

## FALCON 2000 AIRCRAFT MAINTENANCE MANUAL

### TASK 28-22-00-650-801

## QUICK TRANSFER OF THE FUEL FROM ONE TANK TO ANOTHER

#### 1. OVERVIEW OF THE JOB

Operation codes:

- 28-22-00-650-801-01                      From LH to RH tank group
- 28-22-00-650-801-02                      From RH to LH tank group

This task describes the procedures for quick transfer of fuel from a tank group to the opposite to permit maintenance on an item of equipment located in the "source" tank (replacement of a jet pump, probe, etc.). This task can be used to defuel or refuel the "source" tanks.

For a defueling of the "source" tanks, the fuel in the "source" tank may be redistributed to fill the available capacity of other tanks, provided that they have a sufficient available capacity.

If the available capacity of the tanks is less than the quantity of fuel to be transferred from the "source" tanks, the fuel transfer will stop automatically.

In this case, the excess fuel must be drained (Refer to [TASK 28-30-00-650-801](#)).

**NOTE:** The fuel tanks may be drained by gravity (Refer to [TASK 28-30-00-680-802](#)) if suction defueling is not possible.

For a refueling of the "source" tanks, if the quantity of fuel in the other tanks is not sufficient, perform a pressure refueling (Refer to [TASK 28-50-00-650-801](#)).

The procedure describes the following two operations:

Fuel transfer from the LH tank group to the RH tank group, with the LH fuel booster pump ([L30QD](#)) operating,

Fuel transfer from the RH tank group to the LH tank group, with the RH fuel booster pump ([R30QD](#)) operating.

**NOTE:** When the quantity of fuel to be transferred is greater than 3000 lb, performing suction defueling is quicker (Refer to [TASK 28-30-00-650-801](#)).

#### 2. LOGISTICS

##### A. References

Reference	Designation
• <a href="#">24-00-00-860-801</a>	ENERGIZATION / DE-ENERGIZATION OF THE AIRCRAFT
• <a href="#">28-30-00-650-801</a>	SUCTION DEFUELING
• <a href="#">28-30-00-680-801</a>	GRAVITY DEFUELING
• <a href="#">28-30-00-680-802</a>	DRAINING OF THE FUEL TANKS / FUEL SAMPLING
• <a href="#">28-50-00-650-801</a>	PRESSURE REFUELING
• <a href="#">28-70-00-860-801</a>	DE-PRESSURIZATION / PRESSURIZATION OF THE FUEL TANKS

##### B. Energy

- ELECTRICAL

##### C. Access

Reference	Designation
• <a href="#">PAX</a>	PASSENGER DOOR

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• **186DR**

### FUELING CONTROL PANEL ACCESS DOOR

### 3. FUEL TRANSFER FROM LH TANK GROUP TO RH TANK GROUP , WITH LH FUEL BOOSTER PUMP (L30QD) OPERATING

Refer to **fig. 1**, **fig. 2** and **fig. 3**

#### A. Preliminary Steps

- (1) Connect the ground/aircraft electrostatic link to the applicable connector (1) on the RH main landing gear leg.
- (2) De-pressurize the fuel tanks (Refer to [TASK 28-70-00-860-801](#), paragraph "De-pressurization of fuel tanks") and keep door (**186DR**) open.
- (3) On fueling panel (**140QS**), check that the "FULL-PARTIAL" refueling switch is set to "FULL".
- (4) Connect the electrical ground power unit (Refer to [TASK 24-00-00-860-801](#), paragraph "Connection of the Electrical Ground Power Unit").
- (5) Energize the aircraft systems (Refer to [TASK 24-00-00-860-801](#), paragraph "Energization with the Electrical Ground Power Unit").
- (6) In the cockpit, on fire control panel (**310WG**), set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the CLOSED position (guard and switch raised).
- (7) On EIED 2 (Engine Indicator Electronic Display) (**40EA**) ("FUEL" page), determine the available capacity of the RH tank group by deducting the remaining quantity of fuel contained in the RH tank group from the total capacity of the RH tank group.

NOTE 1: Total fuel capacity (see Description and Operation 28-10-00 "Tanks").

NOTE 2: If the available capacity of the RH tank group is less than the quantity of fuel to be transferred from the LH tank group, the transfer will stop automatically when the RH tank group is full. In this case, the excess fuel must be drained by suction defueling (Refer to [TASK 28-30-00-650-801](#)), or by gravity (Refer to [TASK 28-30-00-680-801](#)), from the LH tank group.

#### B. Fuel Transfer from LH tank group to RH tank group

NOTE: Perform one of the two following operations as applicable, depending on the available capacity of the RH tank group:

- The available capacity of the RH tank group is less than the quantity of fuel to be transferred from the LH tank group, or
  - The available capacity of the RH tank group is sufficient to contain the quantity of fuel to be transferred from the LH tank group.
- (1) The available capacity of the RH tank group is less than the quantity of fuel to be transferred from the LH tank group:
    - (a) In the cockpit, perform the following steps:
      - 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).

NOTE: The suction defueling valve (**10QD1**) opens.

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- 2 On overhead panel (**180PC**), set the LH "BOOSTER" switch (**L503QD**) to the ON position (switch raised).
    - (b) On fueling panel (**140QS**), set the RH refueling "ON/OFF" switch to "ON".  
NOTE: The RH electric refueling valve (**R70QS**) opens.
    - (c) On EIED 2 (**40EA**) ("FUEL" page), monitor the fuel transfer by watching the quantity of fuel.
    - (d) If the amber "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is illuminated during fuel transfer, perform the following steps:
      - 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered) to avoid pump (**L30QD**) unpriming.  
NOTE: The suction defueling valve (**10QD1**) closes.
      - 2 When the "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is extinguished, set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).  
NOTE: The suction defueling valve (**10QD1**) opens.
    - (e) If necessary, repeat the steps in paragraph 3.B.(1)(d) if the amber "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is illuminated during fuel transfer.
    - (f) When the fuel transfer stops automatically (RH tank group is full), perform the following steps:
      - 1 On fueling panel (**140QS**), check that the amber "FULL" light (**140QS2**) is illuminated.
      - 2 On fueling panel (**140QS**), set the RH refueling "ON/OFF" switch to "OFF".  
NOTE: The RH electric refueling valve (**R70QS**) closes.
      - 3 In the cockpit, set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered).  
NOTE: The suction defueling valve (**10QD1**) closes.
      - 4 On overhead panel (**180PC**), set the LH "BOOSTER" switch (**L503QD**) to the OFF position (switch lowered).
    - (g) Defuel the LH tank group by suction defueling (Refer to **TASK 28-30-00-650-801**) or by gravity (Refer to **TASK 28-30-00-680-801**).
    - (h) In the cockpit, perform the following steps:
      - 1 Check that the amber "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is illuminated.
      - 2 On EIED 2 (**40EA**) ("FUEL" page), check that the LH tank group is empty.
    - (i) If necessary, fully drain the fuel tanks after full defueling (Refer to **TASK 28-30-00-680-802**, paragraph "Draining of the LH Tank Group").
  - (2) The available capacity of the RH tank group is sufficient to contain the quantity of fuel to be transferred from the LH tank group.
    - (a) In the cockpit, perform the following steps:
      - 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).

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NOTE: The suction defueling valve (**10QD1**) opens.

- 2 On overhead panel (**180PC**), set the LH "BOOSTER" switch (**L503QD**) to the ON position (switch raised).

- (b) On fueling panel (**140QS**), set the RH refueling "ON/OFF" switch to "ON".

NOTE: The RH electric refueling valve (**R70QS**) opens.

- (c) On EIED 2 (**40EA**) ("FUEL" page), monitor the fuel transfer by watching the quantity of fuel.

- (d) If the amber "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is illuminated during fuel transfer, perform the following steps:

- 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered) to avoid pump (**L30QD**) unpriming.

NOTE: The suction defueling valve (**10QD1**) closes.

- 2 When the "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is extinguished, set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).

NOTE: The suction defueling valve (**10QD1**) opens.

- (e) If necessary, repeat the steps in paragraph 3.B.(2)(d) if the amber "LO FUEL 1" warning light (**30WW46**) on warning panel (**30WW**) is illuminated during fuel transfer.

- (f) When the fuel transfer is complete, in the cockpit, perform the following steps:

- 1 On EIED 2 (**40EA**) ("FUEL" page), check that the LH tank group is empty.

- 2 On overhead panel (**180PC**), set the LH "BOOSTER" switch (**L503QD**) to the OFF position (switch lowered).

- 3 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered).

NOTE: The suction defueling valve (**10QD1**) closes.

- (g) On fueling panel (**140QS**), set the RH refueling "ON/OFF" switch to "OFF".

NOTE: The RH electric refueling valve (**R70QS**) closes.

- C. If necessary, fully drain the fuel tanks after full defueling (Refer to **TASK 28-30-00-680-802**, paragraph "Draining of the LH Tank Group").

### D. Final Steps

- (1) After refueling only, on fire control panel (**310WG**) in the cockpit, set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the OPEN position (switch and guard lowered).
- (2) De-energize the aircraft systems (Refer to **TASK 24-00-00-860-801**), paragraph "De-Energization with the Electrical Ground Power Unit").
- (3) Disconnect the electrical ground power unit (Refer to **TASK 24-00-00-860-801**, paragraph "Disconnection of the Electrical Ground Power Unit").
- (4) Do not disconnect the ground/aircraft electrostatic link from the applicable connector (1) on the RH main landing gear leg.

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- (5) Close the door (**186DR**).

#### 4. **FUEL TRANSFER FROM RH TANK GROUP TO LH TANK GROUP, WITH RH FUEL BOOSTER PUMP (R30QD) OPERATING**

Refer to **fig. 1**, **fig. 2** and **fig. 4**

##### A. Preliminary Steps

- (1) Connect the ground/aircraft electrostatic link to the applicable connector (1) on the RH main landing gear leg.
- (2) De-pressurize the fuel tanks (Refer to **TASK 28-70-00-860-801**, paragraph "De-pressurization of fuel tanks") and keep door (**186DR**) open.
- (3) On fueling panel (**140QS**), check that the "FULL-PARTIAL" refueling switch is set to "FULL".
- (4) Connect the electrical ground power unit (Refer to **TASK 24-00-00-860-801**, paragraph "Connection of the Electrical Ground Power Unit").
- (5) Energize the aircraft systems (Refer to **TASK 24-00-00-860-801**, paragraph "Energization with the Electrical Ground Power Unit").
- (6) On EIED 2 (Engine Indicator Electronic Display) (**40EA**) ("FUEL" page), determine the available capacity of the LH tank group by deducting the remaining quantity of fuel contained in the LH tank group from the total capacity of the LH tank group.

NOTE 1: Total fuel capacity (see Description and Operation 28-10-00 "Tanks").

NOTE 2: If the available capacity of the LH tank group is less than the quantity of fuel to be transferred from the RH tank group, the transfer will stop automatically when the LH tank group is full. In this case, the excess fuel must be drained by suction defueling (Refer to **TASK 28-30-00-650-801**), or by gravity (Refer to **TASK 28-30-00-680-801**), from the RH tank group.

##### B. Fuel Transfer from RH tank group to LH tank group.

NOTE: Perform one of the two following operations as applicable, depending on the available capacity of the LH tank group:

- The available capacity of the LH tank group is less than the quantity of fuel to be transferred from the RH tank group, or
- The available capacity of the LH tank group is sufficient to contain the quantity of fuel to be transferred from the RH tank group.

- (1) The available capacity of the LH tank group is less than the quantity of fuel to be transferred from the RH tank group:

##### (a) In the cockpit, perform the following steps:

- 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).

NOTE: The suction defueling valve (**10QD1**) opens.

- 2 On overhead panel (**180PC**), set the RH "BOOSTER" switch (**R503QD**) to the ON position (switch raised).

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- 3 Check that the amber "FUEL 2" light (**30WW45**) on warning panel (**30WW**) is extinguished.
- 4 On fire control panel (**310WG**), set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the CLOSED position (guard and switch raised).

NOTE: Check that the amber "FUEL 2" light is not illuminated during this operation. If the amber "FUEL 2" light is illuminated, the valve opening logic will be reversed.

- 5 If the amber "FUEL 2" light (**30WW45**) on warning panel (**30WW**) is illuminated, perform the following steps:
  - On fire control panel (**310WG**), set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the OPEN position (switch and guard lowered).
  - Repeat the steps in paragraphs 4.B.(1)(a)2 through 4.B.(1)(a)4.

- 6 On overhead panel (**180PC**):
  - a - Set the "X-BP" rotactor (**504QS**) to the ON position (line in the horizontal position).
  - b - Check that the amber "X-BP" light (**506QS**) is illuminated.

- (b) On fueling panel (**140QS**), set the LH refueling "ON/OFF" switch to "ON".

NOTE: The LH electric refueling valve (**L70QS**) opens.

- (c) On EIED 2 (**40EA**) ("FUEL" page), monitor the fuel transfer by watching the quantity of fuel.
- (d) If the amber "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is illuminated during fuel transfer, perform the following steps:

- 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered) to avoid pump (**L30QD**) unpriming.

NOTE: The suction defueling valve (**10QD1**) closes.

- 2 When the "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is extinguished, set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).

NOTE: The suction defueling valve (**10QD1**) opens.

- (e) If necessary, repeat the steps in paragraph 4.B.(1)(d) if the amber "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is illuminated during fuel transfer.

- (f) In the cockpit, when the fuel transfer stops automatically (LH tank group is full), perform the following steps:

- 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered).

NOTE: The suction defueling valve (**10QD1**) closes.

- 2 On overhead panel (**180PC**):
  - a - Set the RH "BOOSTER" switch (**L503QD**) to the OFF position (switch lowered).
  - b - Set the "X-BP" rotactor (**504QS**) to the OFF position (line in the vertical position).

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- c - Check that the amber "X-BP" light (**506QS**) is extinguished.
  - (g) On fueling panel (**140QS**), perform the following steps:
    - 1 Check that the amber "FULL" light (**140QS1**) is illuminated.
    - 2 Set the LH refueling "ON/OFF" switch to "OFF".
      - NOTE: The LH electric refueling valve (**L70QS**) closes.
  - (h) Defuel the RH tank group by suction defueling (Refer to **TASK 28-30-00-650-801**) or by gravity (Refer to **TASK 28-30-00-680-801**).
  - (i) In the cockpit, perform the following steps:
    - 1 Check that the amber "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is illuminated.
    - 2 On EIED 2 (**40EA**) ("FUEL" page), check that the RH tank group is empty.
  - (j) If necessary, fully drain the fuel tanks after full defueling (Refer to **TASK 28-30-00-680-802**, paragraph "Draining of the RH Tank Group").
- (2) The available capacity of the LH tank group is sufficient to contain the quantity of fuel to be transferred from the RH tank group:
  - (a) In the cockpit, perform the following steps:
    - 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).
      - NOTE: The suction defueling valve (**10QD1**) opens.
    - 2 On overhead panel (**180PC**), set the RH "BOOSTER" SWITCH (**R503QD**) to the ON position (switch raised).
    - 3 Check that the amber "FUEL 2" (**30WW45**) light on warning panel (**30WW**) is extinguished.
    - 4 On fire control panel (**310WG**), set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the CLOSED position (guard and switch raised).
      - NOTE: Check that the amber "FUEL 2" light is extinguished during this operation. If the amber "FUEL 2" light is illuminated, the valve opening logic will be reversed.
    - 5 If the amber "FUEL 2" light is illuminated:
      - set engine 2 "FUEL SHUT OFF" switch to the OPEN position (switch and guard lowered),
      - repeat steps (b) through (d).
    - 6 On overhead panel (**180PC**):
      - a - Set the "X-BP" rotactor (**504QS**) to the ON position (line in the horizontal position).
      - b - Check that the amber "X-BP" light (**506QS**) is illuminated.
      - c - Set the RH "BOOSTER" switch (**R503QD**) to the ON position (switch raised).

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- (b) On fueling panel (**140QS**), set the LH refueling "ON/OFF" switch to "ON".  
NOTE: The LH electric refueling valve (**L70QS**) opens.
- (c) On EIED 2 (**40EA**) ("FUEL" page), monitor the fuel transfer by watching the quantity of fuel.
- (d) If the amber "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is illuminated during fuel transfer, perform the following steps:
  - 1 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered) to avoid pump (**L30QD**) unpriming.  
NOTE: The suction defueling valve (**10QD1**) closes.
  - 2 When the "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is extinguished, set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the ON position (guard and switch raised).  
NOTE: The suction defueling valve (**10QD1**) opens.
- (e) If necessary, repeat the steps in paragraph 4.B.(2)(d) if the amber "LO FUEL 2" warning light (**30WW50**) on warning panel (**30WW**) is illuminated during fuel transfer.
- (f) When the fuel transfer is complete, in the cockpit, perform the following steps:
  - 1 On EIED 2 (**40EA**) ("FUEL" page), check that the LH tank group is empty.
  - 2 Set the "DEFUELING" switch (**510QS**) on maintenance panel (**500JT**) to the OFF position (switch and guard lowered).  
NOTE: The suction defueling valve (**10QD1**) closes.
  - 3 On overhead panel (**180PC**):
    - a - Set the RH "BOOSTER" switch (**R503QD**) to the OFF position (switch lowered).
    - b - Set the "X-BP" rotactor (**504QS**) to the OFF position (line in the vertical position).
    - c - Check that the amber "X-BP" light (**506QS**) is extinguished.
- (g) On fueling panel (**140QS**), set the LH refueling "ON/OFF" switch to "OFF".  
NOTE: The LH electric refueling valve (**L70QS**) opens.
- (h) If necessary, fully drain the fuel tanks after full defueling (Refer to **TASK 28-30-00-680-802**, paragraph "Draining of the RH Tank Group").

### C. Final Steps

- (1) After refueling only, on fire control panel (**310WG**) in the cockpit, set engine 1 "FUEL SHUT OFF", engine 2 "FUEL SHUT OFF" and the APU "FUEL SHUT OFF" switches to the OPEN position (switch and guard lowered).
- (2) De-energize the aircraft systems (Refer to **TASK 24-00-00-860-801**), paragraph "De-Energization with the Electrical Ground Power Unit").
- (3) Disconnect the electrical ground power unit (Refer to **TASK 24-00-00-860-801**, paragraph "Disconnection of the Electrical Ground Power Unit").
- (4) Do not disconnect the ground/aircraft electrostatic link from the applicable connector (1) on the RH main landing gear leg.

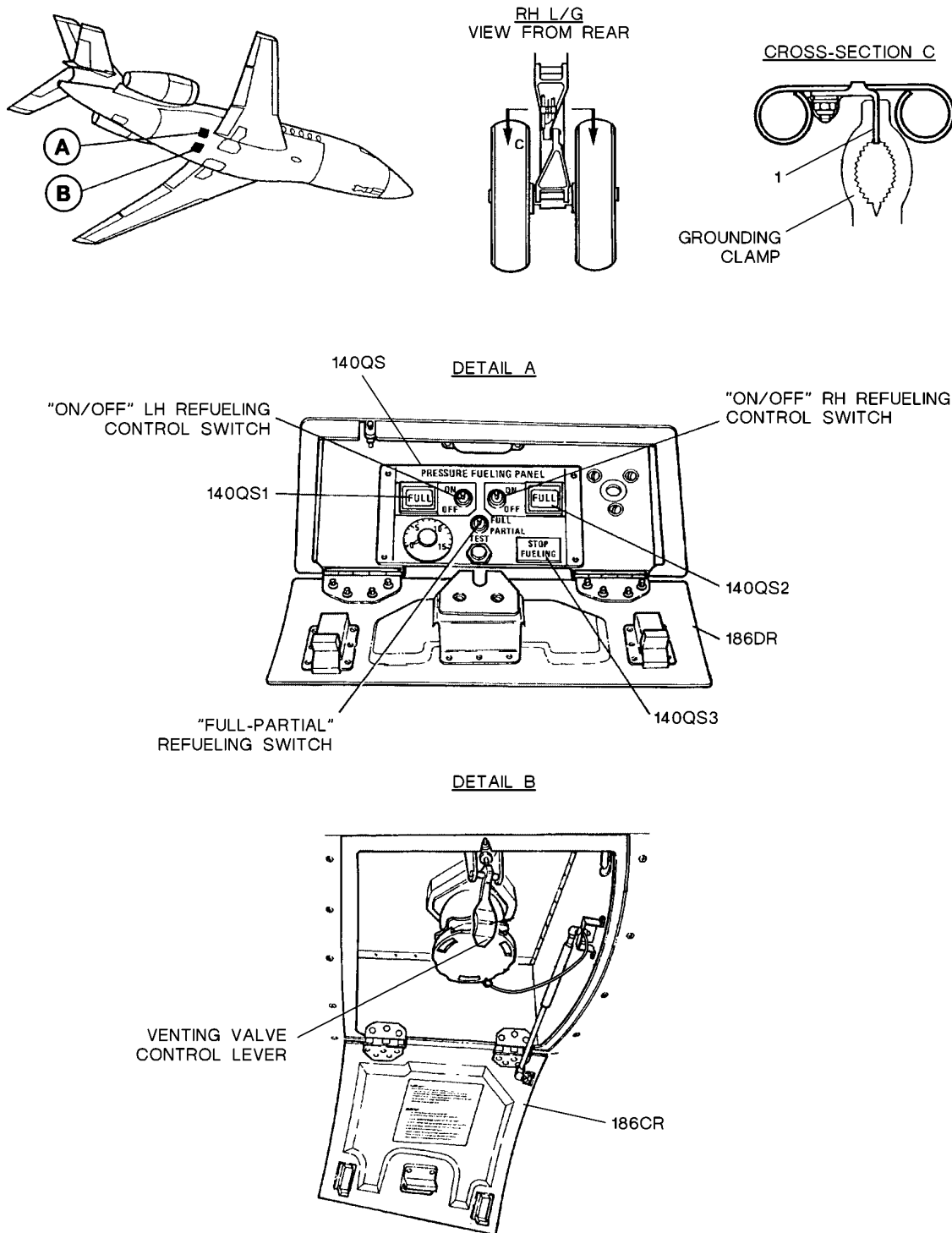


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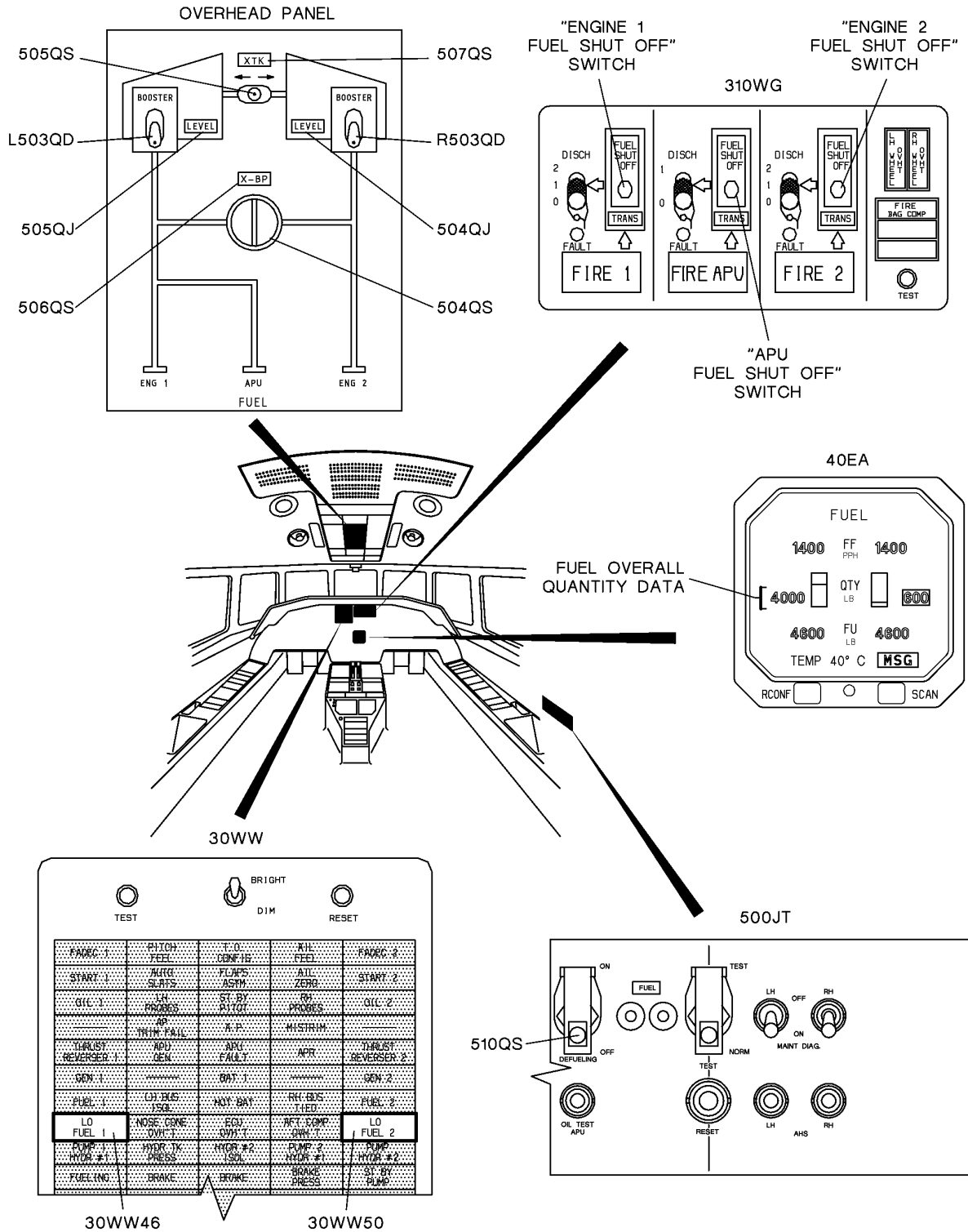
(5) Close door (**186DR**).

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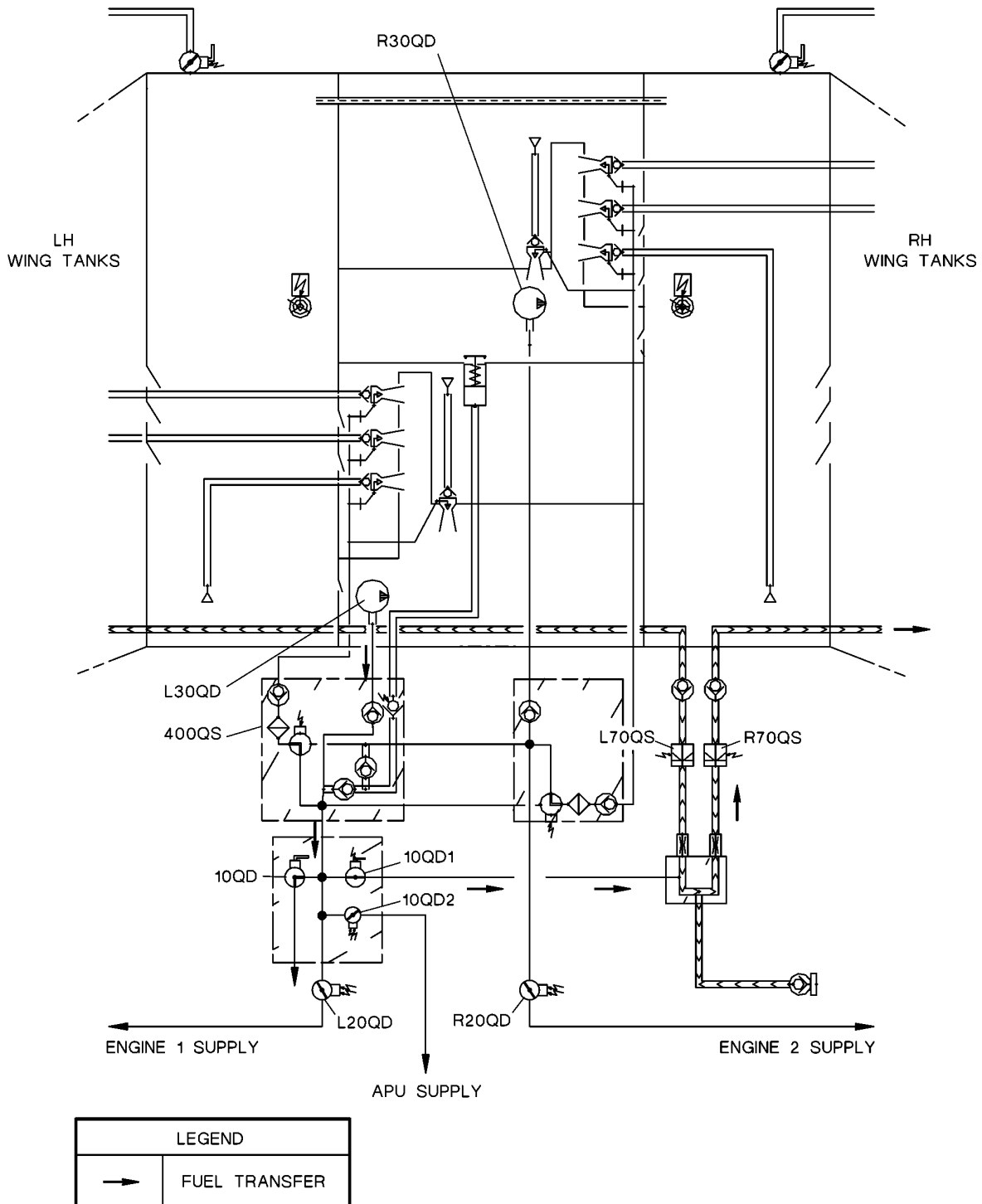
**Figure 1: LOCATION OF CONTROLS ON FUELING PANEL**

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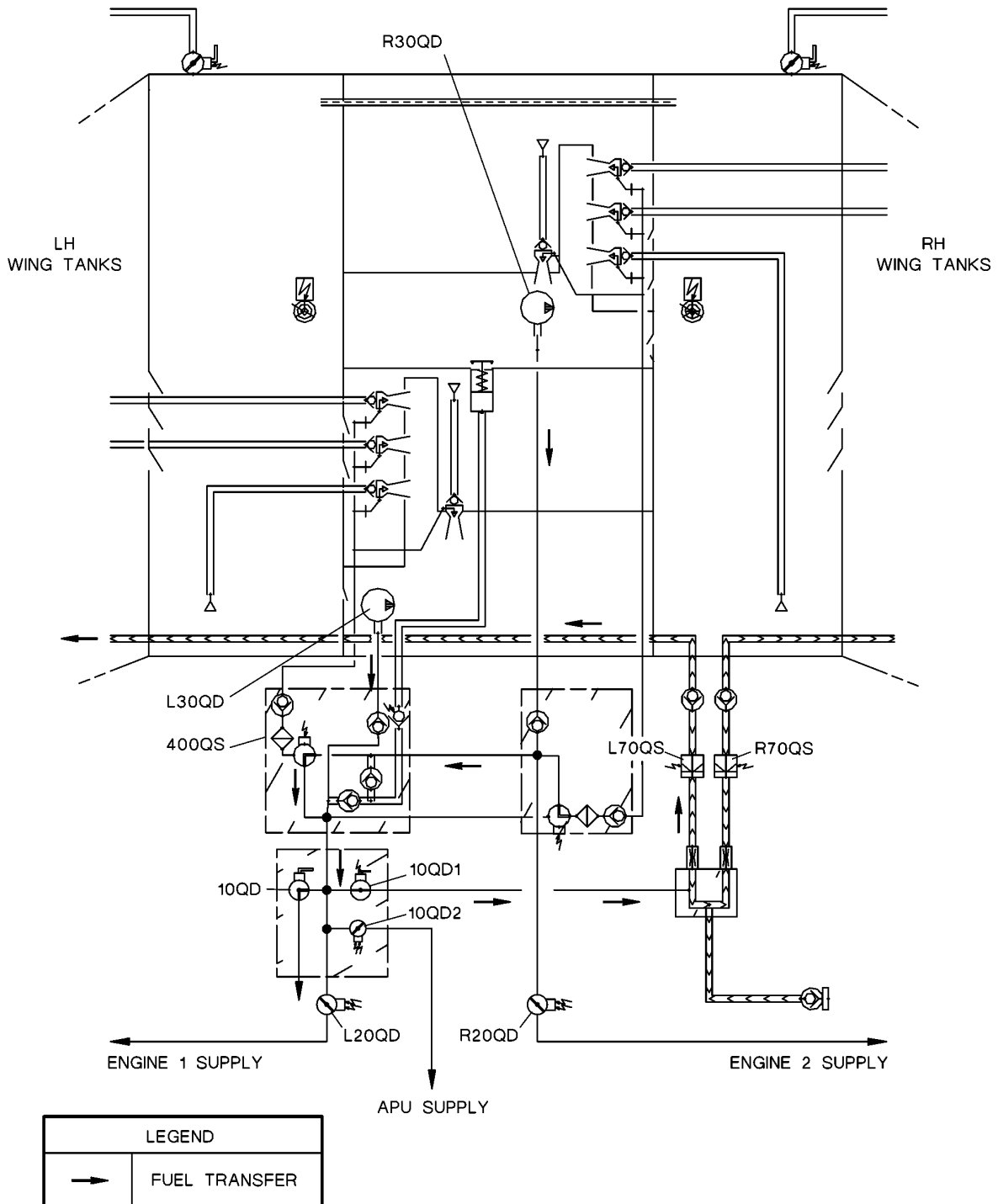
**Figure 2: LOCATION OF COCKPIT CONTROLS**

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**Figure 3: FUEL TRANSFER FROM LH TANKS TO RH TANKS**

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**Figure 4: FUEL TRANSFER FROM RH TANKS TO LH TANKS**