

## FUEL SYSTEM - MAINTENANCE PRACTICES

### 1. General

- A. Fuel system maintenance practices consist of defueling and fuel bay purging.

### 2. Precautions

- A. Always ground airplane before performing any maintenance on fuel system.
- B. Control drainage of residual fuel from disconnected fuel lines and hoses.
- C. Ensure battery switch is turned OFF when performing maintenance on fuel system, unless otherwise specified.  
**NOTE: Plugs or caps should be installed on lines, hoses, and fittings to prevent thread damage and contamination).**
- D. Use thread compound, Antisieze, Graphite Petrolatum (MIL-T-5544) or equivalent to lubricate, and/or seal leaking connections. Apply sparingly to male fittings, keeping compound off first two threads. DO NOT allow compound to enter fuel system.
- E. Before repairing fuel leaks or performing any maintenance on integral fuel tanks, it may be necessary to defuel airplane.

### 3. Defueling

**NOTE: Drain valve poppet O-ring replacement can be performed, without defueling the airplane. Refer to Chapter 28, Fuel Tanks - Maintenance Practices.**

**WARNING: During all fuel system servicing procedures, fire fighting equipment must be available. Two ground wires from TLE-down rings on the airplane to approved ground stakes shall be used to prevent accidental disconnection of one ground wire. Make sure battery switch is turned off, unless otherwise specified.**

- A. Defuel airplane.
  - (1) Ground airplane to a suitable ground or stake.
  - (2) Ensure battery switch is turned OFF.
  - (3) Turn fuel selector valves OFF.
  - (4) Remove filler cap(s) from tank(s) to be defueled; insert defueling nozzle.
  - (5) Remove as much fuel as possible with defueling nozzle.
  - (6) Remove drain valves from bottom of fuel tank and drain remaining fuel.

### 4. Fuel Bay Purging

**WARNING: Purge fuel tank(s) with argon or carbon dioxide prior to repairing leaks to minimize possibility of explosion. Use a portable vapor detector to determine when it is safe to repair fuel tank(s).**

- A. Purge Fuel Bays.
  - (1) Ground airplane to suitable ground or stake.
  - (2) Ensure battery is disconnected from electrical system.
  - (3) Drain all fuel from tank(s).
  - (4) Remove access door and place inert gas supply hose in fuel tank.
  - (5) Allow gas to flow into tank until fuel vapor can not be detected. Non-sparking tools shall be used to make repairs (air motors, plastic hammers and scrapers, etc.)