



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

FUEL TANK GRAVITY REFUELING/DEFUELING - SERVICING

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to gravity-refuel/defuel the fuel tanks.
- B. The aircraft has filler caps and defueling ports for these procedures.
- C. During the fueling/defueling operation, you can monitor the fuel quantity in the tanks from the fuel refueling panel or with the direct-measuring sticks.
- D. The defueling port is installed on the undersurface of the wings or wing stub.
- E. 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
12-11-02-600-801-A	FUEL TANK GRAVITY REFUELING - SERVICING	ALL
12-11-02-600-802-A	FUEL TANK GRAVITY DEFUELING - SERVICING	ALL



# AIRCRAFT MAINTENANCE MANUAL

TASK 12-11-02-600-801-A

EFFECTIVITY: ALL

## 2. FUEL TANK GRAVITY REFUELING - SERVICING

### A. General

- (1) This task gives the procedure to gravity-refuel the fuel tanks.
- (2) The tanks are gravity-refueled through the filler caps installed on the wing top surface.

**NOTE:** • As Fuel-System Icing Inhibitors (FSII), use Ethylene Glycol Monomethyl Ether (EGME), which obeys MIL-I-27686 (NATO S-748), ASTM-D-4171 or GOST 8313 or Di-Ethylene Glycol Monomethyl Ether (Di-EGME), which obeys MIL-I-85470A. Refer to the latest revision of the Rolls-Royce Operations Manual 71-00-00.  
• You can also use the corrosion/lubricity additive found in the Qualified Product List of MIL-I-25017.  
• Follow the fluid manufacturer's specifications to find the additive proportions for each fuel.

- (3) Refer to the List of the Products Approved to be Used on the Aircraft ([AMM MPP 20-30-01/200](#)).

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 12-10-00/200	- MAINTENANCE PRACTICES
AMM MPP 20-30-01/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-02-910-801-A/200	STATIC GROUNDING - STANDARD PRACTICES

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
541	541FT	Wing top surface - LH
641	641FT	Wing top surface - RH

### D. Tools and Equipment

Not Applicable

### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Ladder	For fueling	1



# AIRCRAFT MAINTENANCE MANUAL

## F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
ASTM-D-1655	JET A or JET A-1 Fuel, or other approved fuel	AR

## G. Expandable Parts

Not Applicable

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing top surface

## I. Preparation

### SUBTASK 841-005-A

- (1) Obey the Safety Conditions for the Fuel and Oxygen System Servicing ( [AMM MPP 12-10-00/200](#)).
- (2) Ground the aircraft ( [AMM TASK 20-40-02-910-801-A/200](#)).

**NOTE:** • Do all grounding connections between the fuel source, the aircraft, and the fuel nozzle (refer to the requirements of the Local Regulatory Authorities).  
• Make sure that the fueling source is with filter. If not, have a chamois-leather filter with funnel to correctly filter the fuel.

- (3) Open filler caps 541FT for the LH tank or 641FT for the RH tank ( [AMM MPP 06-44-00/100](#)).

## J. Gravity Refueling ([Figure 301](#))

### SUBTASK 650-005-A

- (1) Put the fueling nozzle into the filler port.
- (2) Start the fueling. At the same time, monitor the fuel level in the tank.
  - (a) You can refuel the two wing tanks at the same time or first one and then the other.
  - (b) Make sure that there is no fuel imbalance when the procedure is completed.
- (3) Remove the fueling nozzle from the filler port after you have the correct fuel level in the tank.

## K. Follow-on

### SUBTASK 842-005-A

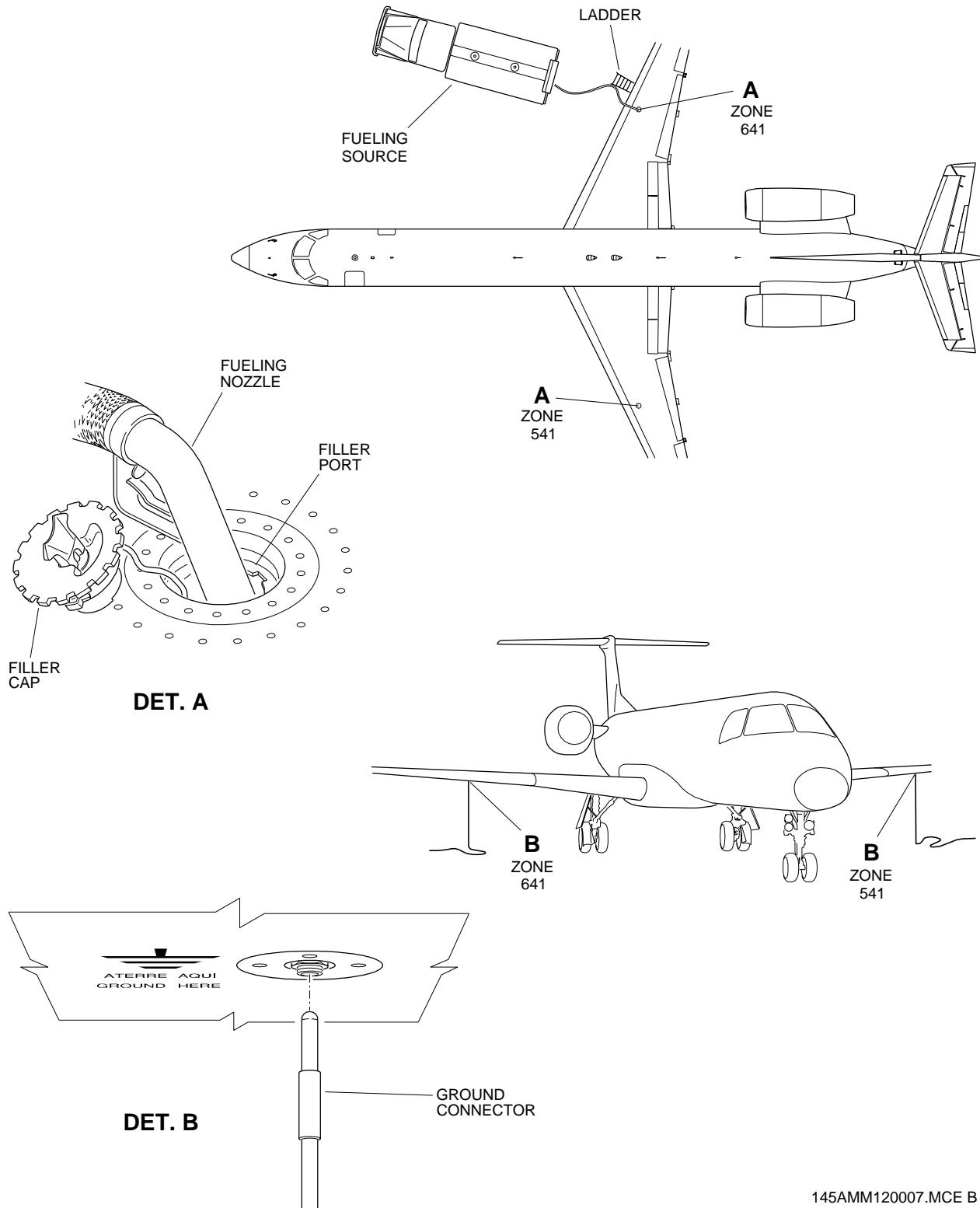
- (1) Remove the grounding cable from the aircraft ( [AMM TASK 20-40-02-910-801-A/200](#)).



AIRCRAFT  
MAINTENANCE MANUAL

- (2) Close filler caps 541FT for the LH tank or 641FT for the RH tank ( [AMM MPP 06-44-00/100](#)).

**EFFECTIVITY: ALL**  
**Gravity Fueling**  
**Figure 301**



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# AIRCRAFT MAINTENANCE MANUAL

TASK 12-11-02-600-802-A

EFFECTIVITY: ALL

## 3. FUEL TANK GRAVITY DEFUELING - SERVICING

### A. General

- (1) This task gives the procedure to gravity-defuel the fuel tanks.
- (2) The tanks are gravity-defueled through the defueling ports installed on the undersurface of the wings or wing stub.

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 12-10-00/200	- MAINTENANCE PRACTICES
AMM TASK 07-10-00-500-801-A/200	-
AMM TASK 20-40-02-910-801-A/200	STATIC GROUNDING - STANDARD PRACTICES

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL	Wing -to-fuselage fairing undersurface - LH
192	192BR	Wing-to-fuselage fairing undersurface - RH
531	531AB	Wing undersurface - LH
631	631AB	Wing undersurface - RH

### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 082	Defueling Valve	For defueling	

### 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	On the undersurface of the wings or wing stub

I. Preparation

**SUBTASK 841-007-A**

- (1) Obey the Safety Conditions for the Fuel and Oxygen System Servicing ( [AMM MPP 12-10-00/200](#)).

- (2) Ground the aircraft ( [AMM TASK 20-40-02-910-801-A/200](#)).

**NOTE:** Make all grounding connections between the defueling cart, the aircraft, and the defueling valve (refer to the requirements of the Local Regulatory Authorities).

- (3) Open the cap that is on the access door 192AL for the LH wing stub and 192BR for the RH wing stub (AMM MPP 06-41-01/100) or on the access door 531AB for the LH tank and 631AB for the RH tank ( [AMM MPP 06-44-00/100](#)).

**CAUTION: OBEY THE DEFUELING LIMITATION RELATED TO COMPLETE AIRCRAFT JACKING (AMM TASK 07-10-00-500-801-A/200).**

- (4) Put the defueling cart near the aircraft.

J. Gravity Defueling ([Figure 302](#))

**SUBTASK 650-007-A**

- (1) Install defueling valve GSE 082 to the defueling port.

- (2) Put the other hose end into the defueling cart.

- (3) Open the shutoff valve of defueling valve GSE 082 and do the defueling.

**CAUTION: DO NOT OPERATE THE AUXILIARY FUEL PUMPS WITH THE TANKS EMPTY, BECAUSE THE LACK OF LUBRICATION WILL CAUSE DAMAGE TO THEM.**

- (4) When you have the quantity of fuel to be defueled, close the shutoff valve of defueling valve GSE 082.

- (5) Remove defueling valve GSE 082 from the defueling port.

K. Follow-on

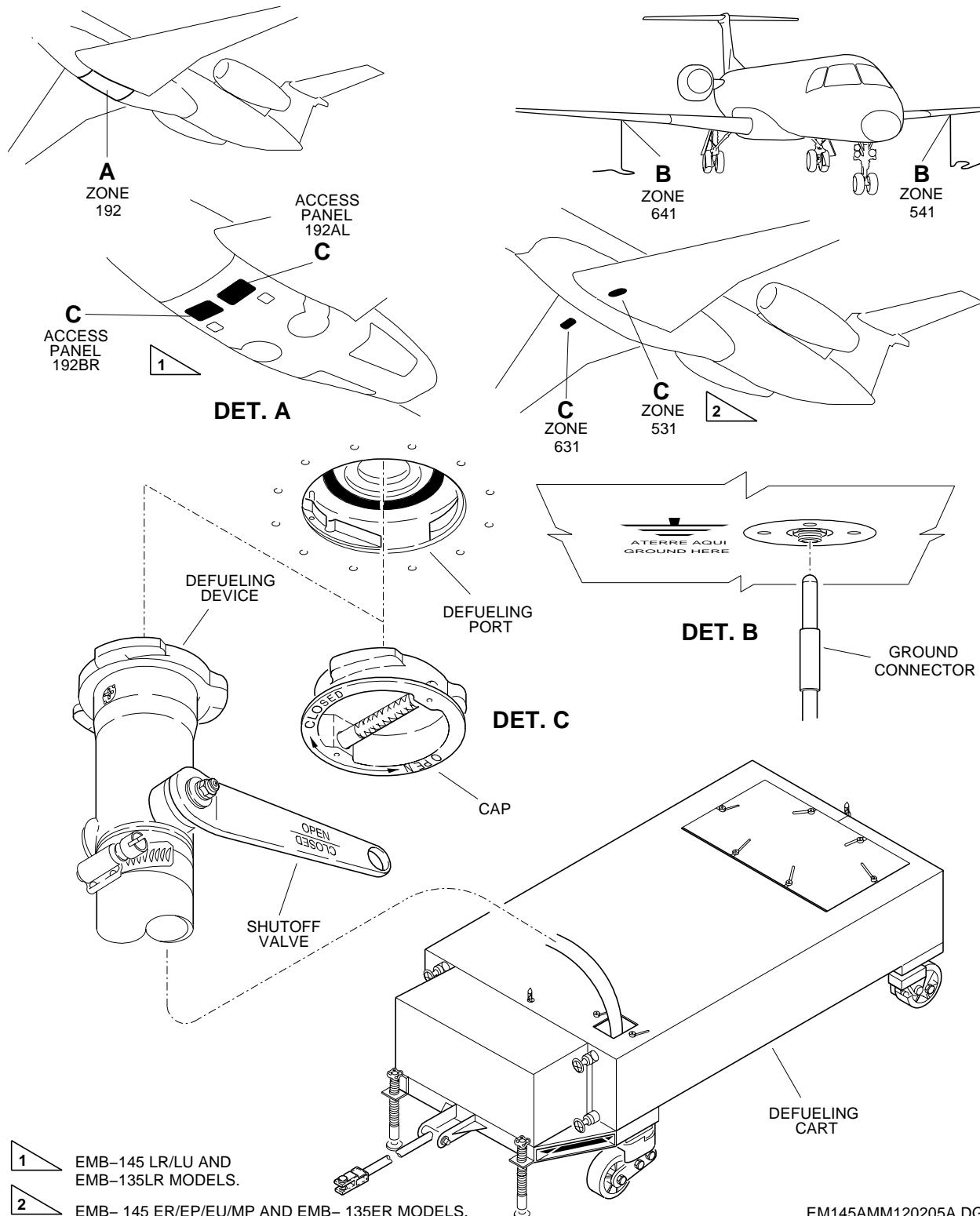
**SUBTASK 842-007-A**

- (1) Remove the defueling cart away from the aircraft.

- (2) Close the cap that is on the access door 192AL for the LH wing stub and 192BR for the RH wing stub (AMM MPP 06-41-01/100) or on the access door 531AB for the LH tank and 631AB for the RH tank ( [AMM MPP 06-44-00/100](#)).

- (3) Remove the grounding cable from the aircraft ( [AMM TASK 20-40-02-910-801-A/200](#)).

**EFFECTIVITY: ALL**  
**Gravity Defueling - Installation**  
**Figure 302**



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