



There are several possible causes to air line solder shorts including:

1. Not holding the feedthru firmly against the bottom of the counterbore.
2. The presence of small burrs at the airline entrance.
3. Use of fixturing, which does not allow proper venting of the solder and flux gases.

The first happens most frequently when soldering without fixtures in the vertical axis. The feedthru, being lower density than the solder, may tend to float during solder melt, thereby inviting solder into the capillary formed beneath when it lifts. Proper fixturing will preclude this problem.

The second problem is avoided by being sure that parts are properly de-burred before plating. Parts should be inspected for burrs with a microscope. Troublesome burrs are frequently undetectable with the naked eye.

Fixtures utilized to hold a feedthru and a solder preform in place should allow for gas escape. This problem is particularly common when utilizing spark plug type fixtures, which if improperly designed will tend to prevent gas escape from the top of the feedthru. Pressure can build in the solder joint from solder and flux out-gassing. If venting to the outside is not provided, solder can be forced into the airline behind the feedthru and cause shorts. See [Bulletin# 400](#) for fixtures, which provide for proper out-gassing.