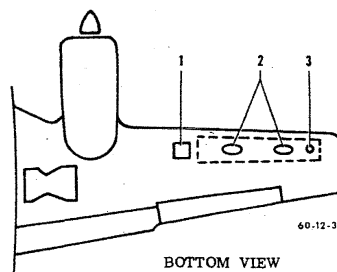


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1. Fuel Plumbing Access
2. Fuel Cell Access
3. Filler Neck

**Outboard Leading Edge Fuel Cell
Access Openings
Figure 205**

- f. Unsnap the fuel cell and remove it from the wing cavity through one of the access openings (2).

NOTE

Tape the edge of the access hole to protect the fuel cell during removal and installation. If the fuel cell is to be stored for a period of 10 days or longer, coat the inside of the cell with light engine oil to prevent cracking or deterioration.

**OUTBOARD LEADING EDGE FUEL CELL
INSTALLATION**

- a. Carefully insert the fuel cell into the wing cavity through access openings (2) and snap in place.
- b. Connect all fuel and vent plumbing. Torque the rubber fuel fitting nipples to 25 ± 5 inch-pounds.
- c. Install the internal fuel cell interconnect clamps. Torque clamps to 25 ± 5 inch-pounds.
- d. Install the access plates (2) and plumbing access plate (1) on the under side of the wing. Torque the access plates to 45 to 55 inch-pounds.
- e. Install the filler neck with a new gasket. Torque the bolts to 45 to 55 inch-pounds and safety wire.

NOTE

Use sealer (3, Chart 205, 91-00-00) between the skin and the adapter flange when installing the filler neck.

WET WING TIP REMOVAL

- a. Disconnect external power from the airplane. Place battery and generator switches in the off position.
- b. Defuel the airplane, to the point where fuel cannot be seen from the inboard filler position.
- c. Remove access plates from the outboard lower wing.
- d. Remove deice boot from wing tip leading edge (if installed). (Refer to Chapter 30).
- e. Working through the access opening in the under side of the wing, loosen the clamps on the 3 inch fuel interconnect and vent lines.
- f. Disconnect the electrical connections.
- g. Support wing tip. Using a 1/8 inch drill bit, drill out rivets along the connecting strap and remove the strap.
- h. Remove the support angle screws at the juncture of the wing tip and wing front and rear spar. Remove the wing tip.

WET WING TIP INSTALLATION

- a. Disconnect external power from the airplane. Place battery and generator switches in the off position.

CAUTION

Support the wing tip on a platform which will give firm support but will allow some flexibility of movement of the wing tip to facilitate proper alignment. Protect the wing tip surface from scratches, dents and other damage during installation.

- b. Support the wing tip in the proper position to attach to the wing. Connect the hoses from the wing to the 3 inch fuel interconnect and vent lines. Secure with clamps.
- c. Connect electrical connections.
- d. Move wing tip into position and secure support angles to the front and rear spars with screws.
- e. Using MS20426AD3 rivets, rivet the connecting strap to both the wing and wing tip.
- f. Install the deicer boots (if required). (Refer to Chapter 30.)

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NOTE

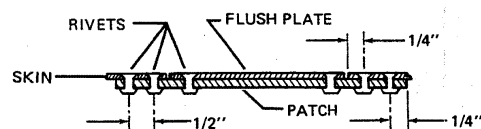
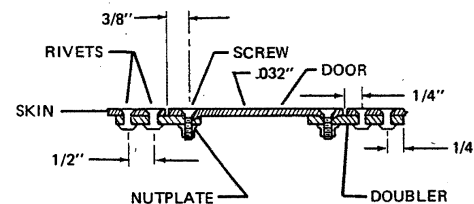
Repair of the wet wing tip is permissible providing the damaged area is far enough from the rib to allow a doubler or plate to be installed. Holes cut to remove damaged area must be round or at least have generous radii. Should a stringer be damaged or fall within the repair area it must be bridged across and be attached to the repair.

CAUTION

It must be realized the wet wing tip is a highly stressed area; consequently, the repair structure must be of equal capability.

GENERAL INSTRUCTIONS

1. Seal edges of doubler or plate, rivet butts and nut plates with PR890B-1/2 (19, Chart 205, 91-00-00) or EC 1675B-1/2 (20, Chart 205, 91-00-00).
2. Fill the rivet heads, screw heads and the patch/skin joints with PR890B-1/2 (19, Chart 205, 91-00-00) or EC 1675B-1/2 (20, Chart 205, 91-00-00).
3. Pressure test (0.50 + 0.25 - 0.00 psig) before applying filler to outer surface.



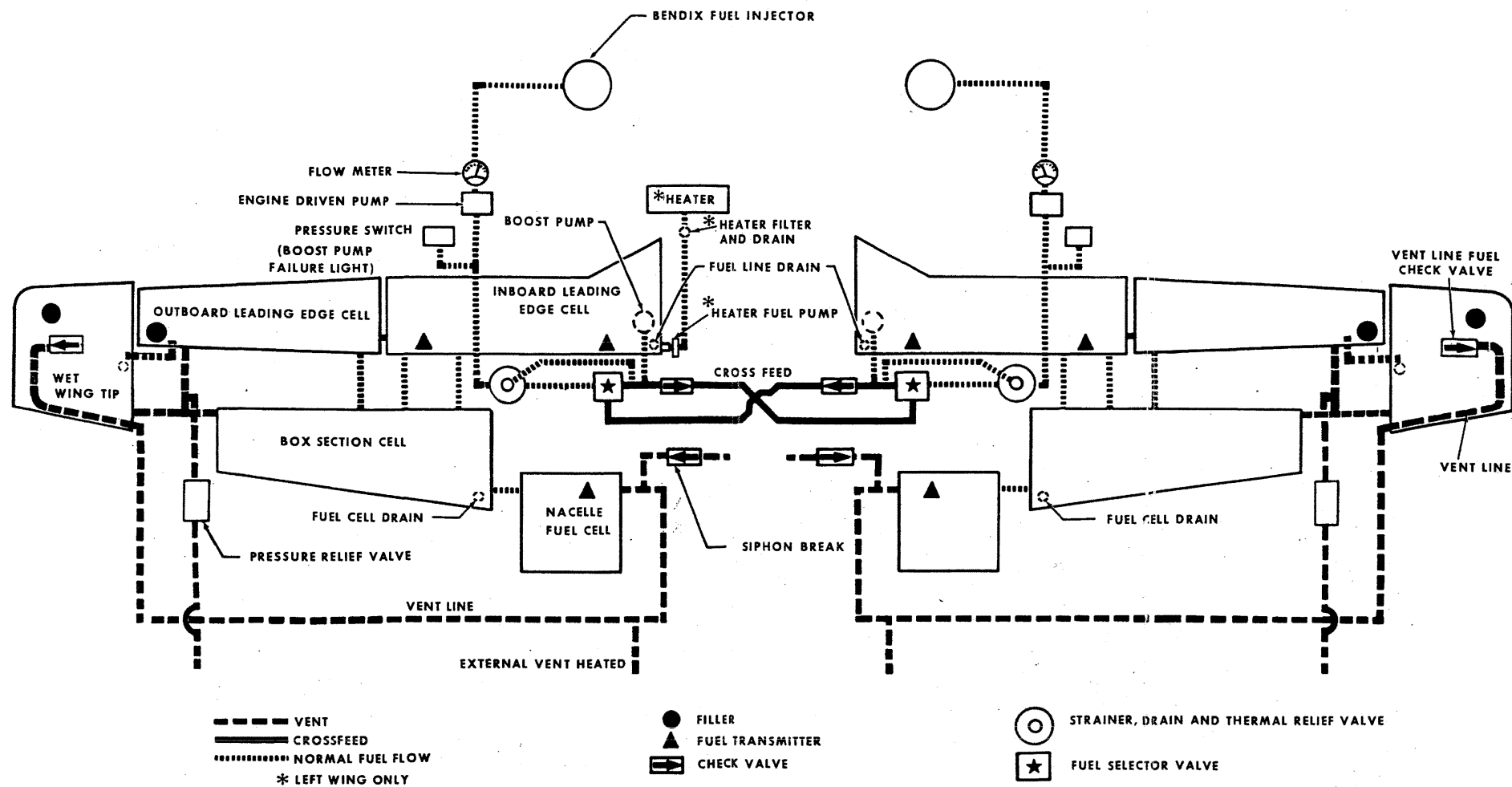
REPAIR OF INACCESSIBLE AREAS

1. Door material - .032 2024 T3 Aluminum ALCLAD.
Doubler material - .051 2024 T3 Aluminum ALCLAD.
Nut Plates - K1000-832 or equivalent.
Screws - AN507-8R-length to be determined.
Rivets - AN426AD3-for attaching nut plates.
Rivets - AN426AD4-for attaching doubler.
2. Two rows rivets in doubler and skin--1/4" E.D., 1/2" spacing between rows and rivets.
3. Single row of screws through doubler and door--3/8" E.D., 5/8" spacing. Dimple door and countersink doubler.
4. Doubler may be cut on one side only in order to place it on inside of cell. Cut side of doubler to be placed on inboard or outboard side of repair.

REPAIR OF ACCESSIBLE AREAS

1. Rivets - AN426AD4-5
Patch material - .032 2024 T3 Aluminum ALCLAD
Plate material - .032 2024 T3 Aluminum ALCLAD
2. Two rows rivets through patch and skin (patch plate to be on inner surface of cell. -If the plate is too large for entry through access openings, use method for inaccessible area.)
3. Rivet E.D. 1/4"--spacing 1/2" between rows and rivets.
4. Fit flush plate and secure with only enough rivets to prevent filler from cracking.

**Minor Wet Wing Tip Repair
Figure 206**



50-603-34

Optional Fuel System Schematic
(P-348, P-365 and after)
Figure 2

"END"

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**GENERAL - DESCRIPTION AND OPERATION
(Figure 1)**

FUEL CELLS

The fuel system installation consists of an inboard main fuel cell and an outboard cell in the leading edge, a nacelle tank, a wing panel fuel cell in each wing and a wet wing tip tank (optional on serials P-348, P-365 and after). All of the fuel cells in each wing and wing tip are interconnected in order to make all of the usable fuel in each wing available to its engine when the fuel selector valve is turned ON. The interconnecting fuel cells are serviced either through the single filler on each wing or the filler in each of the optional wet wing tips, providing single point filling for each side. The combined capacity of the standard and optional systems is shown below:

<i>SERIALS</i>	<i>CAPACITY IN GALLONS</i>	<i>USABLE IN GALLONS</i>
P-3 thru P-195 inboard leading edge fuel cells unbaffled	207	192
P-3 and after with inboard leading edge baffled fuel cells	207	202
Optional fuel system P-348, P-365 and after	237	232

FUEL CROSSFEED

The separate identical fuel supplies for each engine are interconnected by crossfeed lines. During normal operation, each engine uses its own fuel pumps to draw fuel from its respective fuel tank arrangement. However, on crossfeed operations, the entire usable fuel supply of both wings can be consumed by either engine.

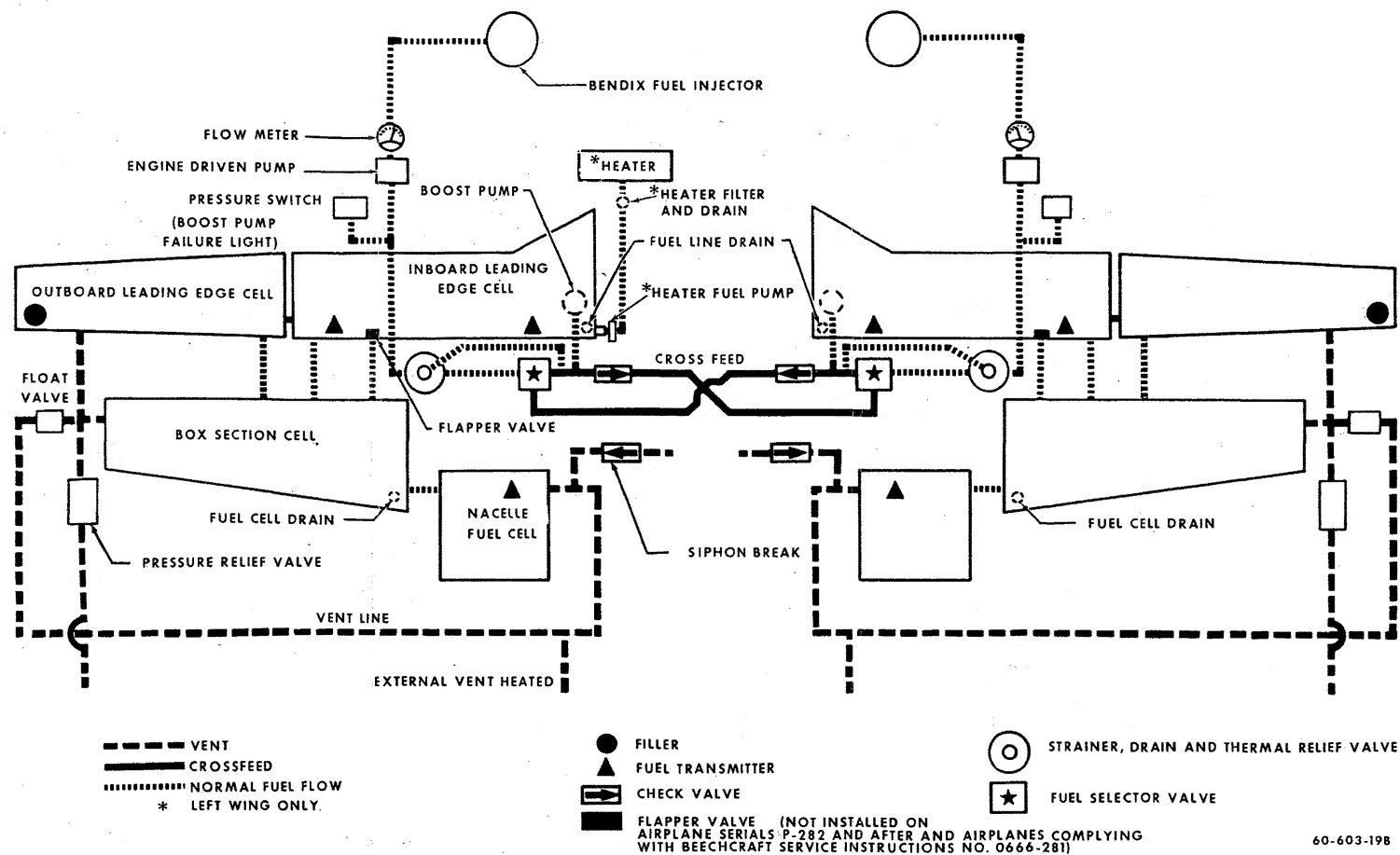
FUEL BOOST PUMPS

Submerged, tank-mounted fuel boost pumps are provided for each engine and are located in the inboard leading edge tanks. They are controlled by separate ON-OFF toggle switches located on the pilot's subpanel. The fuel boost pumps provide for near maximum engine performance should the engine-driven pump fail. Fuel boost pump failure is indicated by illumination of a FUEL PRESS light on the panel.

FUEL CELL DRAINS

The fuel system is drained by six snap-type drains under the wings. A drain is located in each inboard leading edge fuel cell, box section fuel cell and fuel strainer. An additional fuel strainer drain for the heater fuel line is located in the nose wheel well.

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Fuel System Schematic
Figure 1