# GLOBAL EXPRESS

**BD-700 AIRCRAFT MAINTENANCE MANUAL - PART II** 

## **REPLENISHING THE ENGINE OIL TANK - SERVICING**

## TASK 12–14–01–610–801

### 1. Quantity Check of the Engine Oil Tank (With the Sight Glass)

A. <u>Reference Information</u>

| REFERENCE             | DESIGNATION                             |
|-----------------------|---|
| TASK 24-00-00-863-801 | Opening of Non–Thermal Circuit Breakers |
| TASK 24-00-00-863-802 | Closing of Non–Thermal Circuit Breakers |
| TASK 71-00-00-866-806 | Start the Engine                        |
| TASK 71-00-00-866-809 | Engine Shutdown (Usual)                 |

### B. Job Set–Up

I

- (1) Make sure the engine operated in the last 5 to 30 minutes. If the engine did not operate in the last 5 to 30 minutes, do the steps that follow:
  - (a) Start the engine (TASK 71–00–00–866–806).
  - (b) Operate the engine at idle for 10 minutes.
  - (c) Stop the engine (TASK 71–00–00–866–809).
- (2) In the flight compartment, on the EMS CDU, set the circuit breakers that follow to OUT (TASK 24–00–00–863–801):

For the left engine,

| SYSTEM NAME | CIRCUIT BREAKER NAME | BUS NAME |
|-------------|----------------------|----------|
| ENGINE      | L FADEC CH A         | BATT     |
| ENGINE      | L FADEC CH B         | BATT     |

For the right engine,

| SYSTEM NAME | CIRCUIT BREAKER NAME | BUS NAME |
|-------------|----------------------|----------|
| ENGINE      | R FADEC CH A         | BATT     |
| ENGINE      | R FADEC CH B         | BATT     |

EFFECTIVITY: ALL



- (3) Open the access door (432CB/442CB).
- C. Procedure

Refer to Figure 301.

- (1) Do the quantity check of the oil tank as follows:
  - WARNING: BE CAREFUL WHEN YOU DO WORK ON THE ENGINE DURING OR AFTER AN ENGINE OPERATION. THE ENGINE PARTS STAY HOT FOR APPROXIMATELY THREE HOURS AFTER THE ENGINE STOPS. THIS CAN CAUSE INJURY TO PERSONS.

WARNING: BE CAREFUL IF YOU MUST DO WORK ON HOT COMPONENTS. USE APPROVED GLOVES AND PROTECTIVE CLOTHING. IF YOU DO NOT DO THIS, YOU CAN CAUSE INJURY TO PERSONS.

- WARNING: OBEY THE PRECAUTIONS THAT FOLLOW WHEN YOU USE ENGINE OIL:
  - USE APPROVED EYE AND BODY PROTECTION.
  - DO THE WORK IN AN AREA THAT HAS A GOOD FLOW OF CLEAN AIR.
  - OBEY THE MANUFACTURER'S INSTRUCTIONS.
  - DO NOT LET THE ENGINE OIL TOUCH YOUR SKIN, EYES OR MOUTH.
  - GET MEDICAL AID IMMEDIATELY, IF IRRITATION OCCURS.

ENGINE OIL CAN CAUSE INJURY.

- <u>CAUTION</u>: DO NOT LET ENGINE OIL STAY ON THE ENGINE COMPONENTS. ENGINE OIL MUST BE REMOVED IMMEDIATELY. IT CAN CAUSE DAMAGE TO THE COMPONENTS.
- <u>CAUTION</u>: YOU MUST DO A CHECK OF THE ENGINE OIL LEVEL BETWEEN 5 AND 30 MINUTES AFTER THE ENGINE STOPS. IF YOU DO NOT OBEY THESE TIME LIMITS, YOU CAN PUT TOO MUCH OIL IN THE OIL SYSTEM. DAMAGE TO THE ENGINE CAN OCCUR IF YOU PUT TOO MUCH OIL IN THE OIL SYSTEM.
- (a) Do a visual check of the oil quantity indication on the oil tank sight–glass (1). Make sure the oil level is at the FULL mark (hatched area).
- D. <u>Close Out</u>
  - (1) Remove all tools, equipment and unwanted materials from the work area.
  - (2) Close the access door (432CB/442CB).

EFFECTIVITY: ALL

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(3) In the flight compartment, on the EMS CDU, set the circuit breakers that follow to IN (TASK 24–00–00–863–802):

For the left engine,

| SYSTEM NAME | CIRCUIT BREAKER NAME | BUS NAME |
|-------------|----------------------|----------|
| ENGINE      | L FADEC CH A         | BATT     |
| ENGINE      | L FADEC CH B         | BATT     |

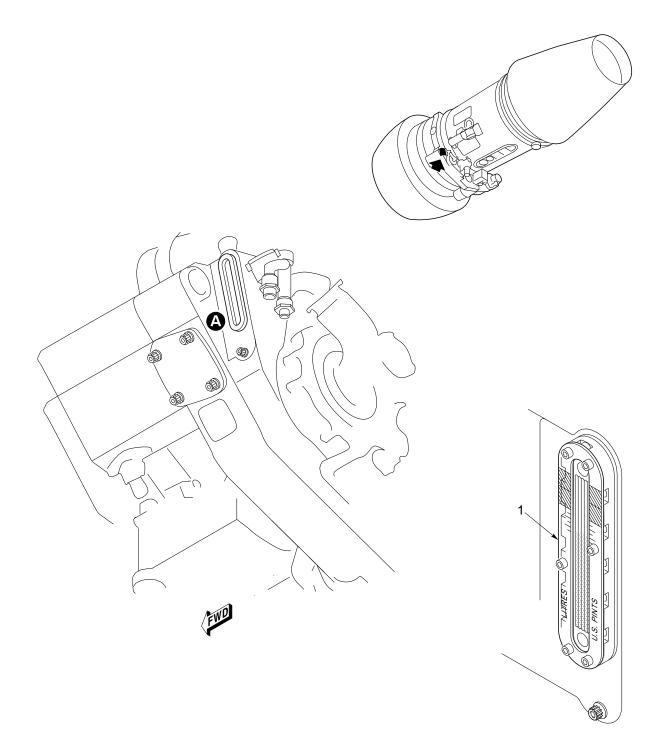
For the right engine,

| SYSTEM NAME | CIRCUIT BREAKER NAME | BUS NAME |
|-------------|----------------------|----------|
| ENGINE      | R FADEC CH A         | BATT     |
| ENGINE      | R FADEC CH B         | BATT     |

EFFECTIVITY: ALL

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Replenish the Engine Oil Tank – Servicing Figure 301

EFFECTIVITY: ALL

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#### TASK 12–14–01–612–801 2. Servicing of the Engine Oil Tank

A. Service Bulletin List

| SERVICE BULLETIN NO. | SERVICE BULLETIN TITLE   |
|----------------------|--|
| 700–24–062           | Modification – AC and DC Power Distribution –<br>Replacement of Units for Activation of Build 6.0 Upgrade  |
| 700–79–005           | Modification – Oil Replenishment System – Power Source<br>Change to Battery Power on Aircraft Post Build 4 |

## B. <u>Reference Information</u>

| REFERENCE             | DESIGNATION   |
|-----------------------|---|
| TASK 12–14–05–610–801 | Quantity Check of the Engine Oil Supply at the<br>Airframe–Mounted Oil Tank |
| TASK 12–14–01–610–801 | Quantity Check of the Engine Oil Tank (With the Sight Glass)                |
| TASK 24-00-00-910-801 | Electrical/Electronic Safety Precautions                                    |
| TASK 24-41-00-861-801 | Connect and Energize External AC Power                                      |
| TASK 24-41-00-861-802 | Remove External AC Power  |
| TASK 24-42-00-861-801 | Connect and Energize External DC Power                                      |
| TASK 24-42-00-861-802 | Remove External DC Power  |
| TASK 49–10–00–866–801 | Starting the APU  |
| TASK 49–10–00–866–802 | APU Shutdown (Normal)   |

- C. Job Set–Up
  - (1) Obey all the electrical/electronic safety precautions (TASK 24–00–00–910–801).
- D. <u>Procedure</u>

Refer to Figure 302.

(1) Make sure the airframe-mounted oil tank is full (TASK 12-14-05-610-801).

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(2) Do the quantity check of the engine oil (with the sight glass) (TASK 12–14–01–610–801).

EFFECTIVITY: ALL



On A/C Post SB 700-79-005 or Post SB 700-24-062

(3) Set the BATT MASTER switch to ON.

On A/C Pre SB 700–79–005 or Pre SB 700–24–062

(4) Connect and energize external ac power (TASK 24–41–00–861–801) or,

Connect and energize external dc power (TASK 24-42-00-861-801) or,

Start the APU (TASK 49–10–00–866–801).

- (5) On the OIL REPLENISHMENT control panel, set the POWER switchlight to on. Make sure the SYSTEM ON legend comes on and stays on.
  - <u>NOTE</u>: When the POWER switchlight is set to on, all legends on the OIL REPLENISHMENT control panel will come on for 3 seconds. All legends will then go off except for the SYSTEM ON legend. The TANK LO legend will stay on only if the oil in the replenishment tank is too low. Any LO OIL legend will stay on if any of the oil tanks are less than 80% full.
- <u>CAUTION</u>: STOP THE OIL REPLENISHMENT OPERATION AND EXAMINE THE SYSTEM IF MORE THAN 4 U.S. QUARTS (3.78 L) IS ADDED. IF YOU CAN ADD MORE THAN 4 U.S. QUARTS (3.78 L) OF OIL, THE OIL SYSTEM CAN HAVE LEAKS OR OTHER PROBLEMS.
- (6) Set the applicable LH ENG or RH ENG switchlight to on. Make sure the conditions that follow occur:
  - (a) The PUMP ON and VLV OPEN legends come on.
  - (b) The applicable engine oil tank fills.
    - <u>NOTE</u>: Make sure that the applicable engine oil tank fills. Do a quantity check of the engine oil tank with the sight glass (TASK 12–14–01–610–801).
  - (c) The PUMP ON and VLV OPEN legends go off after a short period of time.
    - NOTE: If the TANK LO legend comes on at any time, do the servicing of the engine oil supply at the airframe-mounted oil tank (TASK 12–14–05–610–801).

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- (7) Set the applicable LH ENG or RH ENG switchlight to off.
- (8) On the OIL REPLENISHMENT control panel, set the POWER switchlight to off.

On A/C Post SB 700–79–005 or Post SB 700–24–062

(9) Set the BATT MASTER switch to OFF.

EFFECTIVITY: ALL

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On A/C Pre SB 700–79–005 or Pre SB 700–24–062

(10) Remove external ac power (TASK 24–41–00–861–802) or,

Remove external dc power (TASK 24-42-00-861-802) or,

Shut down the APU (TASK 49-10-00-866-802).

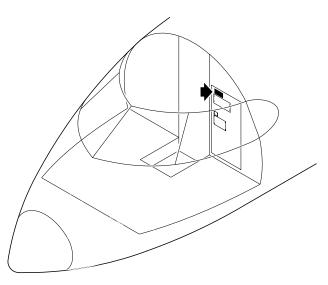
- (11) Do the quantity check of the engine oil tank (with the sight glass).
- (12) Make sure the airframe-mounted oil tank is full (TASK 12-14-05-610-801).
- E. Close Out
  - (1) Remove all tools, equipment and unwanted materials from the work area.

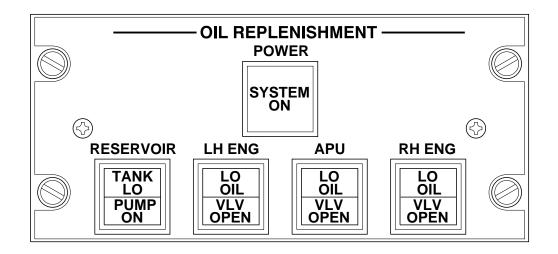
EFFECTIVITY: ALL

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Servicing of the Engine Oil Tank – Servicing Figure 302

EFFECTIVITY: ALL

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