



AIRCRAFT MAINTENANCE MANUAL

RUDDER PEDAL POTENTIOMETER - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the rudder pedal potentiometer.
- 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
32-50-02-000-801-A	RUDDER PEDAL POTENTIOMETER - RE- ALL MOVAL	
32-50-02-400-801-A	RUDDER PEDAL POTENTIOMETER - IN- ALL STALLATION	
32-50-02-000-802-A	RUDDER PEDAL POTENTIOMETER ASSY ALL - REMOVAL	
32-50-02-400-802-A	RUDDER PEDAL POTENTIOMETER ASSY ALL - INSTALLATION	



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 32-50-02-000-801-A

EFFECTIVITY: ALL

2. RUDDER PEDAL POTENTIOMETER - REMOVAL

A. General

- (1) This task gives the procedures to remove the rudder pedal potentiometer.

B. References

REFERENCE	DESIGNATION
AMM TASK 25-11-01-000-801-A/400	PILOT SEAT - REMOVAL
AMM TASK 25-12-06-000-801-A/400	PEDAL ASSEMBLY LINING - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223	223HZ	Cockpit, LH side

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	In the cockpit

I. Preparation

SUBTASK 841-002-A

- (1) On the circuit breaker panel, open the STEER circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (2) Remove the pilot seat ([AMM TASK 25-11-01-000-801-A/400](#)).
- (3) Remove the pedal assembly shroud ([AMM TASK 25-12-06-000-801-A/400](#)).

J. Removal ([Figure 401](#))

SUBTASK 020-002-A

- (1) Disconnect electrical connector P7034 (6).



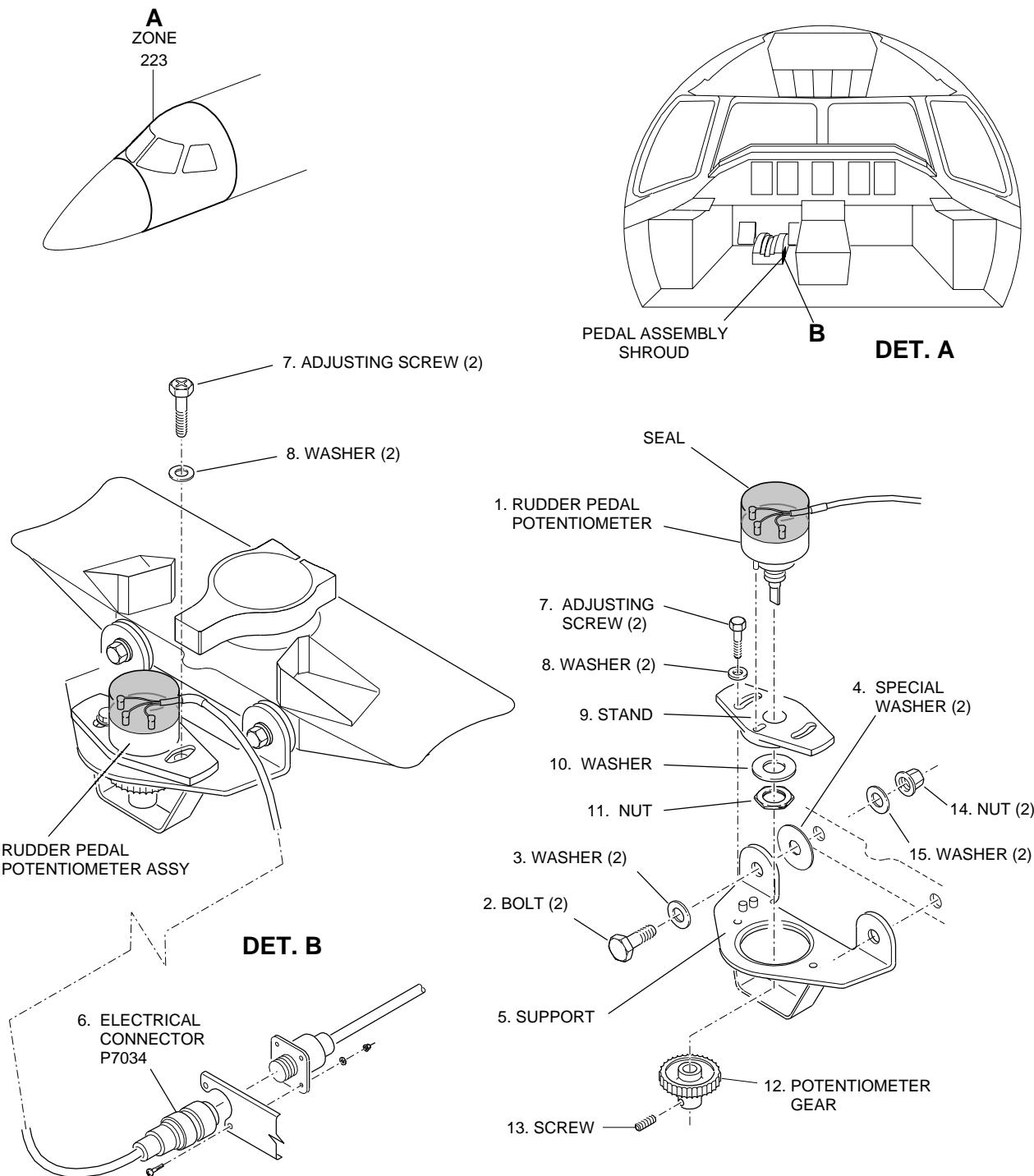
AIRCRAFT MAINTENANCE MANUAL

- (2) Remove the assembly of the rudder pedal potentiometer. For this, untighten the bolts (2), washers (3), and special washers (4) and remove the rudder pedal potentiometer assembly.
- (3) Disassemble the rudder pedal potentiometer assembly. Remove the screw (13), potentiometer gear (12), adjusting bolt (7), and washer (8). Untighten the nut (11) and remove the washer (10).

EFFECTIVITY: ALL

Rudder Pedal Potentiometer - Removal/Installation

Figure 401



145AMM320266.MCE D



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 32-50-02-400-801-A

EFFECTIVITY: ALL

3. RUDDER PEDAL POTENTIOMETER - INSTALLATION

A. General

(1) This task gives the procedures to install the rudder pedal potentiometer.

B. References

REFERENCE	DESIGNATION
AMM TASK 25-11-01-000-801-A/400	PILOT SEAT - REMOVAL
AMM TASK 25-12-06-000-801-A/400	PEDAL ASSEMBLY LINING - REMOVAL
AMM TASK 32-50-00-700-803-A/500	NOSE WHEEL STEERING SYSTEM ACTUATION - OPERATIONAL CHECK
AMM TASK 32-50-02-700-801-A/500	RUDDER PEDAL POTENTIOMETER - ADJUSTMENT/TEST
WM 32-53-50	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223	223HZ	Cockpit, LH side

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

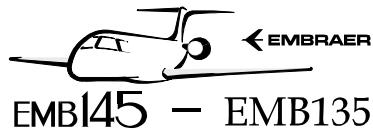
SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-G-23827, Type I DEF STAN 91-53	Aeroshell Grease 7	AR
MIL-PRF-8516, Type II Class 2	Sealant CS-3100	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	In the cockpit



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

I. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Assemble the rudder pedal potentiometer assembly. Put the rudder pedal potentiometer (1) in position. Install and tighten the washer (10) and nut (11) which attach the potentiometer (1) to the stand (9).

NOTE: It is necessary to preassemble the new rudder pedal potentiometer. Solder the wire of connector P7034 and seal it with sealant CS-3100. Refer to WM 32-53-50.

- (2) Install the stand (9) on the support (5), tighten the washer (8) and bolt (7), and install the potentiometer gear (12). Tighten the screw (13).
- (3) Turn the potentiometer gear clockwise and counterclockwise and let the potentiometer gear stay in a position at which the resistance difference ($r_{BC} - r_{BA}$) is less than or equal to 30 ohms.

CAUTION: • THE SPECIAL WASHERS ARE LAMINATED TO PERMIT THE CORRECT ADJUSTMENT OF THE GEAR OF THE RUDDER PEDAL POTENTIOMETER WITH THE RACK.
• MAKE SURE THAT THE POTENTIOMETER GEAR AND THE RACK ENGAGE CORRECTLY. THEY CANNOT FORCE EACH OTHER AND CANNOT PERMIT RELATIVE MOVEMENT.

- (4) Install the rudder pedal potentiometer assembly in position. Tighten the special washers (4), washers (3), and bolts (2).

NOTE: After installation of the rudder pedal potentiometer assembly, lubricate the potentiometer gear (12) with Aeroshell Grease 7.

J. Follow-on

SUBTASK 842-002-A

- (1) Adjust the rudder pedal potentiometer ([AMM TASK 32-50-02-700-801-A/500](#)).
- (2) Install the pedal assembly shroud ([AMM TASK 25-12-06-000-801-A/400](#)).
- (3) Install the pilot seat ([AMM TASK 25-11-01-000-801-A/400](#)).
- (4) On the circuit breaker panel, close the STEER circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (5) Do the operational check of the nose-wheel steering system ([AMM TASK 32-50-00-700-803-A/500](#)).



AIRCRAFT
MAINTENANCE MANUAL

TASK 32-50-02-000-802-A

EFFECTIVITY: ALL

4. RUDDER PEDAL POTENTIOMETER ASSY - REMOVAL

A. General

- (1) This task gives the procedures to remove the rudder pedal potentiometer assy.

B. References

REFERENCE	DESIGNATION
AMM TASK 25-11-01-000-801-A/400	PILOT SEAT - REMOVAL
AMM TASK 25-12-06-000-801-A/400	PEDAL ASSEMBLY LINING - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223	223HZ	Cockpit, LH side

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	In the cockpit

I. Preparation

SUBTASK 841-003-A

- (1) On the circuit breaker panel, open the STEER circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (2) Remove the pilot seat ([AMM TASK 25-11-01-000-801-A/400](#)).
- (3) Remove the pedal assembly shroud ([AMM TASK 25-12-06-000-801-A/400](#)).

J. Removal ([Figure 402](#))

SUBTASK 020-003-A

- (1) Disconnect the electrical connector P7034 (7).



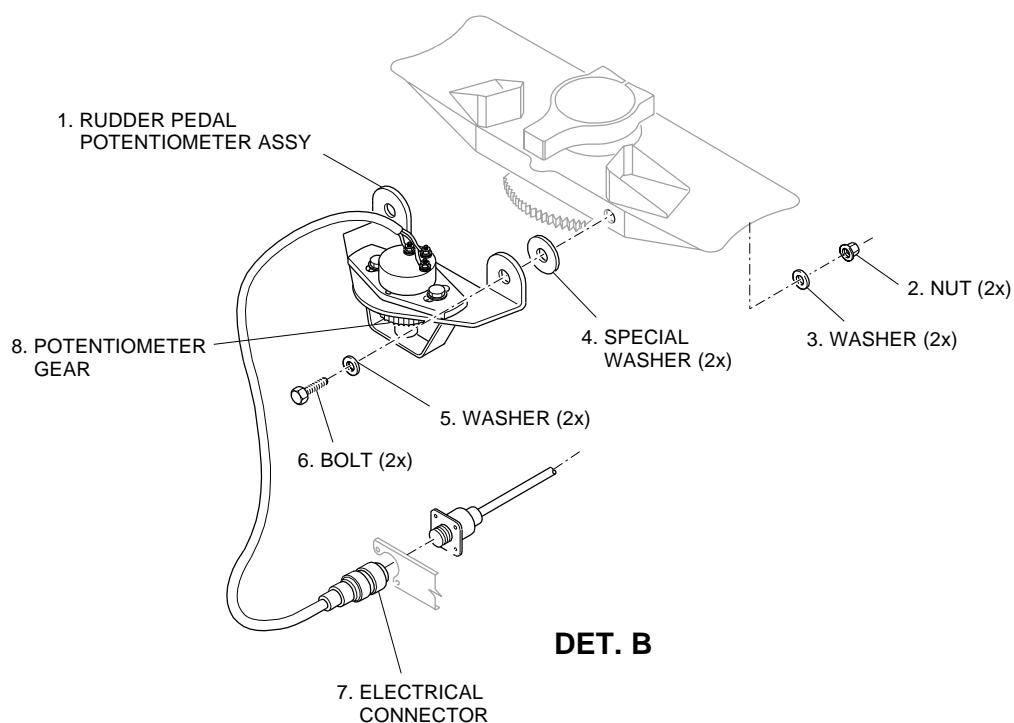
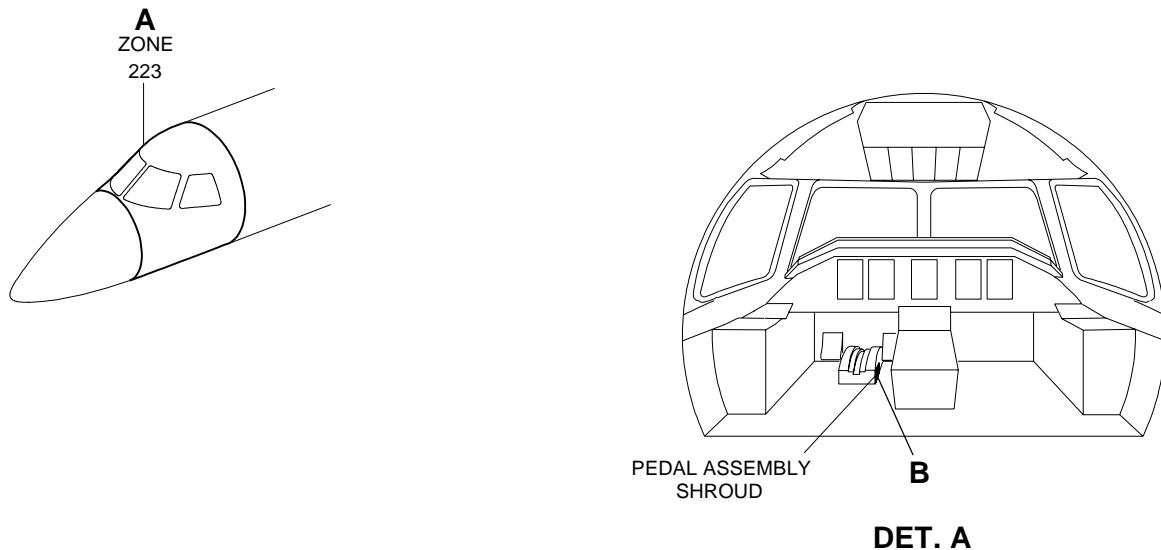
AIRCRAFT
MAINTENANCE MANUAL

- (2) Remove the rudder pedal potentiometer assy (1). For this, untighten the bolts (6), washers (5), special washers (4), washers (3) and nuts (2) and remove the rudder pedal potentiometer assy (1).

EFFECTIVITY: ALL

Rudder Pedal Potentiometer Assy - Removal/Installation

Figure 402



EM145AMM320656B.DGN



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 32-50-02-400-802-A

EFFECTIVITY: ALL

5. RUDDER PEDAL POTENTIOMETER ASSY - INSTALLATION

A. General

- (1) This task gives the procedures to install the rudder pedal potentiometer assy.

B. References

REFERENCE	DESIGNATION
AMM TASK 25-11-01-000-801-A/400	PILOT SEAT - REMOVAL
AMM TASK 25-12-06-000-801-A/400	PEDAL ASSEMBLY LINING - REMOVAL
AMM TASK 32-50-00-700-803-A/500	NOSE WHEEL STEERING SYSTEM ACTUATION - OPERATIONAL CHECK
AMM TASK 32-50-02-700-801-A/500	RUDDER PEDAL POTENTIOMETER - ADJUSTMENT/TEST

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223	223HZ	Cockpit, LH side

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-G-23827, Type I DEF STAN 91-53	Aeroshell Grease 7	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	In the cockpit

I. Installation (Figure 402)

SUBTASK 420-003-A

- (1) Turn the potentiometer gear clockwise and counterclockwise and let the potentiometer gear stay in a position at which the resistance difference ($r_{BC} - r_{BA}$) is less than or equal to 30 ohms.

- CAUTION:**
- THE SPECIAL WASHERS ARE LAMINATED TO PERMIT THE CORRECT ADJUSTMENT OF THE GEAR OF THE RUDDER PEDAL POTENTIOMETER WITH THE RACK.
 - MAKE SURE THAT THE POTENTIOMETER GEAR AND THE RACK ENGAGE CORRECTLY. THEY CANNOT FORCE EACH OTHER AND CANNOT PERMIT RELATIVE MOVEMENT.

- (2) Install the rudder pedal potentiometer assy (1) in position. Tighten the bolts (6), washers (5), special washers (4), washers (3) and nuts (2).

NOTE: After installation of the rudder pedal potentiometer assy (1), lubricate the potentiometer gear (8) with Aeroshell Grease 7.

J. Follow-on

SUBTASK 842-003-A

- (1) Adjust the rudder pedal potentiometer ([AMM TASK 32-50-02-700-801-A/500](#)).
- (2) Install the pedal assembly shroud ([AMM TASK 25-12-06-000-801-A/400](#)).
- (3) Install the pilot seat ([AMM TASK 25-11-01-000-801-A/400](#)).
- (4) On the circuit breaker panel, close the STEER circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (5) Do the operational check of the nose-wheel steering system ([AMM TASK 32-50-00-700-803-A/500](#)).

