FUEL TANK PRESSURE REFUELING/DEFUELING - SERVICING

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to pressure-refuel/defuel the fuel tanks.

   B. The system automatically controls the operation: it stops at the correct quantity and balances the quantity in the tanks.

   C. Make sure that the fuel used comes from an approved source, which supplies only fully clean and correctly specified product.

   D. To do this procedure, use the pressure fueling adapter and the fuel control panel.

   E. Get access to the fuel control panel and pressure fueling adapter through the access door, on the right side of the fuselage.

   F. The fuel control panel includes a remaining fuel-quantity indicator which has an internal fuel-quantity prescheduling system for the tanks. This prescheduling is done through a display operated with the related adjustment switch. These indicators are repeaters of the indicators installed on the main instrument panel.

   G. The pressure fueling adapter is assembled with a valve operated by the opening movement of the fueling nozzle shut-off valve, which is manually controlled.

   H. Do the pressure fueling procedure with the aircraft energized.

   I. 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*
12-11-01-600-801-A	FUEL-TANK PRESSURE REFUELING - SERVICING	ALL
12-11-01-600-802-A	FUEL-TANK PRESSURE DEFUELING - SERVICING	ALL

TASK 12-11-01-600-801-A
EFFECTIVITY: ALL

2. FUEL-TANK PRESSURE REFUELING - SERVICING

A. General

(1) This task gives the procedure to pressure-refuel the fuel tanks with the pressure method.

NOTE:
- As Fuel-System Icing Inhibitors (FSII), you can 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.

(2) Refer to the List of the Products Approved to be Used on the Aircraft (AMM MPP 20-30-02/200).

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-41-01/100	-
AMM MPP 12-10-00/200	- MAINTENANCE PRACTICES
AMM MPP 20-30-02/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 20-40-02-910-801-A/200	STATIC GROUNDING - STANDARD PRACTICES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
191	191BR	Wing-to-fuselage fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

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	Fuel servicing panel

I. Preparation

SUBTASK 841-002-A

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

(2) Statically ground the aircraft (AMM TASK 20-40-02-910-801-A/200).

NOTE: Make all grounding connections between the fuel source, aircraft, and fuel nozzle (refer to the requirements of the Local Regulatory Authorities).

(3) Energize the aircraft with the external DC power supply (AMM TASK 20-40-01-860-801-A/200).

NOTE: If the external DC power supply is not available, set the POWER SELECTION switch to the BATTERY position, on the refueling panel.

(4) Open access door 191BR (AMM MPP 06-41-01/100).

J. Pressure Refueling (Figure 301)

SUBTASK 650-002-A

(1) Make sure that the REFUELING lights related to the LH and RH tanks are off.

(2) Make sure that the DEFUELING light is off.

(3) Make sure that the SELECTED quantity indicator shows zero.

WARNING: BEFORE YOU SET THE INDICATOR, MAKE SURE OF THE UNIT OF MEASUREMENT (POUND/KILOGRAM) THAT THE INDICATOR SHOWS.

(4) Set the indicator to the necessary fuel quantity.

(5) Remove the protection cover from the pressure refueling adapter.

WARNING: MAKE SURE THAT THE REFUELING ADAPTER IS IN GOOD CONDITION. A BAD CONNECTION OF THE FUEL NOZZLE CAN CAUSE FUEL SPILLAGE, FIRE, INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

(6) Make sure that the refueling adapter is in good condition:

- Do a check for missing or damaged lugs;
- Do a check for signs of cracks and contamination.

(7) Connect the fuel nozzle to the pressure refueling adapter.

(8) Pressurize the system (35 - 50 psig).

(9) Make sure that there is no leakage at the fuel nozzle connection.

NOTE: A leakage through the vent valve during the refueling operation of less than 10 drops/min is permitted if it does not continue for 20 minutes after refueling operation stops. A leakage between 10 drops/min and 60 drops/min is permitted if the vent valve is replaced at the next time the fuel tank is opened and also it does not continue for 20 minutes after refueling operation stops.

(10) Make sure that the REFUELING lights related to the LH and RH tanks come on (CLOSED or CLSD, as applicable) and the refueling flow stops.

(11) Set the REFUELING switch to the OPEN position and make sure that the REFUELING lights related to the LH and RH tanks go off.

(12) (For aircraft with HLEIS) If one or more than one of the STOP RFL lights come(s) on, immediately remove the fuel pressure that comes from the refueling source and stop the refueling procedure.

(13) Make sure that the REFUELING lights related to the LH and RH tanks come on (CLOSED or CLSD), when you have the set fuel quantity.

(14) Set the REFUELING switch to the CLOSED position.

(15) Remove the fuel nozzle from the pressure refueling adapter.

(16) Install the protection cover to the pressure refueling adapter.

K. Follow-on

SUBTASK 842-002-A

(1) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

NOTE: If you used the POWER SELECTION switch at the BATTERY position, set it back to the NORMAL position and close the switch guard.

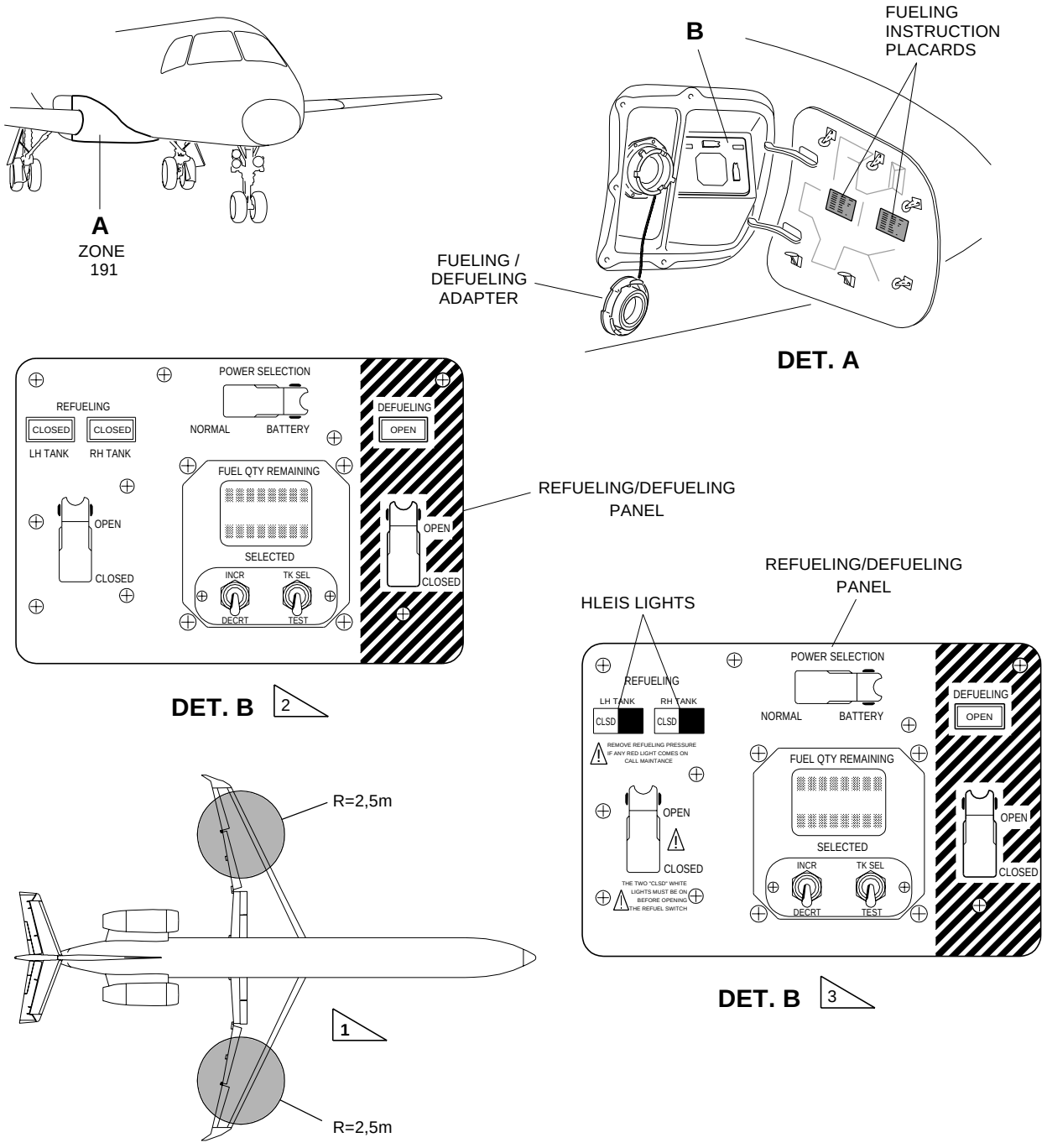
(2) Remove the grounding cable from the aircraft (AMM TASK 20-40-02-910-801-A/200).

WARNING: MAKE SURE THAT ALL THE SWITCH GUARDS ARE AT THE CLOSED POSITION ON THE REFUELING PANEL.

(3) Close access door 191BR (AMM MPP 06-41-01/100).

EFFECTIVITY: ALL

Pressure Refueling/Defueling
Figure 301



1 KEEP FREE OF VEHICLES AND EQUIPMENT THE AREAS AROUND THE FUEL TANK VENTS (HATCHED AREAS) DURING PRESSURE REFUELING OPERATION.

2 AIRCRAFT WITHOUT HLEIS

3 AIRCRAFT WITH HLEIS

145AMM120106.MCE

TASK 12-11-01-600-802-A
EFFECTIVITY: ALL

3. FUEL-TANK PRESSURE DEFUELING - SERVICING

A. General

(1) This task gives the procedure to pressure-defuel the fuel tanks.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-41-01/100	-
AMM MPP 12-10-00/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 20-40-02-910-801-A/200	STATIC GROUNDING - STANDARD PRACTICES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
191	191BR	Wing-to-fuselage fairing

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	Fuel servicing panel

I. Preparation

SUBTASK 841-003-A

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

(2) Statically ground the aircraft (AMM TASK 20-40-02-910-801-A/200).

NOTE: Make all grounding connections between the fuel source, aircraft, and fuel nozzle (refer to the requirements of the Local Regulatory Authorities).

(3) Energize the aircraft with the external DC power supply (AMM TASK 20-40-01-860-801-A/200).

(4) Open access door 191BR (AMM MPP 06-41-01/100).

J. Pressure Defueling (Figure 301)

SUBTASK 650-003-A

(1) Make sure that the DEFUELING light is off.

(2) Remove the protection cover from the pressure refueling adapter.

WARNING: MAKE SURE THAT THE REFUELING ADAPTER IS IN GOOD CONDITION. A BAD CONNECTION OF THE FUEL NOZZLE CAN CAUSE FUEL SPILLAGE, FIRE, INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

(3) Make sure that the refueling adapter is in good condition:

- Do a check for missing or damaged lugs;
- Do a check for signs of cracks and contamination.

(4) Connect the fuel nozzle to the pressure refueling adapter.

(5) Set the DEFUELING switch to the OPEN position and make sure that the DEFUELING light comes on (OPEN).

(6) On the overhead panel, set the XFEED switch as applicable:

- To defuel the two tanks, set it to the LOW 2 position.
- To defuel the LH tank, set it to the LOW 2 position.
- To defuel the RH tank, set it to the OFF position.

(7) Apply suction (4 psig MAX) to the nozzle or set the PUMP PWR switches, on the overhead panel, to the ON position.

NOTE: If you see that the fuel pumps "cycle" (automatically change selection of the pumps one after the other), open the circuit breakers related to the pumps not selected with the PUMP SEL switches. For example, if pumps 1A and 2B are selected, open the PUMP 1B, PUMP 1C, PUMP 2A, and PUMP 2C circuit breakers.

(8) When you have only the necessary remaining fuel quantity, set the DEFUELING switch to the CLOSED position and make sure that its light goes off.

CAUTION: DO NOT RUN THE ELECTRICAL PUMPS WITH A FUEL QUANTITY IN EACH TANK BELOW 35 LTS (9.2 GAL) OR 28 KG (62 LB) OR DO A DRY OPERATION OF THE FUEL PUMPS, DURING THE DEFUELING OPERATION. IF YOU DO NOT OBEY THIS PRECAUTION, DAMAGE TO THE AIRCRAFT OR THE EQUIPMENT CAN OCCUR.

(9) Set the PUMP PWR and XFEED switches to the OFF position.

(10) Disconnect the fuel nozzle from the pressure refueling adapter.

(11) Install the protection cover to the pressure refueling adapter.

K. Follow-on

SUBTASK 842-003-A

(1) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

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

WARNING: MAKE SURE THAT ALL THE SWITCH GUARDS ARE AT THE CLOSED POSITION ON THE REFUELING PANEL.

(3) Close access door 191BR (AMM MPP 06-41-01/100).