



# AIRCRAFT MAINTENANCE MANUAL

## VACUUM PUMP - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

### 1. General

- A. This section gives the procedures to remove and install the vacuum pump.
- B. The vacuum pump is installed at the external bottom surface of center fuselage III, inside the wing-to-fuselage fairing.
- 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
21-31-06-000-801-A	VACUUM PUMP - REMOVAL	ALL
21-31-06-400-801-A	VACUUM PUMP - INSTALLATION	ALL



EMB145 - EMB135

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TASK 21-31-06-000-801-A

EFFECTIVITY: ALL

2. VACUUM PUMP - REMOVAL

A. General

(1) This task gives the procedures to remove the vacuum pump.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
191	191EL	Left side of the forward wing-to-fuselage fairing
191	191FR	Right side of the forward wing-to-fuselage fairing
191	191GL	Bottom of the forward wing-to-fuselage fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Plastic or wooden spatula	To remove the sealant	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	A - Does the task	External bottom surface of center fuselage III, inside the wing-to-fuselage fairing
1	B - Helps technician A	Under the passenger cabin floor

I. Preparation ([Figure 401](#))

**SUBTASK 841-002-A**

- (1) On the overhead circuit breaker panel, open the circuit breakers shown below and attach DO-NOT-CLOSE tags to them:
  - PACK 1 (Location tip: DC BUS 1 / AIR COND/PNEU / PACK 1).
  - PACK 2 (Location tip: DC BUS 2 / AIR COND/PNEU / PACK 2).
  - RAM AIR (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / RAM AIR).
  - EBV 1 (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / EBV 1).
  - EBV 2 (Location tip: ESSENTIAL DC BUS 2 / AIR COND/PNEU / EBV 2).
  - APU BLEED (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / APU BLEED).
- (2) Remove access panels 191EL and 191FR (AMM MPP 06-41-01/100).
- (3) Through the access 191EL and 191FR ([Figure 401](#)):
  - Loosen the clamps (1) and move apart the connections.
  - Loosen the clamps (2) and move apart the couplings.
  - Disconnect the electrical connectors (3).
- (4) Remove access panel 191GL (AMM MPP 06-41-01/100).

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

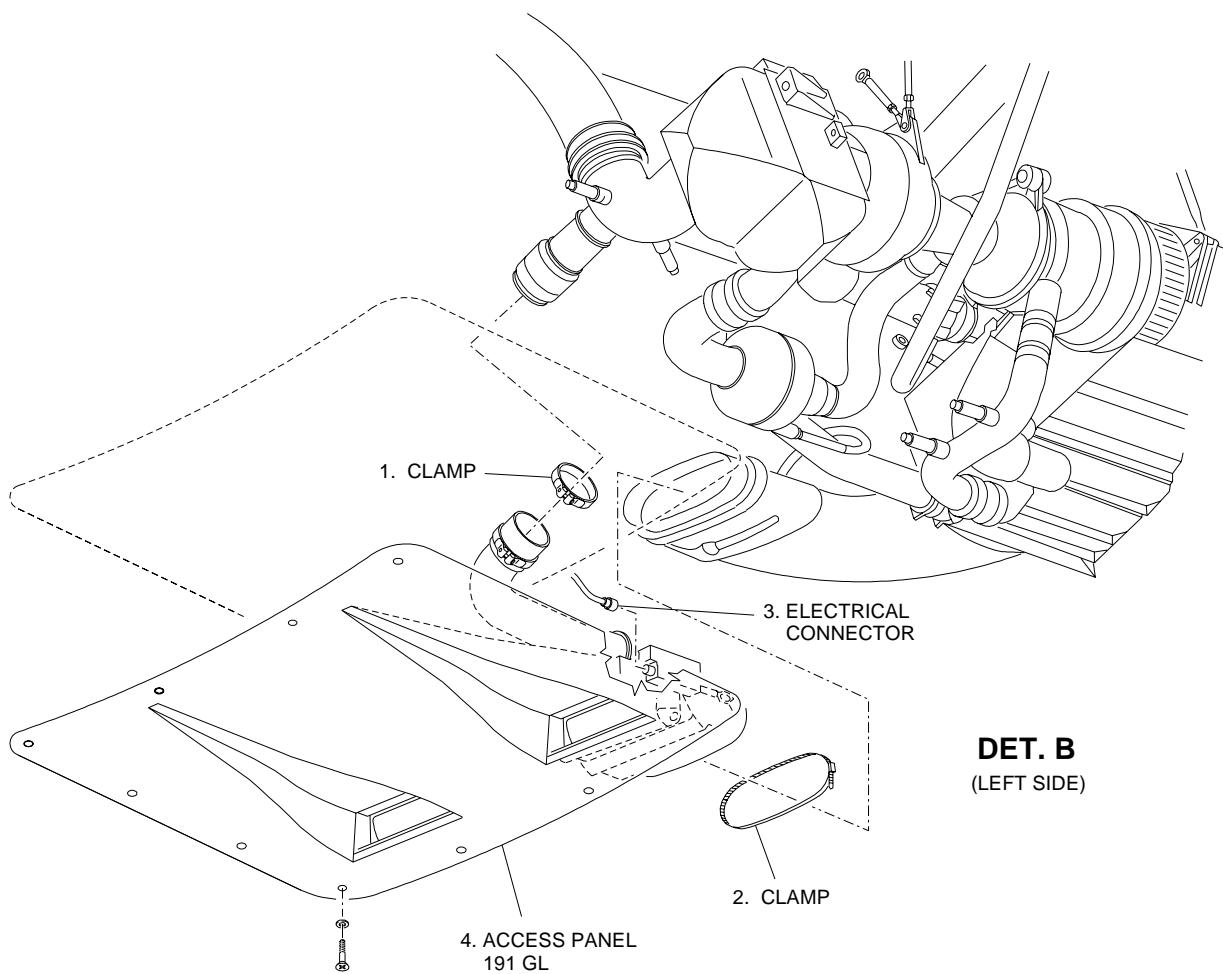
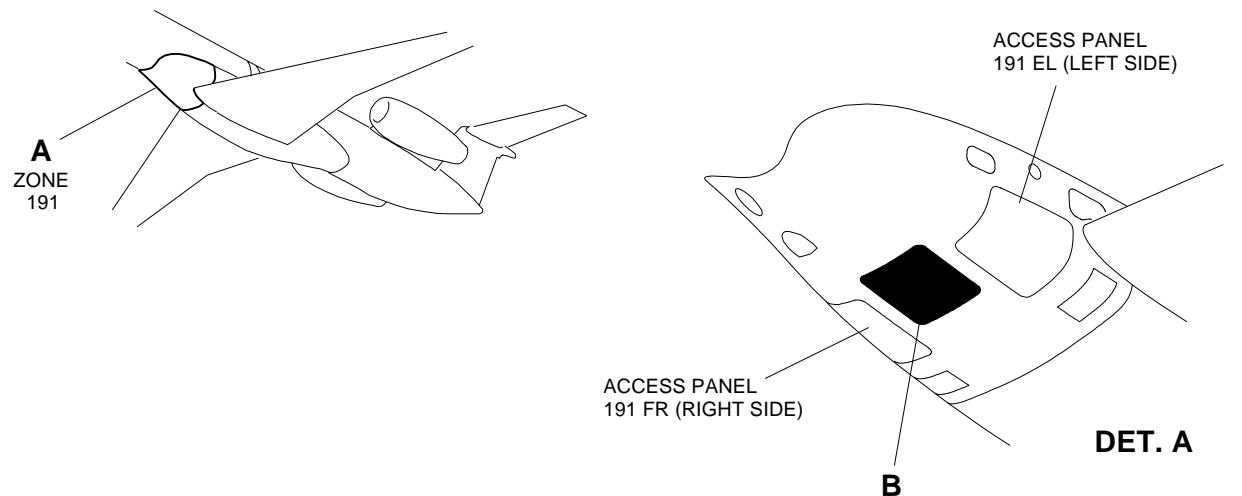
**SUBTASK 020-002-A**

- (1) Disconnect the pressure tube (4) and the vacuum tube (1) from the vacuum pump (5).
- (2) Remove all the old sealant with the plastic or wooden spatula, and prepare the surface (SRM 51-20-01).
- (3) Remove the nut (2) and washer (3).
- (4) Remove the vacuum pump (5).

**EFFECTIVITY: ALL**

Access Panel 191GL - Removal/Installation

Figure 401

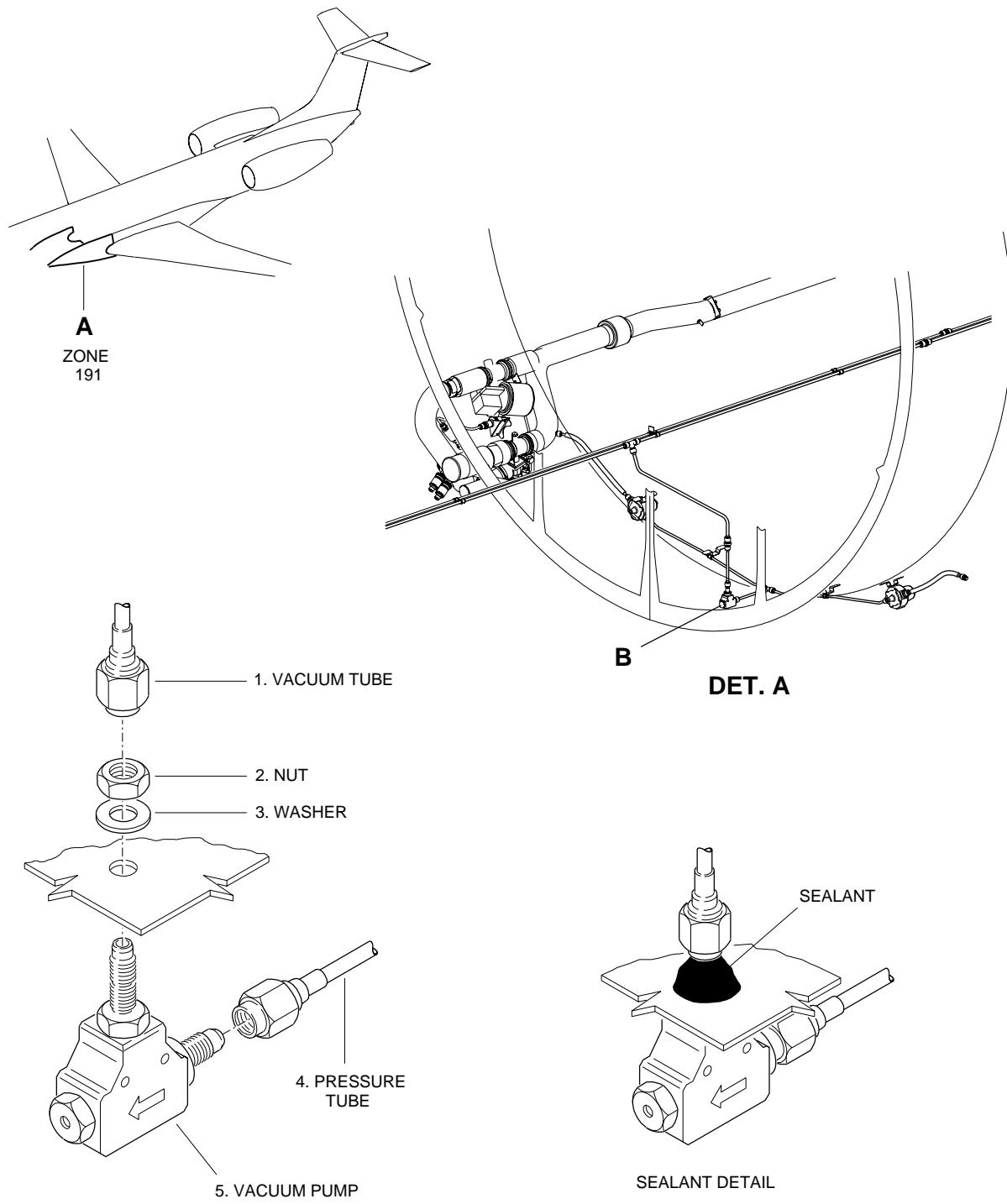


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**EFFECTIVITY: ALL**

Vacuum Pump - Removal/Installation

Figure 402



145AMM210031.MCE B



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TASK 21-31-06-400-801-A

EFFECTIVITY: ALL

3. VACUUM PUMP - INSTALLATION

A. General

(1) This task gives the procedures to install the vacuum pump.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 28-41-00-200-801-A/600	-
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
191	191EL	Left side of the forward wing-to-fuselage fairing
191	191FR	Right side of the forward wing-to-fuselage fairing
191	191GL	Bottom of the forward wing-to-fuselage fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

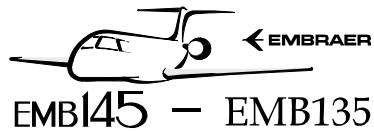
SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-S-8802 Type II, Class A-2	Sealant PR1440A-2	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	A - Does the task	External bottom surface of center fuselage III, inside the wing-to-fuselage fairing
1	B - Helps technician A	Under the passenger cabin floor



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I. Installation (Figure 402)

SUBTASK 420-002-A

- (1) Put the vacuum pump (5) in the installation position.
- (2) Install the nut (2) and washer (3).
- (3) Connect the pressure (4) and vacuum (1) tubes.
- (4) Prepare the surface and apply the sealant (SRM 51-20-01) on the nut (2) and washer (3) (Figure 402).

J. Follow-on (Figure 401)

SUBTASK 842-002-A

- (1) Install access panel 191GL (AMM MPP 06-41-01/100).
- (2) Through the access 191EL and 191FR (Figure 401):
  - Attach the connections and tighten the clamps (1).
  - Attach the couplings and tighten the clamps (2).
  - Connect the electrical connectors (3).
- (3) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

**NOTE:** The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations (Section 6) of the Maintenance Review Board Report (MRB).

- (4) Install access panels 191EL and 191FR (AMM MPP 06-41-01/100).
- (5) On the overhead circuit breaker panel, remove the DO-NOT-CLOSE tags from the circuit breakers shown below and close them:
  - PACK 1 (Location tip: DC BUS 1 / AIR COND/PNEU / PACK 1).
  - PACK 2 (Location tip: DC BUS 2 / AIR COND/PNEU / PACK 2).
  - RAM AIR (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / RAM AIR).
  - EBV 1 (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / EBV 1).
  - EBV 2 (Location tip: ESSENTIAL DC BUS 2 / AIR COND/PNEU / EBV 2).
  - APU BLEED (Location tip: ESSENTIAL DC BUS 1 / AIR COND/PNEU / APU BLEED).

