheet 1

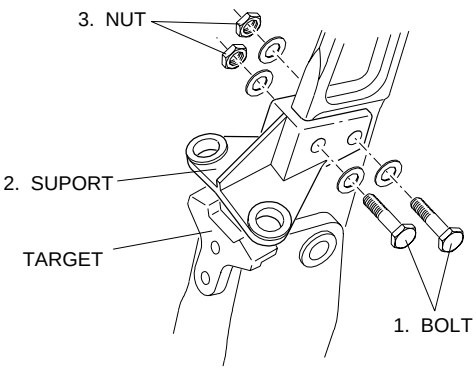




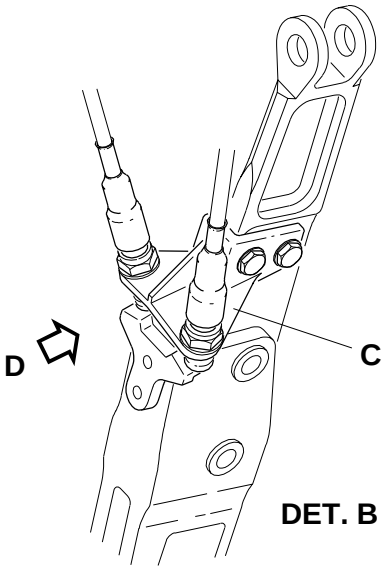
DET. A



VIEW. D



DET. C

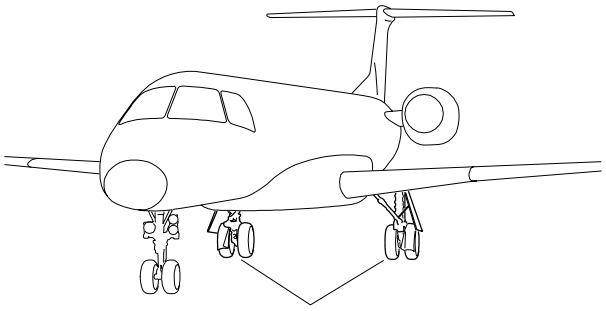


DET. B

145AMM320438.MCE A

EFFECTIVITY: ALL

Downlock Proximity Switch - Clearance Adjustment
Figure 503 - Sheet 2



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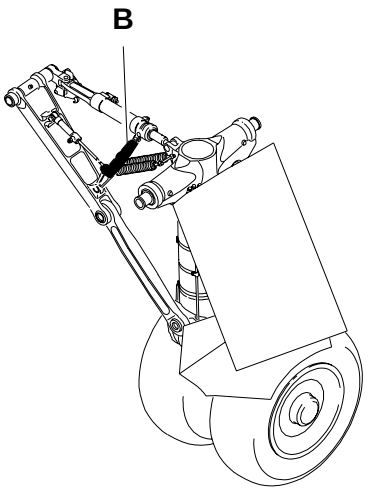
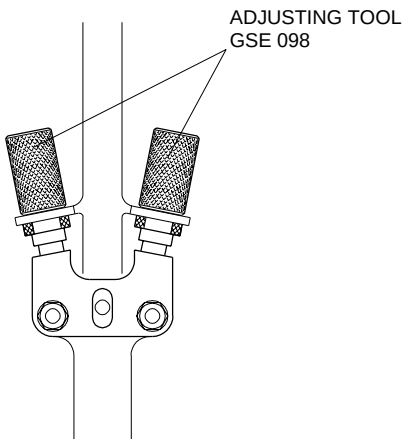
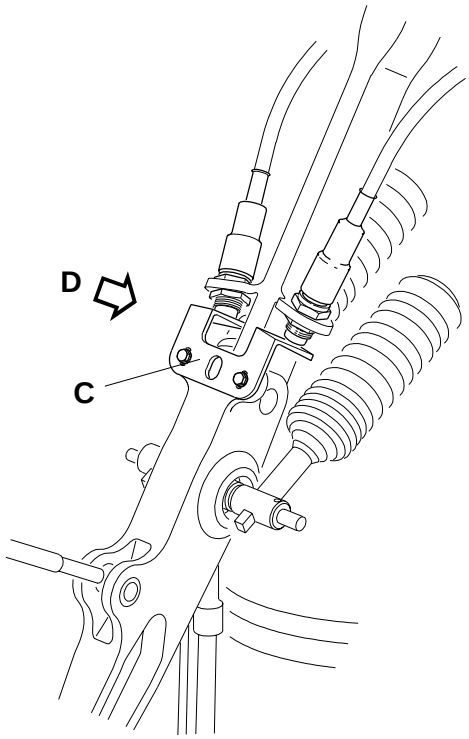


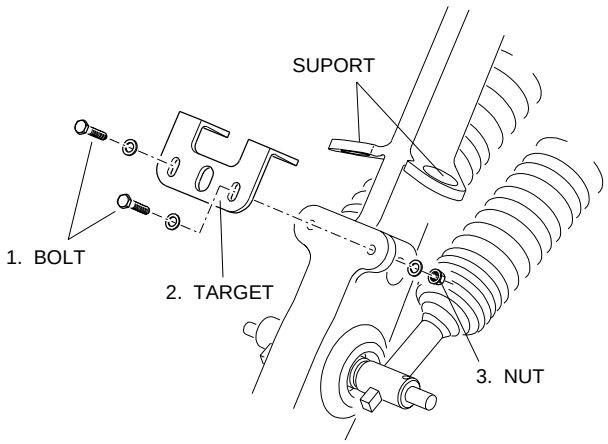
DET. A



VIEW. D



DET. B

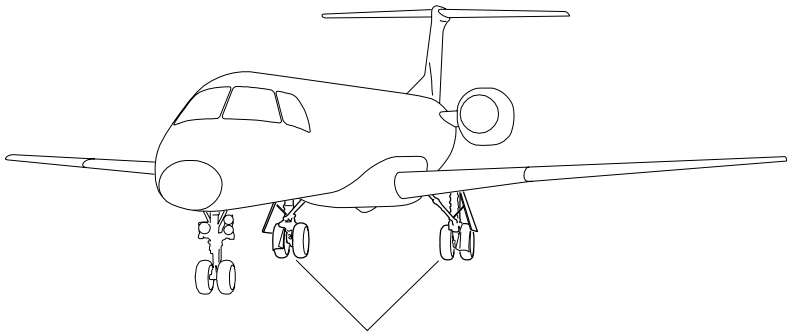


DET. C

145AMM320439.MCE A

EFFECTIVITY: ALL

Front Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 504



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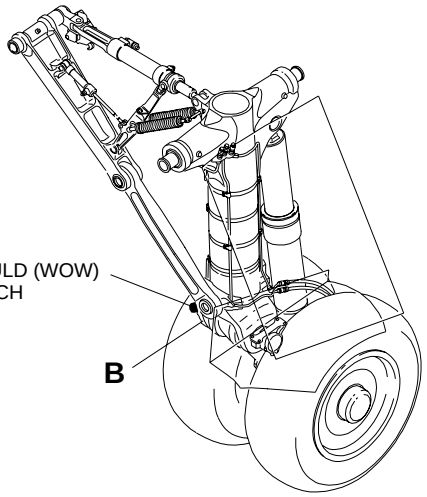
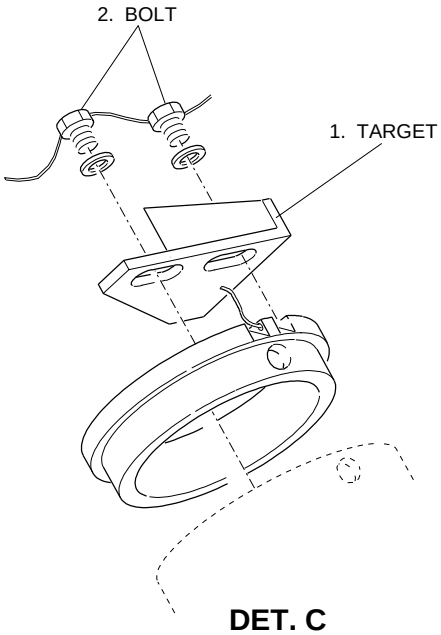
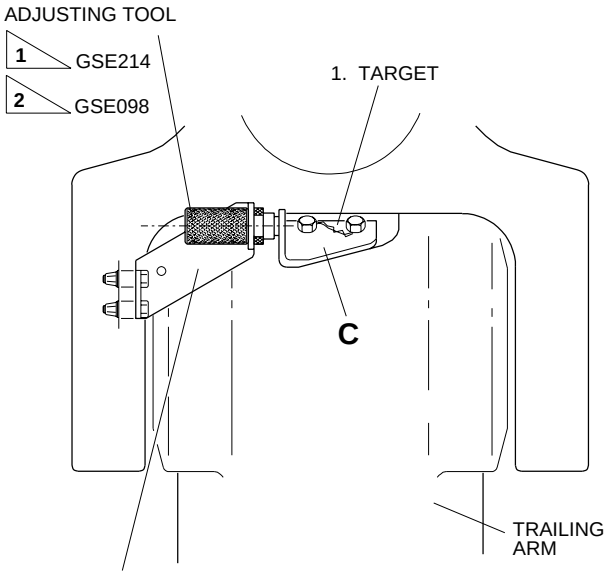


DET. A



DET. C



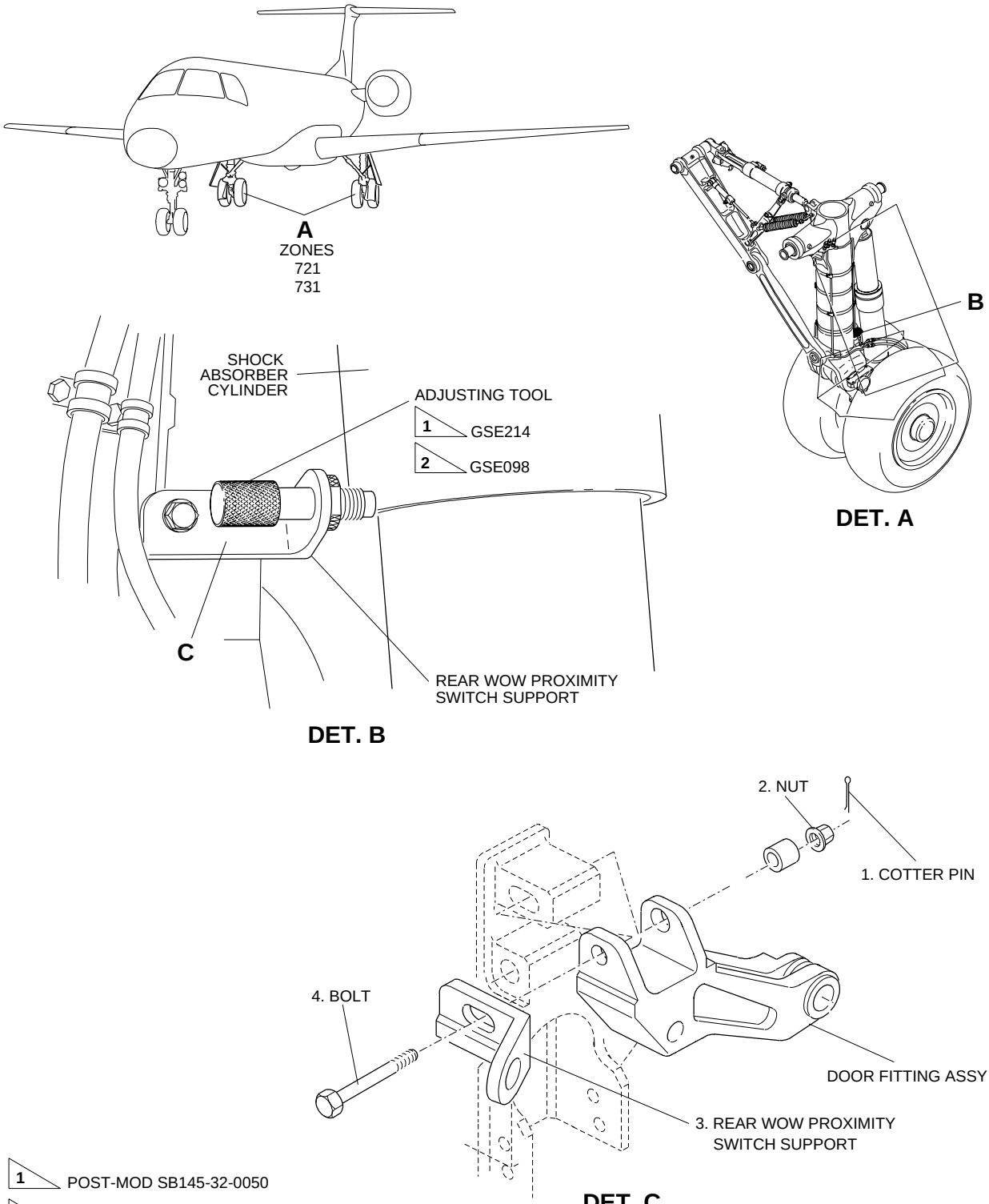
DET. B

1 POST-MOD SB145-32-0050
2 PRE-MOD SB145-32-0050

145AMM320335.MCE B

EFFECTIVITY: ALL

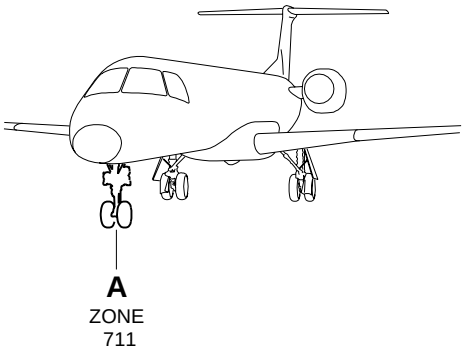
Rear Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 505

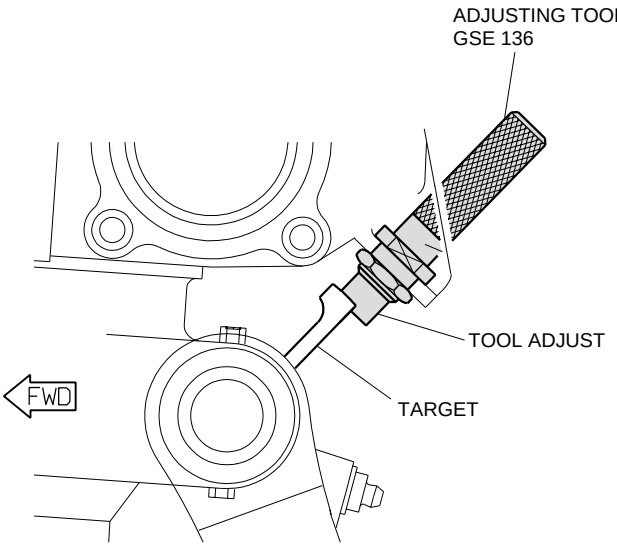


145AMM320332.MCE A

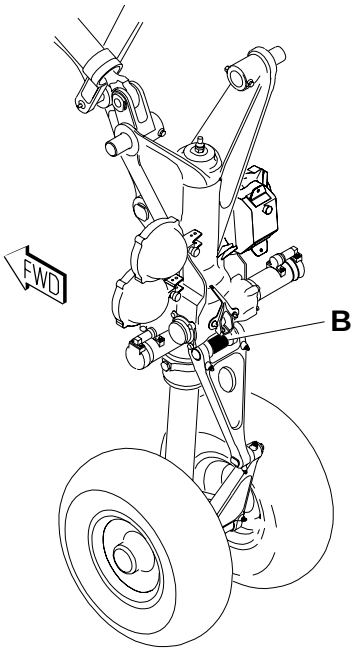
EFFECTIVITY: ALL

Nose-Landing-Gear Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 506

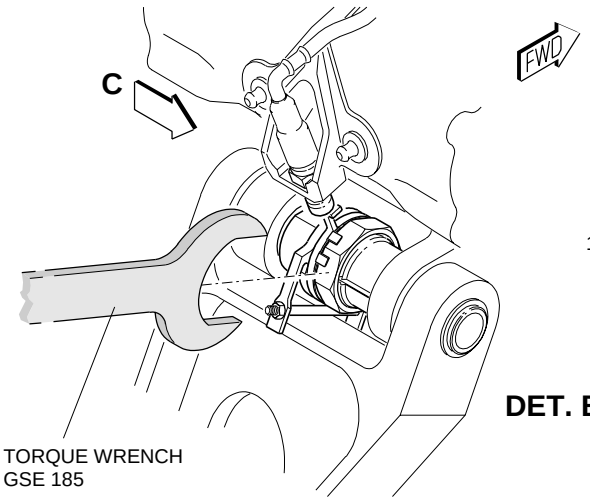




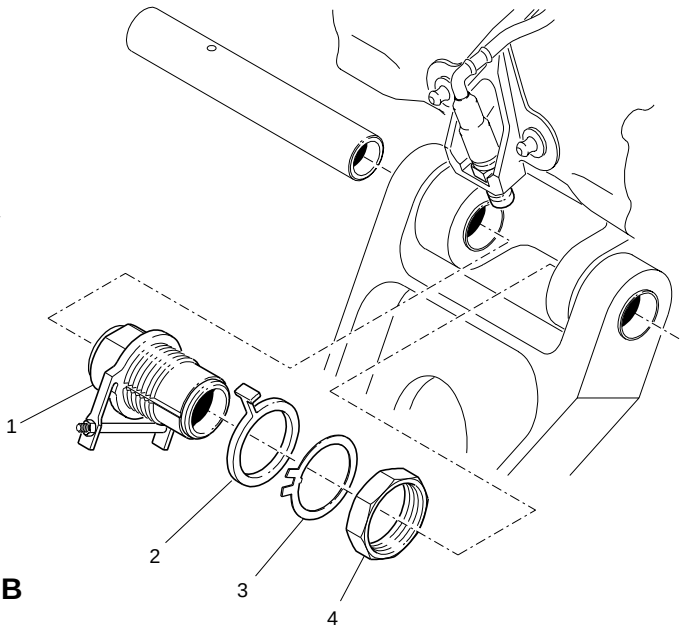
VIEW C



DET. A



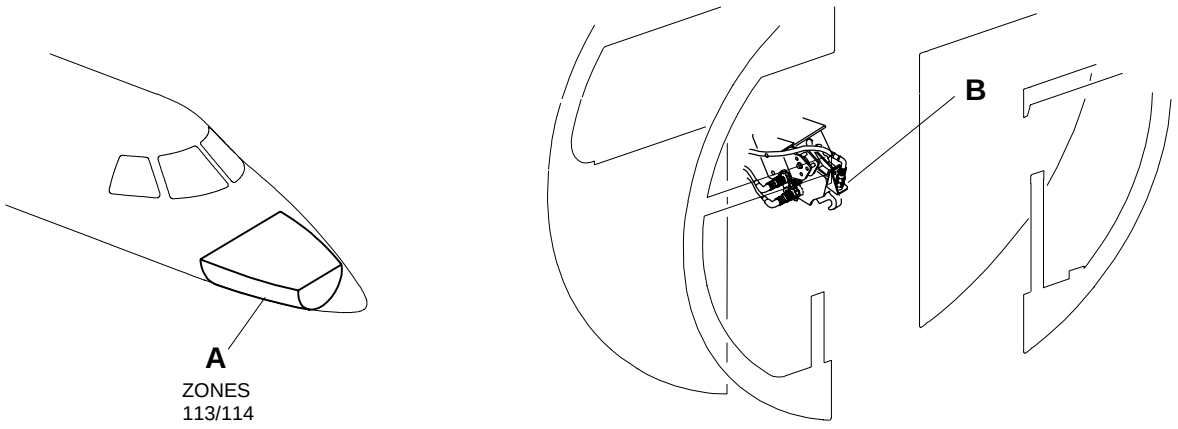
DET. B



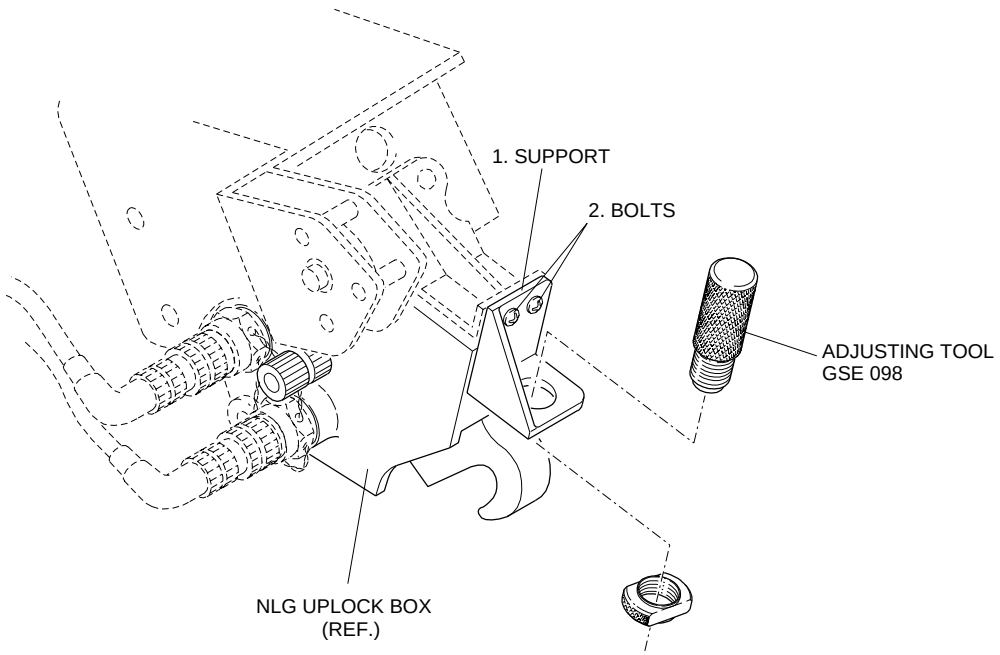
145AMM320330.MCE C

EFFECTIVITY: ALL

Nose-Landing-Gear Door-Sequence Proximity Switch - Clearance Adjustment
Figure 507



DET. A

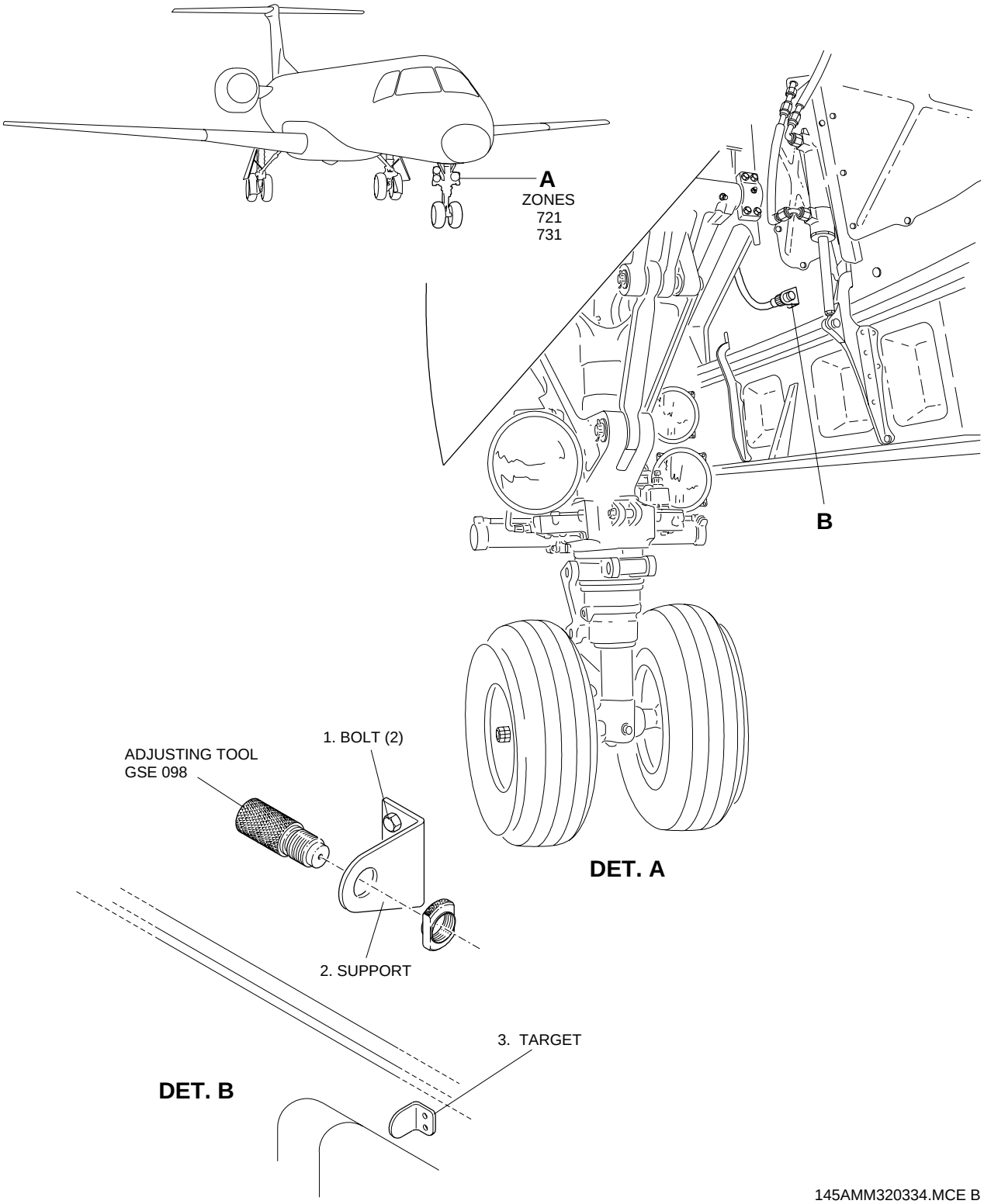


DET. B

145AMM320313.MCE B

EFFECTIVITY: ALL

Nose-Landing-Gear Door-Open Proximity Switch - Clearance Adjustment
Figure 508

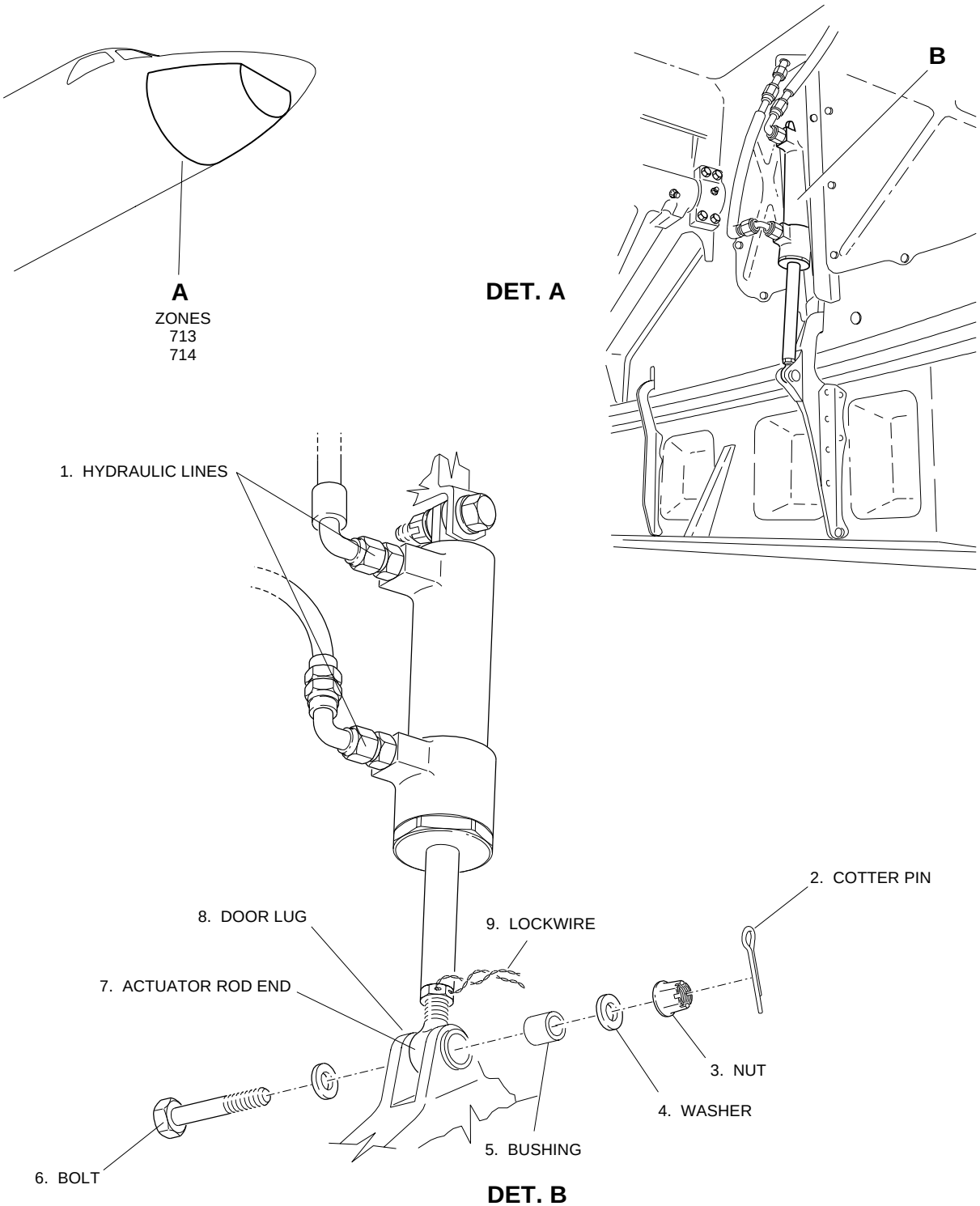


145AMM320334.MCE B

EFFECTIVITY: ALL

NLG Door Actuator - Disconnection

Figure 509



EM145AMM320672A.DGN

TASK 32-63-05-700-804-A
EFFECTIVITY: ALL

5. PROXIMITY SWITCH (SENSOR) - CLEARANCE (GAP) ADJUSTMENT - ALTERNATIVE PROCEDURE

A. General

(1) This procedure gives the instructions to adjust the clearance (gap) between the proximity switch and its target, applicable to downlock, Air/ground (WOW), NLG door sequence, and NLG door open systems with the aid of the feeler gage directly between the proximity switch and its mounting target.

(2) it is necessary to lift the aircraft on jacks only to adjust the clearance (gap) between the Air/ground (WOW) proximity switch and its target.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 07-10-00-500-801-A/200	-
AMM TASK 07-10-00-500-802-A/200	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
SB145-32-0036	-
SB145-32-0050	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 185	Wrench	To assemble and disassemble the target lever on the nose landing gear	
Commercially available	Feeler gage	To adjust the distance between proximity switch face and its target	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MIL-S-81733, type II - 1/2	Sealant	AR
MS20995C32	Lockwire	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Landing gear

I. Preparation

SUBTASK 841-005-A

(1) On aircraft PRE-MOD SB145-32-0036, make sure that the pressure in hydraulic system No. 1 is fully released (AMM TASK 29-10-00-860-802-A/200).

(2) On aircraft POST-MOD SB145-32-0036, install the safety pin of the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

(3) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200).

(4) For the adjustment of the Air/ground (WOW) proximity switch, lift the aircraft on jacks. Refer to AMM TASK 07-10-00-500-801-A/200.

(5) Remove the proximity switch from its support.

J. Adjustment of the Clearance (Gap) Between Proximity Switch and its Target with Feeler Gage

SUBTASK 710-005-A

(1) Downlock proximity switch. Refer to Figure 510, sheet 1 for NLG, and sheet 2 for MLG.

(a) Loosen the bolts (1) in such a manner as to allow the free adjustment of switch target (2) of the main landing gear or switch support (2) of the nose landing gear, as applicable.

(b) Prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

(c) Adjust the target (2) or support (2) position, as applicable, with the feeler gage.

(d) Do the step (c) for both downlock proximity switches.

(e) Keep this position and tighten the bolts (1) to lock the target (2) or support (2), as applicable.

(f) For MLG, apply a torque of 2.5 to 3.0 N.m (23 to 26 lb.in) on nut (3).

For NLG, apply a torque of 1.5 to 2.0 N.m (13 to 18 lb.in) on nut (3).

(g) After you apply torque, do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the target and proximity switch face. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(h) For NLG, safety bolts (1) with lockwire.

For MLG , install the cotter pin on nut (3).

(i) Apply sealant on the nut (3) and bolt (1) again.

(2) Main Landing Gear Air/ground (WOW) proximity switch. Refer to Figure 511 and Figure 512.

(a) Front proximity switch. Refer to Figure 511.

1 Remove the lockwire and loosen the bolts (2) in such a manner as to allow the free adjustment of the target (1).

2 For aircraft PRE-MOD SB145-32-0050, prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

For aircraft POST-MOD SB145-32-0050, prepare the feeler gage to get a thickness of 2.2 mm ± 0.2 (0.086 in ± 0.008).

3 Adjust the target (1) position with the feeler gage.

4 Keep this position and tighten the bolts (2) to lock the target.

5 Apply a torque of 3.0 to 5.0 N.m (26 to 44 lb.in) on bolts (2).

6 After you apply torque, do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the target and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in) for PRE-MOD SB145-32-0050 or 2.0 to 2.4 mm (0.078 to 0.094 in) for POST-MOD SB 145-32-0050.

7 Safety with lockwire and apply sealant on the bolts (2).

(b) Rear proximity switch. Refer to Figure 512.

1 Remove the cotter pin (1) and loosen the nut (2) in such a manner as to allow the free adjustment of support (3).

2 For aircraft PRE-MOD SB145-32-0050, prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

For aircraft POST-MOD SB145-32-0050, prepare the feeler gage to get a thickness of 2.2 mm ± 0.2 (0.086 in ± 0.008).

3 Adjust the support (3) position with a feeler gage.

4 Keep this position and tighten the nut (2) to lock the support.

5 Apply a torque of 5.0 to 6.5 N.m (44 to 57 lb.in) on nut (2).

6 After you apply torque, do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the shock absorber and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in) for PRE-MOD SB145-32-0050 or 2.0 to 2.4 mm (0.078 to 0.094 in) for POST-MOD SB 145-32-0050.

7 Install the cotter pin (1) and apply the sealant on the bolt head (4) and nut (2).

(3) Nose Landing Gear Air/ground (WOW) proximity switch. Refer to Figure 513.

(a) Make sure that the piston tube (1) is extended and at 0° position.

(b) Unfold tabs of the lock washer (3) and loosen the nut (4) with GSE 185 in such a manner as to allow the free adjustment of target lever (2).

(c) Prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

(d) Adjust the target lever (2) position with the feeler gage.

NOTE: Observe the correct position of the target lever related to the proximity switch. Refer to Figure 513, view D.

(e) Keep this position and tighten the nut (4) to lock the target lever (2).

(f) Apply a torque of 15 to 18 N.m (133 to 159 lb.in) on nut (4) with GSE 185.

NOTE: Make sure that the target lever does not turn when you apply the torque.

(g) After you apply torque, do the check of the gap with the feeler gage and check the target position.

NOTE:
- During this check, make sure that the feeler gage moves freely but without clearance between the target and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).
- Make sure that the target is in the correct position. Refer to Figure 513 view D.

(h) Bend the tabs of the lock washer (3) to lock the nut (4).

(i) Apply the sealant on the lock washer tabs.

(4) Nose-landing-gear door-sequence proximity switch. Refer to Figure 514.

(a) Make sure that the hook of the NLG uplock box is in unlock position. If necessary, command the landing gear free-fall lever in the cockpit.

(b) Loosen the bolts (2) in such a manner as to allow the free adjustment of the support (1).

(c) Prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

(d) Adjust the support position with the feeler gage.

(e) Keep this position and tighten the bolts (2) to lock the support (1).

(f) Apply a torque of 2.5 to 3.0 N.m (22 to 26 lb.in) on bolts (2).

NOTE: Make sure that the support does not turn when you apply the torque.

(g) After you apply torque, do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely, but, without clearance between the uplock hook and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(h) Apply the sealant on the head of the bolts (2).

(5) Nose-landing-gear door-open proximity switch. Refer to Figure 515 and Figure 509.

(a) Disconnect the NLG door actuator rod end from the NLG doors, as follows: (See Figure 509).

1 Remove the cotter pin (2), nut (3), washer (4), bushing (5), and bolt (6).

2 Remove the actuator rod end (7) from the NLG door lugs (8) and attach the actuator housing with tape so that it stays safe during actuation.

NOTE: Do not disconnect the hydraulic lines (1).

(b) Retract the landing gear. Refer to AMM TASK 32-30-00-700-801-A/500. Keep the landing gear in the up position.

(c) Make sure that the pressure in hydraulic system 1 is fully released.

(d) On the circuit breaker panel, open the ELEC PUMP 1; CMD; and DOOR CMD circuit breakers and attach a DO-NOT-CLOSE tag to them.

(e) Attach a DO-NOT-ACTUATE tag on the free fall control lever and on landing gear control lever.

(f) Loosen bolts (1) in such a manner as to allow the free adjustment of the support (2).

(g) Prepare the feeler gage to get a thickness of 1.5 mm ± 0.2 (0.060 in ± 0.008).

(h) Manually close one side of the NLG door and adjust the support position with the feeler gage.

(i) Keep this position and tighten the bolts (1) to lock the support (2).

(j) Apply a torque of 2.5 to 3.0 N.m (22 to 26 lb.in) on bolt (1).

NOTE: Make sure that the support does not turn when you apply the torque.

(k) After you apply torque, do the check of the gap with the feeler gage.

NOTE: During this check, make sure that the feeler gage moves freely but without clearance between the target (3) and proximity switch surface. Keep the gap between 1.3 to 1.7 mm (0.052 to 0.068 in).

(l) Apply the sealant on the head of the bolts (1).

(m) Repeat the steps (f) thru (l) for the other NLG door.

(n) On the circuit breaker panel, close the ELEC PUMP 1; CMD; and DOOR CMD circuit breakers and remove the DO-NOT-CLOSE tag from them.

(o) Remove the DO-NOT-ACTUATE tag from the free fall control lever and landing gear control lever.

(p) Extend the landing gear. Refer to AMM TASK 32-30-00-700-801-A/500.

(q) Do the steps (1) to (3) of the subtask I. "Preparation", again.

(r) Install the rod ends of the NLG door actuators on the NLG doors as follows: (See Figure 509).

1 Install the actuator rod end (7) between the NLG door lugs (8).

2 Install bolt (6), bushing (5), washer (4), nut (3), and cotter pin (2).

K. Follow-on

SUBTASK 842-005-A

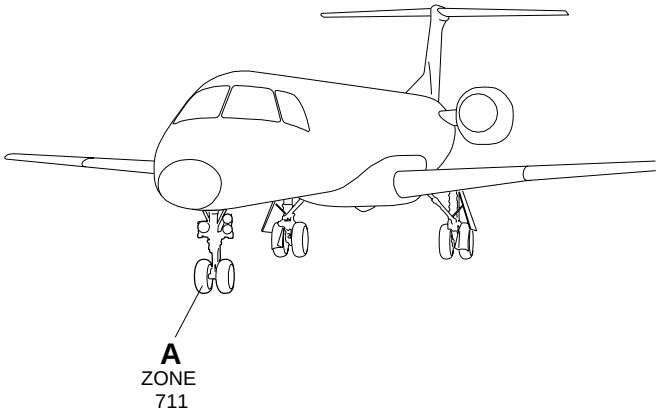
(1) On aircraft POST-MOD SB145-32-0036, remove the safety pin from the NLG door solenoid valves (AMM TASK 32-00-02-910-801-A/200).

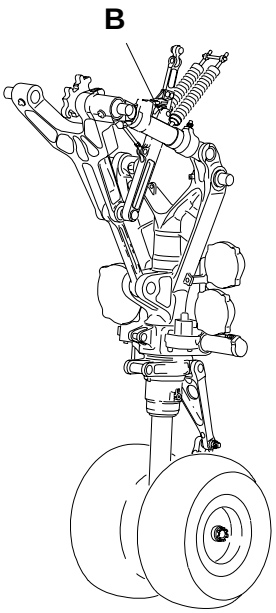
(2) For the adjustment of the Air/ground (WOW) proximity switch, lower the aircraft and remove the jacks. Refer to AMM TASK 07-10-00-500-802-A/200.

(3) De-energize the aircraft. Refer to AMM TASK 20-40-01-860-801-A/200.

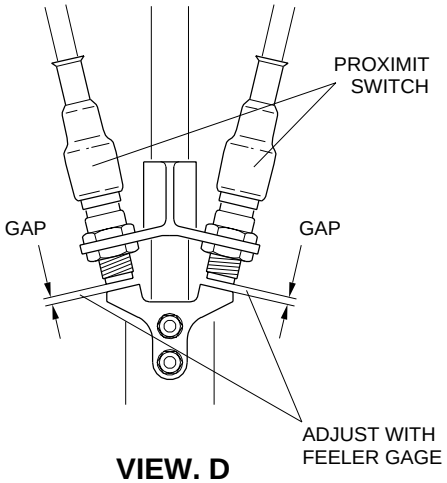
EFFECTIVITY: ALL

Downlock Proximity Switch - Clearance Adjustment
Figure 510 - Sheet 1

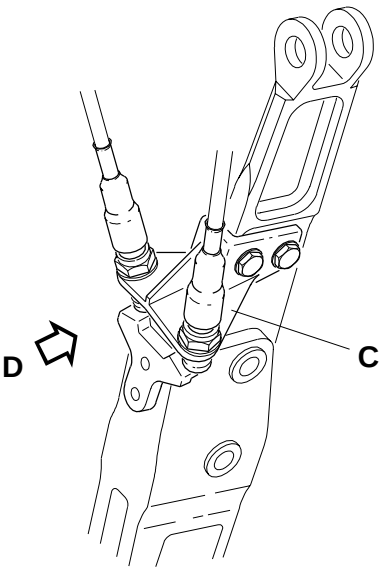




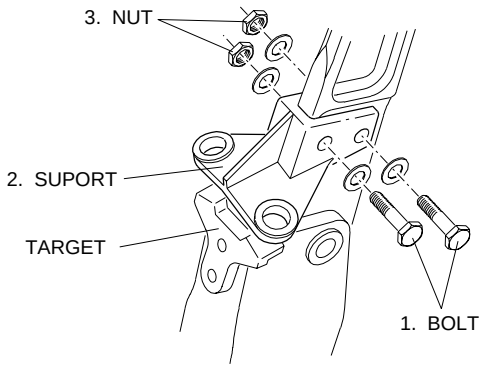
DET. A



VIEW. D



DET. B

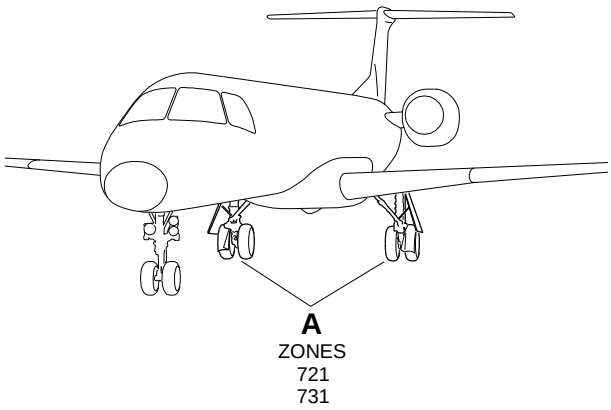


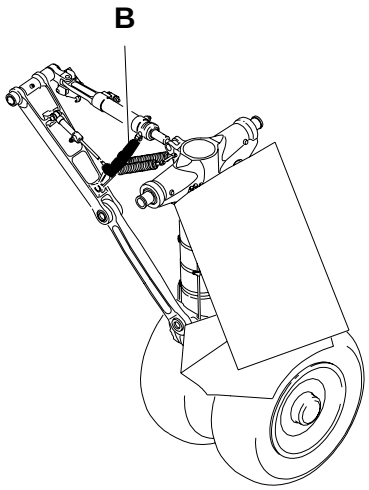
DET. C

145AMM320369.MCE B

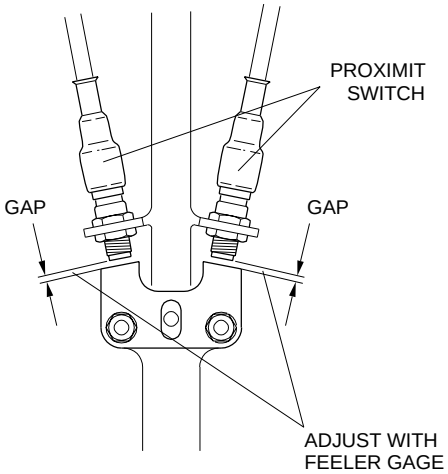
EFFECTIVITY: ALL

Downlock Proximity Switch - Clearance Adjustment
Figure 510 - Sheet 2

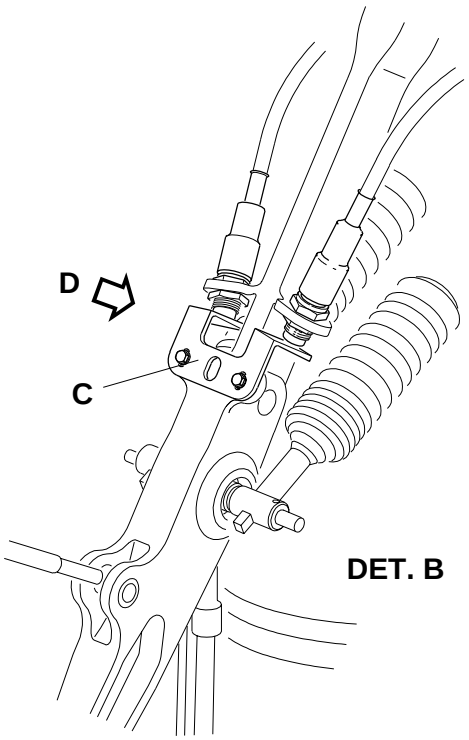




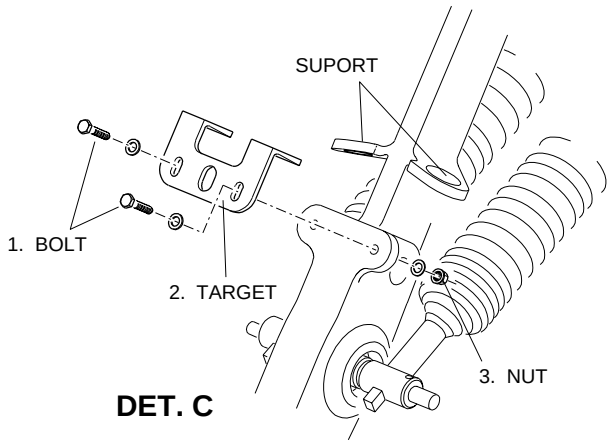
DET. A



VIEW. D



DET. B

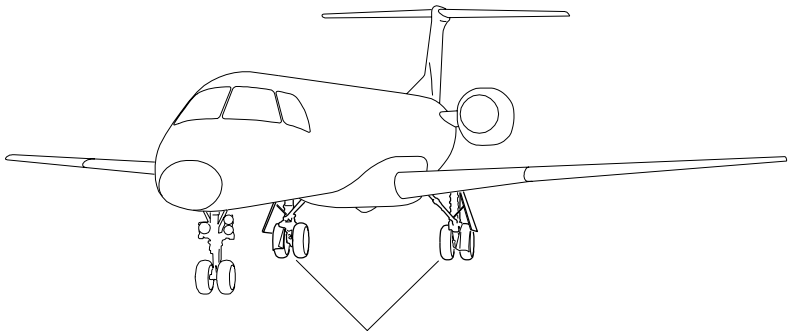


DET. C

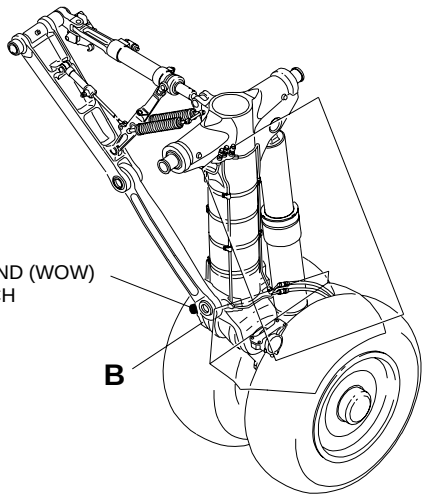
145AMM320370.MCE B

EFFECTIVITY: ALL

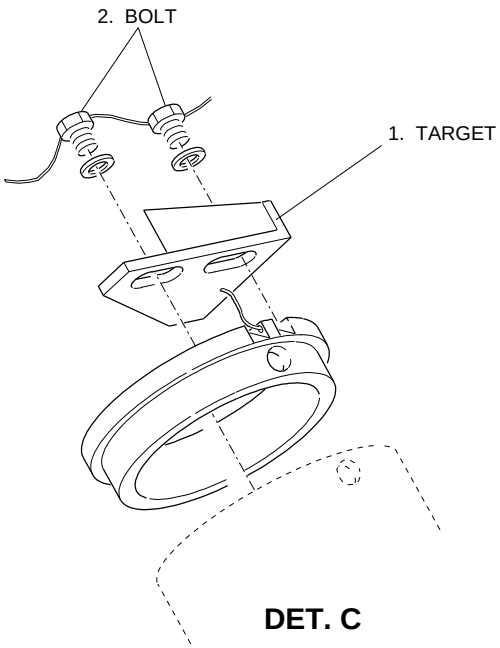
Front Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 511



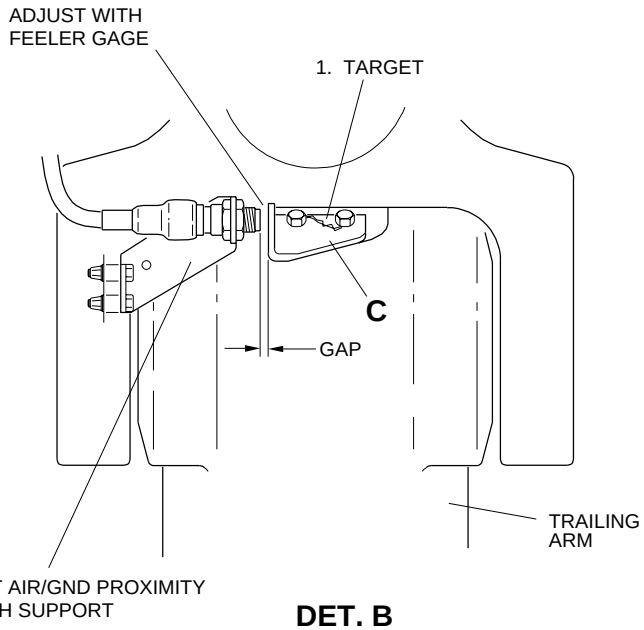
A
ZONES
721
731



DET. A



DET. C

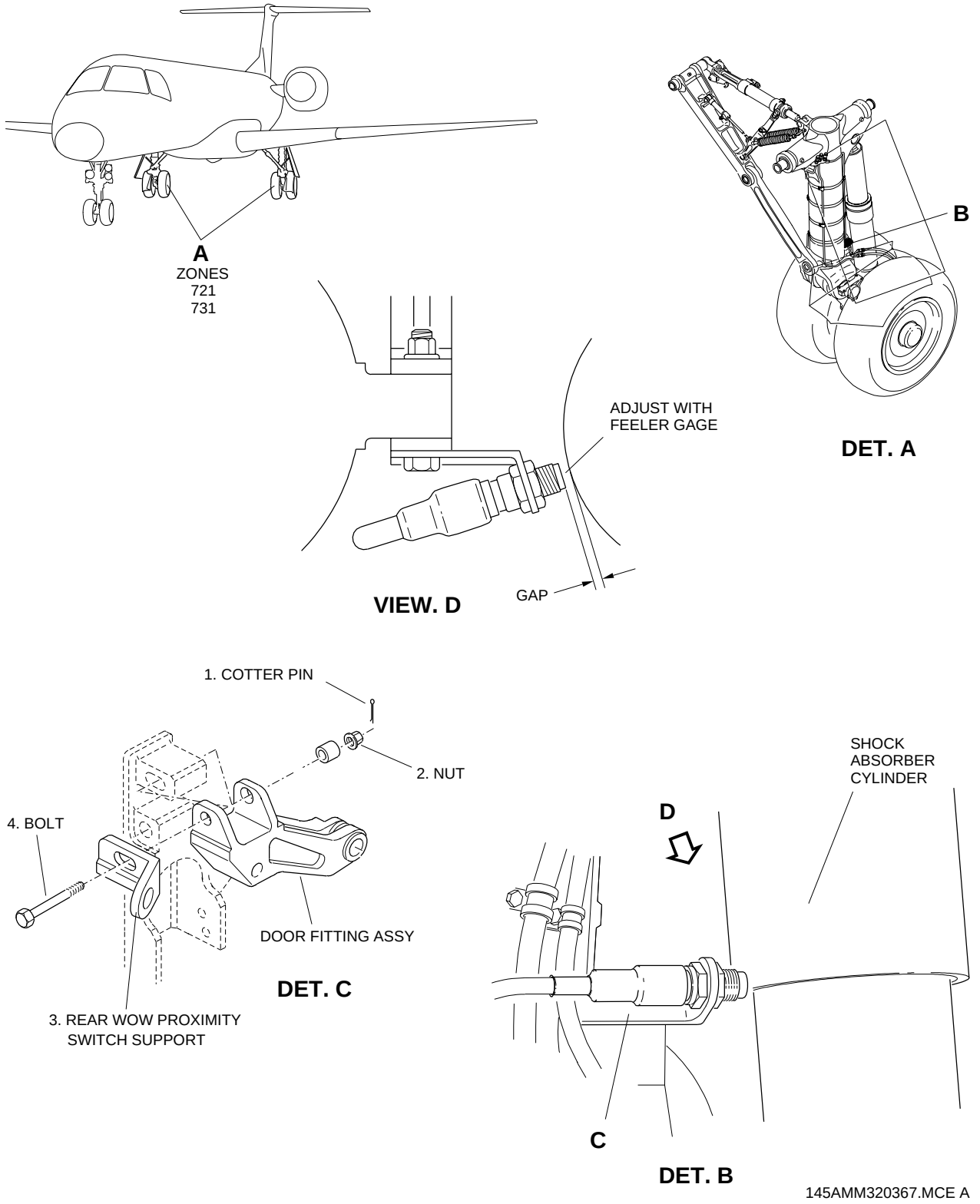


DET. B

145AMM320368.MCE A

EFFECTIVITY: ALL

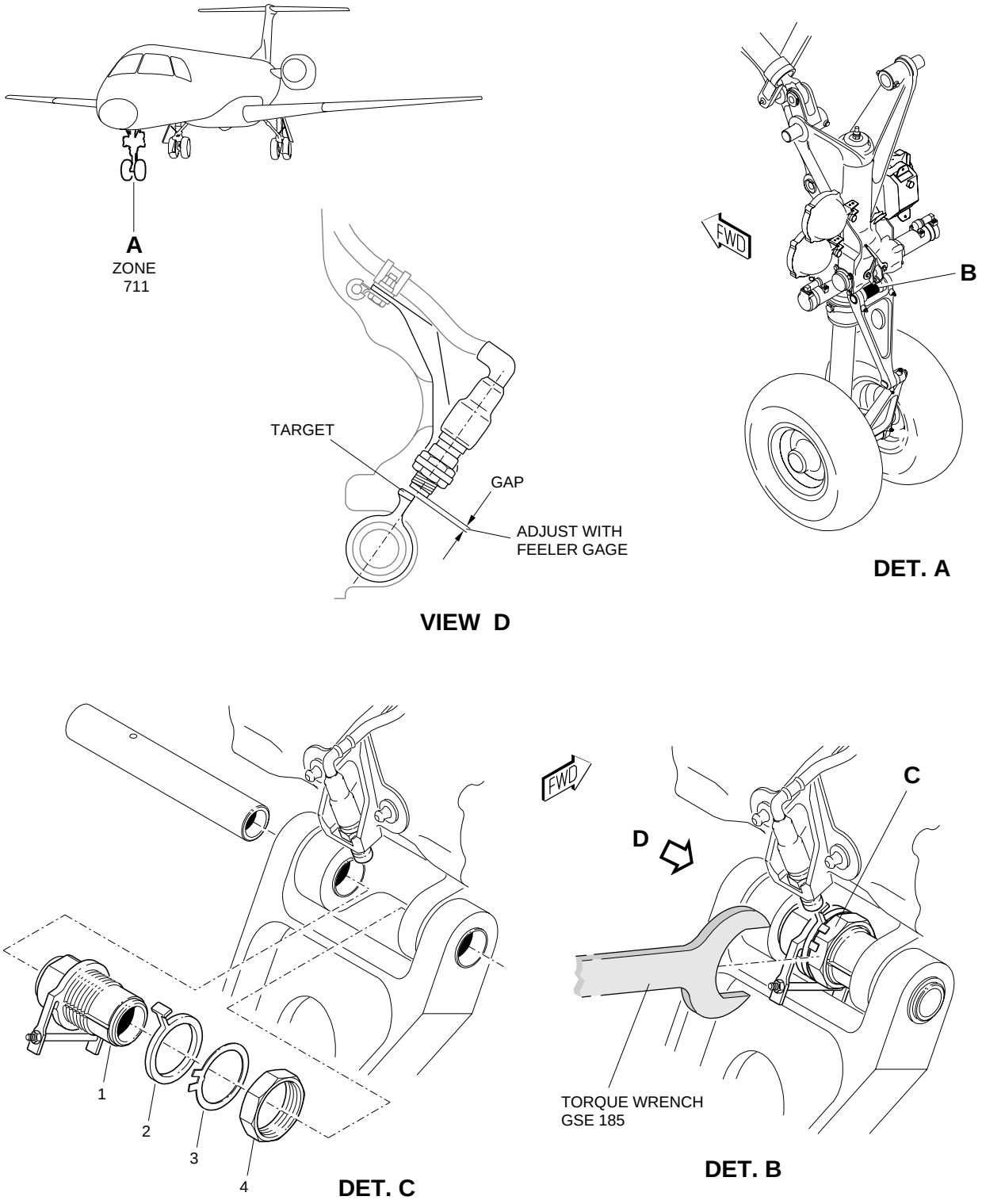
Rear Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 512



145AMM320367.MCE A

EFFECTIVITY: ALL

Nose-Landing-Gear Air/Ground (WOW) Proximity Switch - Clearance Adjustment
Figure 513

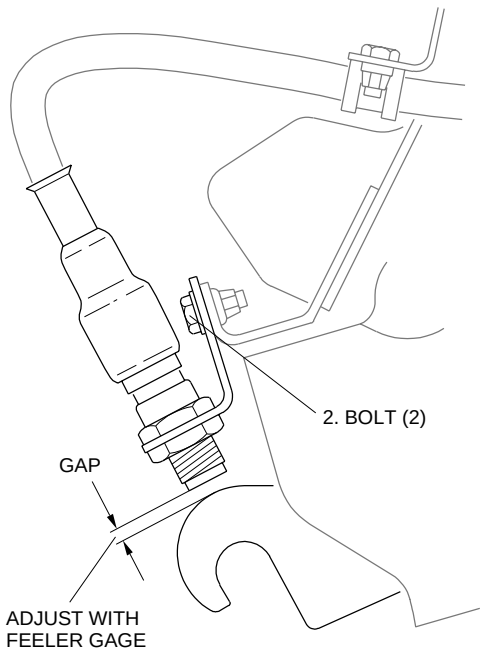


145AMM320366.MCE A

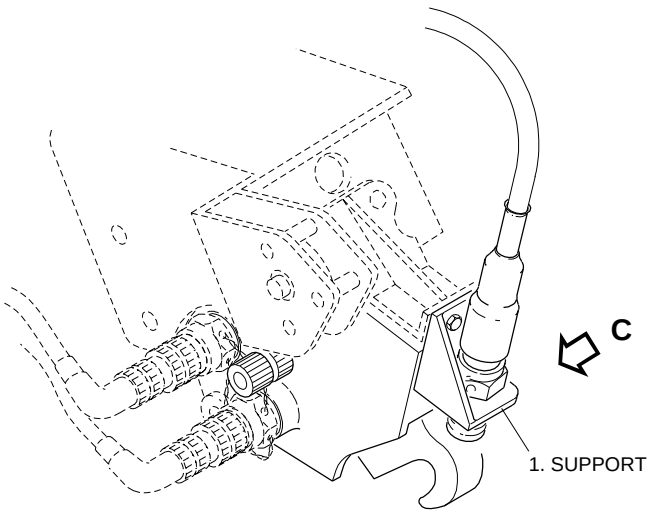
EFFECTIVITY: ALL

Nose-Landing-Gear Door-Sequence Proximity Switch - Clearance Adjustment
Figure 514

DET. A



VIEW. C



DET. B

145AMM320365.MCE A

EFFECTIVITY: ALL

Nose-Landing-Gear Door-Open Proximity Switch - Clearance Adjustment
Figure 515