



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

VACUUM LINE - REMOVAL/INSTALLATION

EFFECTIVITY: ACFT MODEL(S) EMB-135

1. General

- A. This section gives the procedures to remove and install the vacuum line.
- B. The vacuum line is installed below the cockpit, passenger cabin, and baggage compartment floors, and in the rear electronic compartment.
- 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
21-31-09-000-802-A	VACUUM LINE - REMOVAL	ACFT MODEL(S) EMB-135
21-31-09-400-802-A	VACUUM LINE - INSTALLATION	ACFT MODEL(S) EMB-135



AIRCRAFT MAINTENANCE MANUAL

TASK 21-31-09-000-802-A

EFFECTIVITY: ACFT MODEL(S) EMB-135

2. VACUUM LINE - REMOVAL

A. General

(1) This task gives the instructions to remove the vacuum line.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
AMM MPP 06-41-03/100	- COMPONENT LOCATION
AMM TASK 23-22-02-000-801-A/400	ACARS PRINTER - REMOVAL
AMM TASK 23-24-02-000-801-A/400	CMU PRINTER - REMOVAL
AMM TASK 53-01-01-000-801-A/400	COCKPIT FLOOR PANELS - REMOVAL
AMM TASK 53-01-02-000-802-A/400	-
AMM TASK 53-01-03-000-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - REMOVAL
AMM TASK 53-01-04-000-801-A/400	REAR ELECTRONIC-COMPARTMENT FLOOR PANELS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
222	222FF	Cockpit
223	223TZ	Cockpit
232	232AF/232BF/232CF	Passenger cabin
242	242AF/242BF	Passenger cabin
252	252AF/252BF/252CF/252DF	Passenger cabin
261	261CF	Passenger cabin
262	262BF	Passenger cabin
271	271CF/271DF/271EF	Baggage compartment
272	272AF/272BF	Baggage compartment
272	272DR	Rear electronic compartment

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Ladder	To get access to the rear electronic compartment	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	In the cockpit, passenger cabin, baggage compartment, and in the rear electronic compartment

I. Preparation
SUBTASK 841-011-A

- (1) On the overhead circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:
 - CONTROL (Location tip: ESSENTIAL DC BUS 2/APU/CONTROL).
 - START 1 (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/START 1).
 - START 2 (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/START 2).
- (2) Put the ladder in front of the rear electronic compartment.
- (3) Remove the access panels and door shown below to get access to the vacuum line:
 - (a) Cockpit ([AMM TASK 53-01-01-000-801-A/400](#)):
 - 222FF (AMM MPP 06-41-02/100).
 - 223TZ ([AMM MPP 06-41-03/100](#)) (only for aircraft with manual controller installed on the right side of the control pedestal).
 - (b) Passenger cabin (AMM TASK 53-01-02-000-802-A/400):
 - 232AF/232BF/232CF/242AF/242BF/252AF/252BF/252CF/252DF/262BF (AMM MPP 06-41-02/100).
 - (c) Baggage compartment ([AMM TASK 53-01-03-000-801-A/400](#)):
 - 271CF/271DF/271EF/272AF/272BF (AMM MPP 06-41-02/100).
 - 261CF (AMM MPP 06-41-02/100).
 - (d) Rear electronic compartment ([AMM TASK 53-01-04-000-801-A/400](#)):
 - 272DR (AMM MPP 06-41-01/100).
- (4) On aircraft with the manual controller installed on the left side of the control pedestal, remove the ACARS Printer ([AMM TASK 23-22-02-000-801-A/400](#)), or CMU Printer ([AMM TASK 23-24-02-000-801-A/400](#)), or control-pedestal top cover, as applicable.



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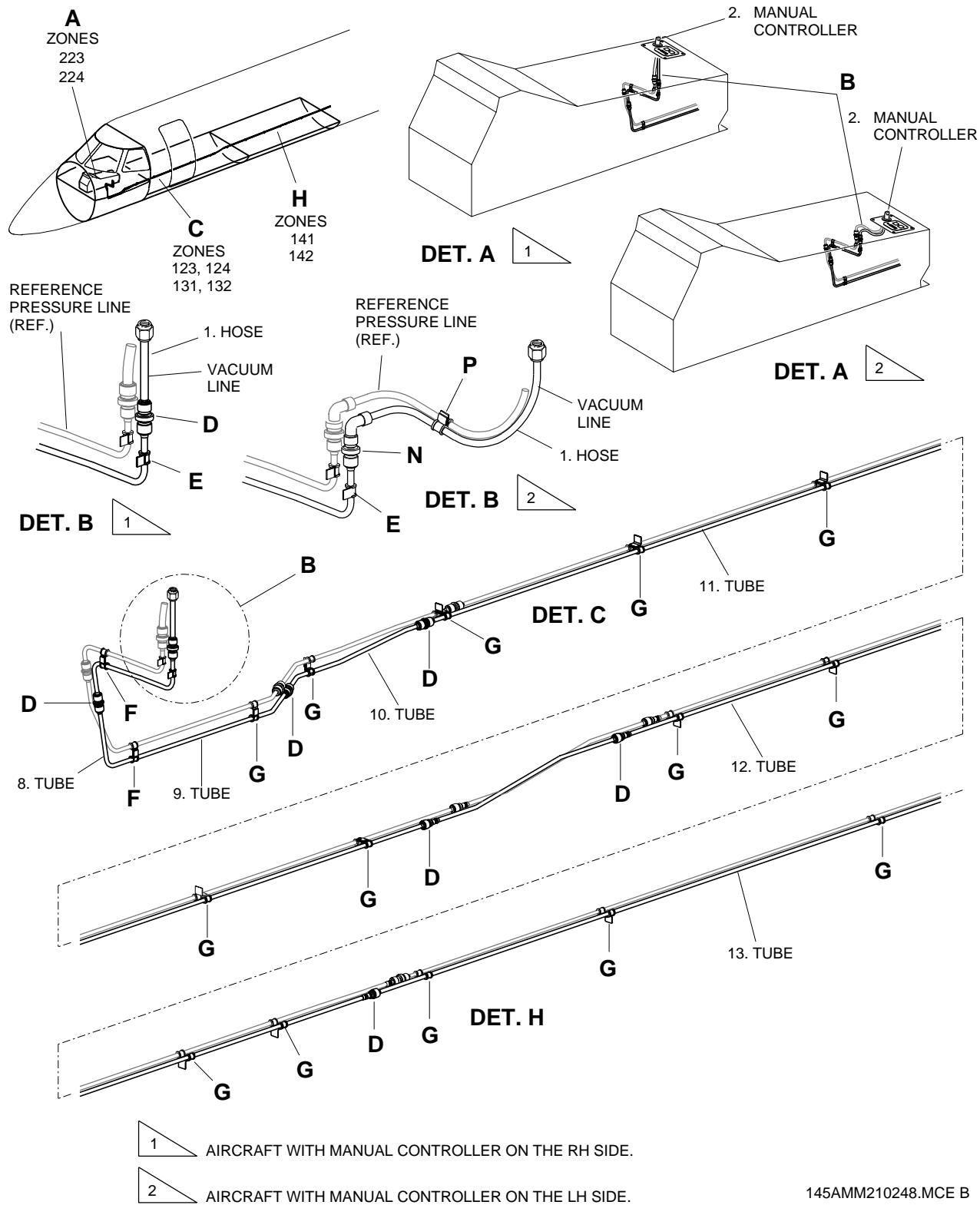
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J. Removal (Figure 401)

SUBTASK 020-011-A

- (1) Disconnect the hose (1) (sheet 1, DET. B) from the manual controller (2) (sheet 1, DET. A).
- (2) On aircraft with manual controller on the left side, remove the bolt (4), washer (6), and clamp (7) (sheet 3, DET. P) from the hose (1).
- (3) Disconnect the hose (1) from the union (3) (sheet 3, DET. D or DET. N, as applicable).
- (4) Remove the bolts (4), nuts (5), washers (6), and clamps (7) (sheet 2, DET. L, and sheet 3, DET. E, DET. F, DET. G, and DET. M) from the tubes (8) to (20) and (24) (sheet 1, DET. C and DET. H, sheet 2, DET. J, and sheet 3, DET. K).
- (5) Disconnect the tubes (8) to (20) and (24) from the unions (3) (sheet 3, DET. D).
- (6) Disconnect the tubes (20), (21) and (22) from the tee (23) (sheet 3, DET. K).
- (7) Disconnect the tube (21) from the pneumatic outflow valve (REF.) and remove it (sheet 3, DET. K).
- (8) Disconnect the tube (22) from the electropneumatic outflow valve (REF.) and remove it (sheet 3, DET. K).
- (9) Disconnect the tubes (14), (24) and (25) from the tee (26) (sheet 2, DET. J).
- (10) Disconnect the tubes (25) and (27) (sheet 2, DET. J) from the union (3) (sheet 3, DET. D).
- (11) Disconnect the tube (27) from the vacuum pump (ref.) and remove it (sheet 2, DET. J).

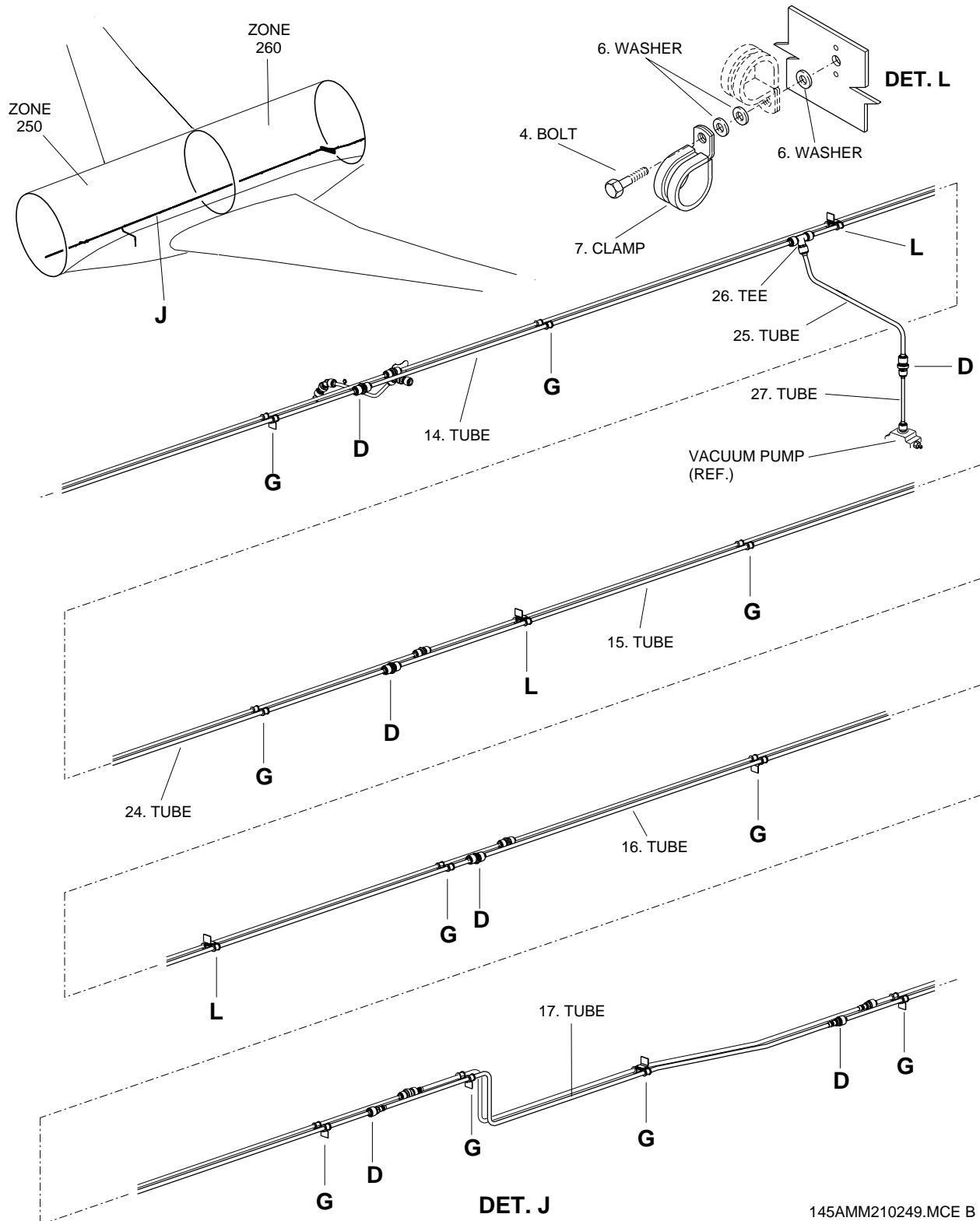
EFFECTIVITY: ACFT MODEL(S) EMB-135
 Vacuum Line - Removal/Installation
 Figure 401 - Sheet 1



EFFECTIVITY: ACFT MODEL(S) EMB-135

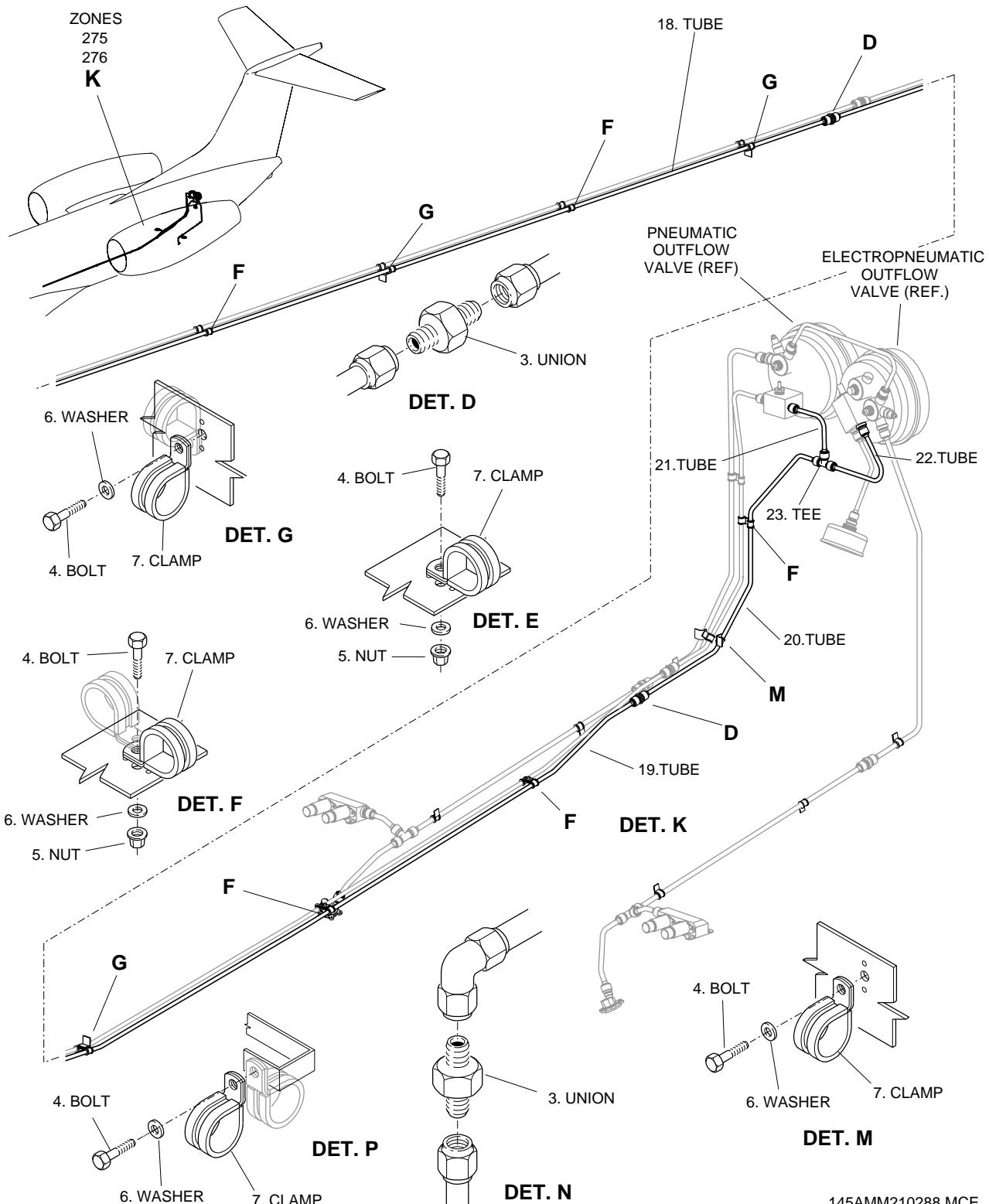
Vacuum Line - Removal/Installation

Figure 401 - Sheet 2



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EFFECTIVITY: ACFT MODEL(S) EMB-135
 Vacuum Line - Removal/Installation
 Figure 401 - Sheet 3



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TASK 21-31-09-400-802-A

EFFECTIVITY: ACFT MODEL(S) EMB-135

3. VACUUM LINE - INSTALLATION

A. General

- (1) This task gives the instructions to install the vacuum line.

B. References

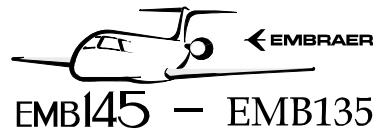
REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
AMM MPP 06-41-03/100	- COMPONENT LOCATION
AMM TASK 21-31-00-700-806-A/500	-
AMM TASK 23-22-02-400-801-A/400	ACARS PRINTER - INSTALLATION
AMM TASK 23-24-02-400-801-A/400	CMU PRINTER - INSTALLATION
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 53-01-01-400-801-A/400	COCKPIT FLOOR PANELS - INSTALLATION
AMM TASK 53-01-02-400-802-A/400	-
AMM TASK 53-01-03-400-801-A/400	BAGGAGE-COMPARTMENT FLOOR PANELS - INSTALLATION
AMM TASK 53-01-04-400-801-A/400	REAR ELECTRONIC-COMPARTMENT FLOOR PANELS - INSTALLATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
222	222FF	Cockpit
223	223TZ	Cockpit
232	232AF/232BF/232CF	Passenger cabin
242	242AF/242BF	Passenger cabin
252	252AF/252BF/252CF/252DF	Passenger cabin
261	261CF	Passenger cabin
262	262BF	Passenger cabin
271	271CF/271DF/271EF	Baggage compartment
272	272AF/272BF	Baggage compartment
272	272DR	Rear electronic compartment

D. Tools and Equipment

Not Applicable



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E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Ladder	To get access to the rear electronic compartment	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	In the cockpit, passenger cabin, baggage compartment, and in the rear electronic compartment

I. Installation (Figure 401)

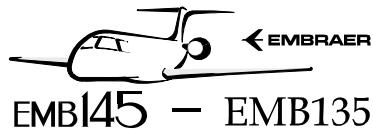
SUBTASK 420-011-A

- (1) Connect the tube (27) to the vacuum pump (REF.) (sheet 2, DET. J).
- (2) Connect the tubes (25) and (27) (sheet 2, DET. J) with the union (3) (sheet 3, DET. D).
- (3) Connect the tubes (14), (24) and (25) with the tee (26) (sheet 2, DET. J).
- (4) Connect the tube (22) to the electropneumatic outflow valve (REF.) (sheet 3, DET. K).
- (5) Connect the tube (21) to the pneumatic outflow valve (REF.) (sheet 3, DET. K).
- (6) Connect the tubes (20), (21) and (22) with the tee (23) (sheet 3, DET. K).
- (7) Connect the tubes (8) to (20) and (24) (sheet 1, DET. C and DET. H, sheet 2, DET. J, and sheet 3, DET. K) with the unions (3) (sheet 3, DET. D).
- (8) Install the bolts (4), nuts (5), washers (6), and clamps (7) (sheet 2, DET. L, and sheet 3, DET. E, DET. F, DET. G, and DET. M) on the tubes (8) to (20) and (24).
- (9) Connect the hose (1) (sheet 1, DET. B) to the union (3) (sheet 3, DET. D or DET. N, as applicable).
- (10) On aircraft with manual controller on the left side, install the bolt (4), washer (6), and clamp (7) (sheet 3, DET. P) on the hose (1).
- (11) Connect the hose (1) to the manual controller (2) (sheet 1, DET. A).

J. Follow-on

SUBTASK 842-011-A

- (1) Do the Functional Test for Line Leakage (AMM TASK 21-31-00-700-806-A/500).



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- (2) On aircraft with the manual controller installed on the left side of the control pedestal, install the ACARS Printer ([AMM TASK 23-22-02-400-801-A/400](#)), or CMU Printer ([AMM TASK 23-24-02-400-801-A/400](#)), or control-pedestal top cover, as applicable.
- (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 the access panels and door shown below:
 - (a) Cockpit ([AMM TASK 53-01-01-400-801-A/400](#)):
 - 222FF (AMM MPP 06-41-02/100).
 - 223TZ ([AMM MPP 06-41-03/100](#)) (only for aircraft with manual controller installed on the right side of the control pedestal).
 - (b) Passenger cabin (AMM TASK 53-01-02-400-802-A/400):
 - 232AF/232BF/232CF/242AF/242BF/252AF/252BF/252CF/252DF/262BF (AMM MPP 06-41-02/100).
 - (c) Baggage compartment ([AMM TASK 53-01-03-400-801-A/400](#)):
 - 271CF/271DF/271EF/272AF/272BF (AMM MPP 06-41-02/100).
 - 261CF (AMM MPP 06-41-02/100).
 - (d) Rear electronic compartment ([AMM TASK 53-01-04-400-801-A/400](#)):
 - 272DR (AMM MPP 06-41-01/100).
- (5) On the overhead circuit breaker panel, close these circuit breakers and remove the DO-NOT-CLOSE tags from them:
 - CONTROL (Location tip: ESSENTIAL DC BUS 2/APU/CONTROL).
 - START 1 (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/START 1).
 - START 2 (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/START 2).
- (6) Remove the ladder from the work area.