



sonex LLC

511 Aviation Road Oshkosh, WI 54902
Tel. (920)-231-8297 www.sonexaircraft.com

Installing the Oops Fittings

(Rev C 11/17/2022, 2 Pages)

Oops fitting installation is standard to all new Sonex fuel tanks and a replacement / repair for embedded fittings in legacy tanks that have come lose. They are available in two size:

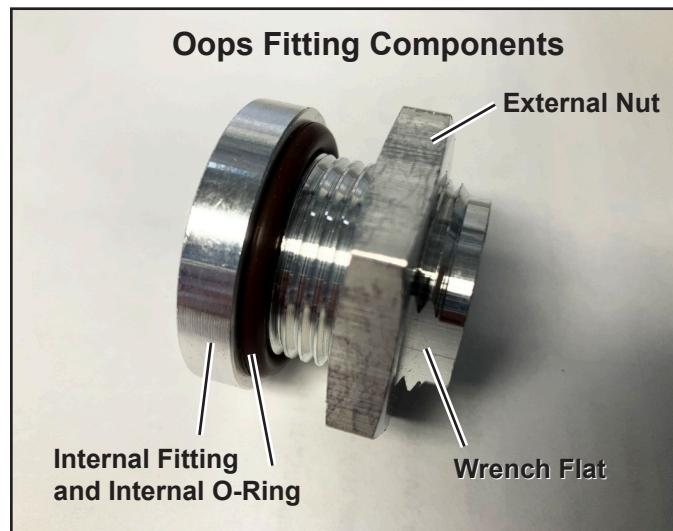
1/8 NPT fitting with O-Ring - Part Number SNX-G01-20

3/8 NPT fitting with O-ring. - Part Number SNX-G01-30

Replacement O-Rings:

Replacement O-Ring for 1/8 NPT Fitting- SNX-G01-23

Replacement O-Ring for 3/8 NPT Fitting- SNX-G01-33



Recommended Tools and Materials

Review these instructions to determine specifically what additional parts you may need to complete your particular installation:

- X-Acto and/or utility knife
- Step Drill, Approximately 1/8" to 7/8"
- Adjustable wrench (2)
- Flexible wire (safety wire, electrical wire, etc.)
- 9/16" Dia. drill bit for installing a 1/8 NPT fitting
- 1" Dia. drill bit for installing the 3/8 NPT fitting
- 3/4" diameter washer

Installing Oops Fittings In New Tanks

Refer to the "G" section of your Sonex airframe plans set. These instruction are supplemental.

Note: Some airframe plans may show a second o-ring installed under the nut on the outside of the tank. That o-ring should not be installed as it may prevent the nut from tightening properly and introduce the possibility of a leak.

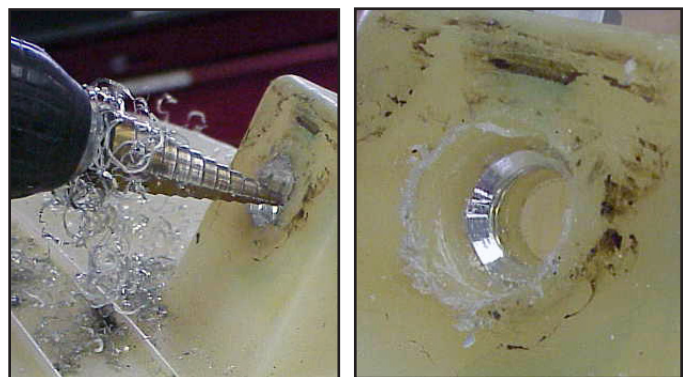
Removing an Existing Fitting

1. Purge all fuel and fumes from the fuel tank.



Explosive Vapor!
Avoid serious injury or death.
Remove all fuel and explosive vapor from the fuel tank before performing this repair.

2. Use a step drill to drill the damaged fitting from the tank. If drilling the large 3/8 NPT fitting do not drill larger than 7/8" with the step drill. If drilling a 1/8 NPT fitting do not drill deeper than the 9/16" step of the drill. Some of the damaged fitting will still remain in the tank after this step is complete.



A step drill (left) is used to remove most of the existing fitting (right). Do not drill deeper than indicated in step 2 or the hole may be too large for the Oops fitting and a new fuel tank will be required.

3. Remove the remainder of the damaged fitting with a standard twist drill. Use a 9/16" diameter drill bit to remove the remainder of a 1/8" NPT fitting. Use a 1" diameter drill bit to remove the remainder of a 3/8" NPT fitting.

4. Use a sharp knife, fine file, and sandpaper as needed to smooth the area around the entrance and exit of the hole so the o-rings of the Oops fitting have a smooth surface to seal against.

Important: If replacing the 3/8 NPT fitting, remove the large ridge inside the tank where the old fitting was. The smoother and flatter this area is the better the seal will be between the Oops fitting and the tank.



Installing an Oops Fitting

Note: This is just one method which can be used to position an Oops fitting in the tank. Any tools or methods that accomplish the task are acceptable.

1. Thoroughly clean the inside of the tank.
2. Guide a flexible wire (electrical wire, coat hangar, safety wire, etc.) into the hole where the old fitting was, through the tank, and out the filler neck.
3. Place the internal fitting (with one O-ring) over the wire and let it slide through the tank to the hole of the old fitting.
4. Attach a 3/4" diameter washer to the end of the wire which extends from the filler neck and pull the wire/washer into the tank until the washer contacts the internal fitting and "pushes" it through the hole.
5. Slide the lock nut over the wire and onto the fitting. Tighten the lock nut by turning it *counterclockwise* onto the fitting. Wrench flats on the end of the internal fitting allow it to be held with a wrench while the nut is tightened.
6. Remove the wire and washer from the tank.



The Oops fitting installed.

7. It is wise to test the fittings for leaks before re-installing the tank. If you use air pressure do not apply more than 5 psi.

Installing Fuel Fittings

When installing fuel fittings into the Oops fitting the wrench flats on the Oops fitting permit easy tightening of the fuel fitting without spinning the Oops fitting in the tank.