



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

LANDING-GEAR PROXIMITY SWITCH - REPAIR

EFFECTIVITY: ALL

1. General

- A. This section gives the procedure to repair the proximity switch.
- B. This procedure is applicable to the uplock/dowlock landing gear indication, steering system, nose landing-gear door, air/ground (WOW) system proximity switches, and ground spoiler system.
- 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
32-63-05-300-801-A	PROXIMITY SWITCH - REPAIR	ALL



# AIRCRAFT MAINTENANCE MANUAL

TASK 32-63-05-300-801-A

EFFECTIVITY: ALL

## 2. PROXIMITY SWITCH - REPAIR

### A. General

- (1) This task gives the procedure to repair a proximity switch.
- (2) The repair of the proximity switch consists of the replacement of the outer and inner seals and connector cleaning.

### B. References

REFERENCE	DESIGNATION
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 32-63-05-700-801-A/500	PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK
AMM TASK 32-63-05-700-802-A/500	PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK - ALTERNATIVE PROCEDURE
SB145-32-0036	-
SWPM 20-50-00	-

### C. Zones and Accesses

Not Applicable

### D. Tools and Equipment

Not Applicable

### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Brush, Soft Bristled (nonmetal)	To clean the connector and contacts	AR
Commercially available	Cloth, Lint-Free	To dry parts after cleaning	AR
Commercially available	Low-pressure compressed air	To dry parts after cleaning	AR
Commercially available	Rubber Gloves	Protection for the hands	AR
Commercially available	Goggles	Protection for the eyes	1
Commercially available	Tweezer	To remove the seals	1



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

(Continued)

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Dental Pick	To remove the seals	1

## F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
TT-I-735	Isopropyl Alcohol	AR
MIL-L-87177 Type 1, Grade B	Super CORR A anticorrosive Lektro-Tech	AR
ASTM-D-329	Acetone	AR
ASTM-D-740	Methyl-Ethyl-Ketone (MEK)	AR

## G. Expandable Parts

Not Applicable

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Landing Gear System

## I. Preparation

## SUBTASK 841-002-A

- (1) On the circuit breaker panel, open the AIR/GND A, AIR/GND B, AIR/GND C, AIR/GND D, IND 1 and IND 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (2) On the overhead panel, make sure that the BATT 1 and BATT 2 switches are set at OFF, and place a DO-NOT SET-AUTO tag on BATT 1 and BATT 2 switches.
- (3) Make sure that the safety pins of the landing gear are installed. Refer to [AMM TASK 32-00-01-910-801-A/200](#).
- (4) For 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](#)).
- (5) For aircraft POST-MOD [SB145-32-0036](#), install the safety pin of the NLG doors solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).

## J. Repair of the Proximity Switch (Figure 801)

## SUBTASK 340-002-A

**CAUTION:** THE OUTER AND INNER SEALS ARE MADE OF THIN MATERIAL. BE CAREFUL NOT TO DAMAGE THE SEALS DURING REMOVAL AND INSTALLATION.

**CAUTION:** PROXIMITY SWITCH ASSEMBLIES HAVE ELECTROSTATIC-SENSITIVE COMPONENTS. USE CORRECT ELECTROSTATIC PRECAUTIONS TO HANDLE PROXIMITY SWITCH ASSEMBLIES. DAMAGE CAN OCCUR FROM ELECTROSTATIC DISCHARGE.

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

- (1) For connectors that already have a heat-shrinkable boot, remove it with a cutting tool.
- (2) Remove the defective outer seal (1) and inner seal (2) with tweezers or a dental pick. ([Figure 801](#)).
- (3) Clean the proximity switch connector (3) and remove contamination with a nonmetal brush and alcohol. ([Figure 801](#)).
- (4) Dry with low pressure (less than 25 psi) compressed air or a clean, lint-free cloth. Make sure that the connector surfaces are completely dry.
  - (a) If, after the component is properly cleaned and dry, there is visual evidence of corrosion, it can be necessary to replace the proximity switch.

**NOTE:** The corrosion preventive compound is not designed to remove corrosion. It will clean and revitalize a suspect connector but cannot replace damaged areas.

**WARNING:** DO NOT LET ANTICORROSIVE COMPOUND LEKTRO-TECH SUPER CORR-A GET IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE VAPORS FROM THE COMPOUND. PUT ON A PROTECTIVE SPLASH GOGGLE AND GLOVES. DO THE WORK IN AN AREA THAT HAS A GOOD AIRFLOW. KEEP THE COMPOUND AWAY FROM SPARKS, FLAME, AND HEAT. THE COMPOUND IS A POISONOUS AND FLAMMABLE SUBSTANCE AND CAN CAUSE INJURY TO YOUR SKIN, EYES, AND RESPIRATORY TRACT.

- (5) Apply corrosion preventive compound SUPER CORR A to the connector and pin surfaces.
  - (a) For aerosol, apply two coats if necessary (wait 30 seconds after you apply the first coat to apply the second).
  - (b) Apply the compound for a uniform coverage of the connector and pins from a distance of 25 - 30 cm (10 - 12 in).

**NOTE:** There is not a definition for the exact amount of spray to be applied, but the product should cover the contacts without excess spray. Excess spray does not cause any damage to the connector contacts and/or rubber, but can collect dirt.

**WARNING:** BE CAREFUL WHEN YOU USE THE METHYL-ETHYL-KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL-ETHYL-KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.

- (c) You can remove excess spray with acetone or MEK.
- (d) Apply corrosion preventive compound SUPER CORR A again as necessary.

- (6) Make sure that the new seals (Inner (2) and outer (1)) surfaces are completely dry and cleaned. If necessary, clean the new seals surfaces with alcohol and dry with a clean lint-free cloth. ([Figure 801](#)).
- (7) Install a new inner seal (2) to the proximity switch (3) with tweezers. Refer to Figure 801 to align pins A, B and C.
- (8) Install a new outer seal (1) so that the smooth surface is visible when you look into the proximity switch connector (3). ([Figure 801](#)).
- (9) Make sure the inner and outer seals were not damaged during steps (7) and (8).

**WARNING:** DO NOT LET ANTICORROSIVE COMPOUND LEKTRO-TECH SUPER CORR-A GET IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE VAPORS FROM THE COMPOUND. PUT ON A PROTECTIVE SPLASH GOGGLE AND GLOVES. DO THE WORK IN AN AREA THAT HAS A GOOD AIRFLOW. KEEP THE COMPOUND AWAY FROM SPARKS, FLAME, AND HEAT. THE COMPOUND IS A POISONOUS AND FLAMMABLE SUBSTANCE AND CAN CAUSE INJURY TO YOUR SKIN, EYES, AND RESPIRATORY TRACT.

- (10) Apply corrosion preventive compound SUPER CORR A to the connector, pins, and seals again, as given in step (5).

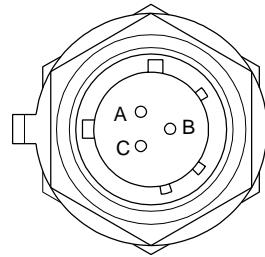
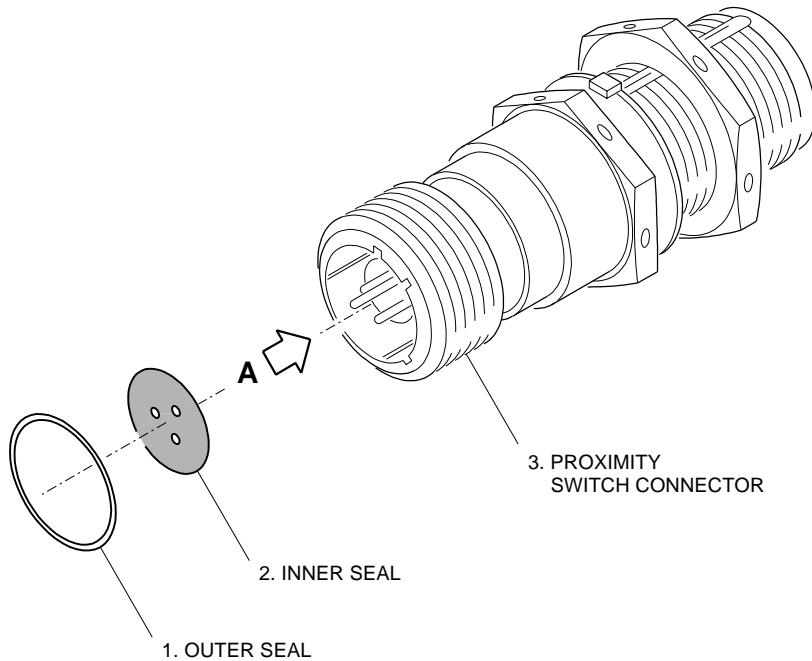
K. Follow-on

SUBTASK 842-002-A

**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.

- (1) Connect the electrical connector to the proximity switch. Refer to SWPM 20-50-00.
- (2) Do the proximity switch protection ([AMM TASK 32-60-00-910-801-A/200](#)).
- (3) On the overhead panel, set BATT 1 and BATT 2 switches to AUTO and remove the DO-NOT-SET-AUTO tag from them.
- (4) On the circuit breaker panel, close the AIR/GND A, AIR/GND B, AIR/GND C, AIR/GND D, IND 1 and IND 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (5) Remove safety pin of the NLG door solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).
- (6) Do the functional check of the proximity switch ([AMM TASK 32-63-05-700-801-A/500](#)) or ([AMM TASK 32-63-05-700-802-A/500](#)).

**EFFECTIVITY: ALL**  
 Proximity Switch - Repair  
 Figure 801



**VIEW A**

PIN	FUNCTION
A	PWR
B	RTN
C	OUT

EM145AMM320608A.DGN