

# SERVICE BULLETIN

**Subject:** Fuel Nozzle Sheath Inside Depth Too Shallow

1. Planning

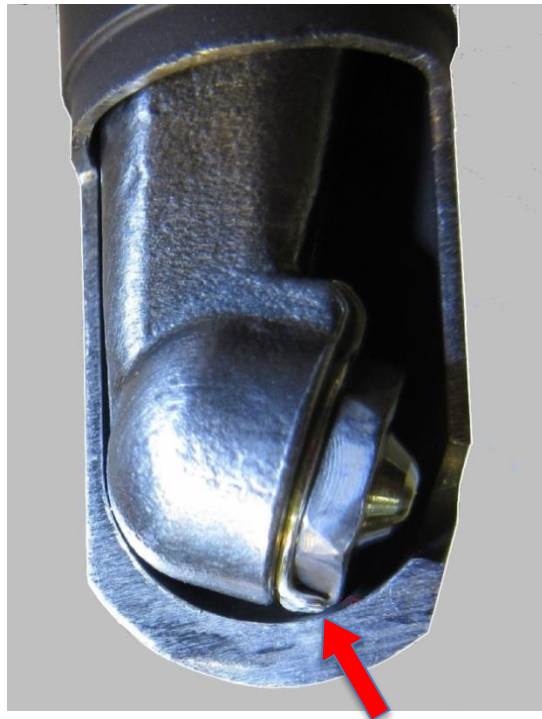
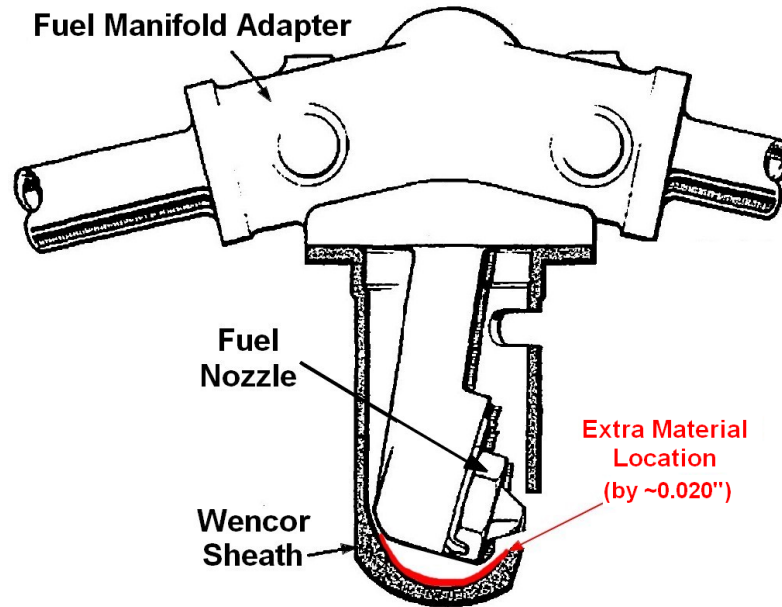
a. Effectivity

Wencor P/N	NHA P/N	NHA Description	ATA	Engine Application
3119920-01WE  Sheath, Fuel Nozzle	3019491 3021242 3032844 3034342	Engine	73-10-05	PT6A-38 PT6A-41 PT6A-42 PT6A-45 PT6A-50 PT6A-60 PT6A-61 PT6A-62 PT6A-64 PT6A-65 PT6A-67

b. Reason

The inside depth of the Wencor Sheath was designed with approximately 0.020” extra material in the bottom of the inside area of the Sheath for improved manufacturability. The extra material created the possibility of contact with the Duplex Fuel Manifold Adapter or the bent tabs on the key washer or the hex on the fuel nozzle as shown in Figure 1.

Although the Sheath is also installed onto the Simplex Fuel Manifold Adapter, based upon an actual fit check it is unlikely that there will be contact with the Simplex Fuel Manifold Adapter because that adapter is slightly shorter than the duplex adapter.



**Figure 1, Section Views Showing Extra Material Location and Potential Contact Location with Sheath and Duplex Adapter**

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c. Background

The Wencor Sheath, Fuel Nozzle is installed over both the Simplex and Duplex Fuel Manifold Adapters as shown in Figure 2. The Sheath serves primarily as a heat shield from the high temperature combustion gases as forced cooling air from the compressor section enters the slot near the Sheath flange and flows within the Sheath and out through the nozzle aperture hole. This cooling air also assists in fuel atomization on the PT6 series engines.

A single Wencor customer reported a problem with the installation of the Wencor Sheath onto a Duplex Fuel Manifold Adapter. The investigation discovered that there would be direct contact between the inside dome area of the Sheath and the Duplex Fuel Manifold Adapter or the bent tabs on the key washer or the hex on the fuel nozzle due to extra material located on the inside dome area of the Sheath as shown in Figure 1.

d. Safety

The installation steps and required checks listed in the PT6 engine maintenance manual ensure that the Sheath is installed properly onto the fuel manifold adapters and also ensures that there is no disruption of the fuel spray as it exits the fuel nozzle. Therefore any contact between the Wencor Sheath and the Duplex Fuel Manifold Adapter will not have any operational safety effects on the PT6 engine.

2. Recommended Actions

a. Line Maintenance (for parts in service)

Perform the normal required maintenance checks on the fuel manifold system per the engine maintenance manual (EMM). Replace parts as required per the EMM.

b. Repair and Overhaul (for parts not yet in service)

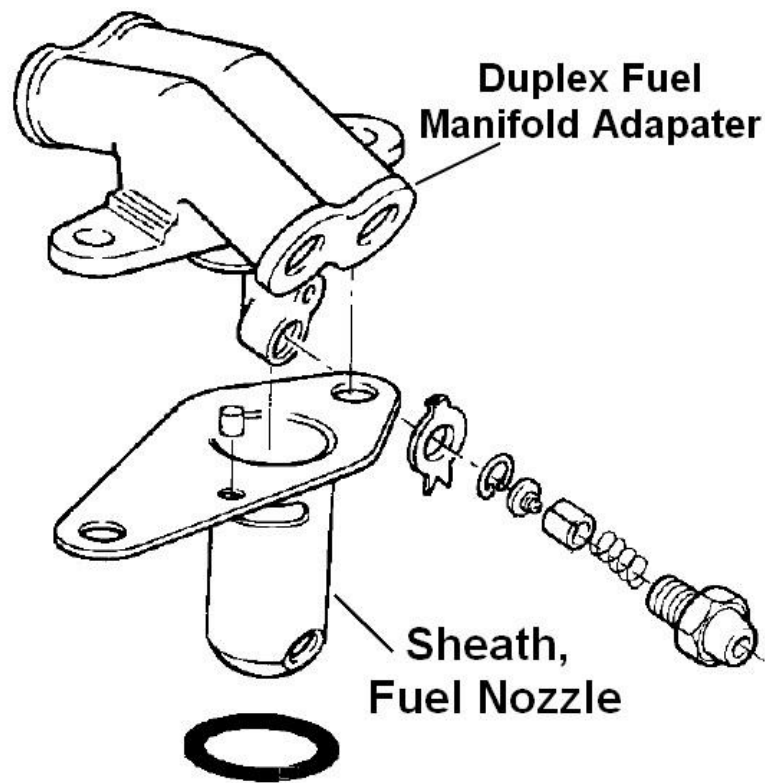
Any Wencor Fuel Nozzle Sheath's that have not already been installed should undergo a trial fit check to determine if there is contact with the Duplex Fuel Manifold Adapter, key washer or fuel nozzle during installation. Installation onto a Simplex Fuel Manifold Adapter should be acceptable. Any Sheath's that result in contact should be returned to Wencor for an improved replacement Sheath. This action will ensure proper service life on both the Sheath and the Duplex Fuel Manifold Adapter.

### 3. Compliance

There is no required compliance time for this SB.

### 4. Material

Any Wencor Sheath's that requires replacement with improved Sheath's as a result of this Service Bulletin will be covered free of charge under the Wencor material warranty. If there are any questions regarding this Service Bulletin, please contact the applicable Wencor representative by calling 801-489-2000 or email: [sales@wencor.com](mailto:sales@wencor.com).



**Figure 2, Exploded View of Sheath Installation**