REFUELING-DEFUELING

1. Refueling Procedures

Due to the relative flatness of the wing, it is recommended that the aircraft be pitched nose down, if possible level laterally when fueling to capacity.

A. Overwing Refueling

CAUTION: DUE TO THE SHALLOWNESS OF THE WING TANK IN THE AREA OF THE FILLER ADAPTER, CAUTION SHOULD BE EXERCISED SUCH THAT THE INSIDE OF THE TANK IS NOT DAMAGED BY THE NOZZLE.

(1) Check quantity in tanks using cockpit gages.

NOTE: If tanks need refueling, it is recommended that servicing be accomplished over the leading edge of the wing.

(2) Remove Gravity fill vent cover from lower skin surface.
(3) Check main vent (lower surface of wing) is open.
(4) Remove gravity filler cap from adapter at outboard location, upper skin surface.
(5) Ground fuel nozzle to aircraft structure through grounding jack located in the upper leading edge.
(6) Fuel as required.
(7) When fueling has been completed, replace filler cap and check for security.
(8) Replace gravity fill vent cover and check for security.

B. Pressure Fueling - Full Capacity

NOTE: This procedure is to be followed for full capacity fuel loading. For partial loading, see Paragraph C.

(1) Gain access to pressure fueling adapter through access door located in the fuselage to wing fillet skin.
(2) Remove dust cover from adapter.
(3) Ground pressure fueling nozzle.
(4) Connect pressure fueling nozzle to pressure fueling adapter.
(5) Check pre-check selectors (mounted to pressure fueling adapter) are in "FUEL" position.
(6) Open pressure fueling nozzle.

**NOTE:** Optimum fuel pressure range at the fueling nozzle (with fuel flowing) for adequate pre-check of high level pilot’s and tank pressure sensing valves is 35 to 55 psig max.

(7) Load the required amount of fuel.
(8) Remove pressure fueling nozzle from pressure fueling adapter.
(9) Remove ground.
(10) Replace dust cover on pressure fueling adapter and check for security.
(11) Check pre-check selectors are in "FUEL" position.
(12) Close access door.

**C. Pressure Fueling - Partial Loading**

**NOTE:** This procedure is to be followed for partial fuel loading. For full capacity fuel loading, see paragraph B.

To carry out this procedure, it is necessary to have someone in the cockpit to read the fuel quantity indicators during fueling operations.

(1) Gain access to pressure fueling adapter through access door located in the fuselage to wing fillet skin.
(2) Remove dust cover from adapter.
(3) Ground pressure fueling nozzle.
(4) Connect pressure fueling nozzle to the pressure fueling adapter.
(5) Check pre-check selectors (mounted to pressure fueling adapter) are in "FUEL" position.
(6) Ensure the left and right REMOTE FUELING SHUT-OFF switches (located in the overhead panel) are in the OPEN position.
(7) Open pressure fueling nozzle.

**NOTE:** Optimum fuel pressure range at the fueling nozzle (with fuel flowing) for adequate pre-check of high level pilot’s and tank pressure sensing valves is 35 to 55 psig max.

(8) Operate pre-checks during refueling operation.

**NOTE:** Steps 9 through 11 cover partial loading using the pre-check selector at the pressure fueling adapter.

Steps 12 through 17 cover partial loading using the remote fueling shut-off switches. When the required amount of fuel has been uplifted into one side, place the pre-check selector for that tank into the "FLOAT" position.

(10) When the required amount of fuel has been uplifted into the other side, close the pressure fueling nozzle.
(11) Reposition selector valve from "FLOAT" (step 9) to "FUEL".
(12) Energize the main 28V dc bus.
(13) When the required amount of fuel has been uplifted into one side, place the REMOTE FUELING SHUT-OFF switch for that tank to the closed position.
(14) When the required amount of fuel has been uplifted into the other side, place the other REMOTE FUELING SHUT-OFF switch to the closed position.
(15) Close the pressure fueling nozzle.
(16) Place the REMOTE FUELNG SHUT-OFF switches to the OPEN position.
(17) De-energize the main 28V dc bus.
(18) Remove pressure fueling nozzle from pressure fueling adapter.
(19) Remove ground.
(20) Replace dust cover from pressure fueling adapter and check for security.
(21) Check pre-check selectors are in “FUEL” position.
(22) Close access door.

Defueling the aircraft may be accomplished by either suction, pumping or a combination of both. Suction defueling is accomplished through the pressure fueling adapter and does not result in a completely empty fuel tank. Pumping is accomplished through the drain valves located in each of the upper main wheel wells. This method affords the least amount of fuel remaining in the tank.

A tank vent system provides adequate venting while the aircraft is on the ground. In flight the tanks are slightly pressurized. Due to the wing geometry, it is necessary when gravity fueling to use a separate inboard standpipe vent located on each side.