PTL Continuity Test Fixture

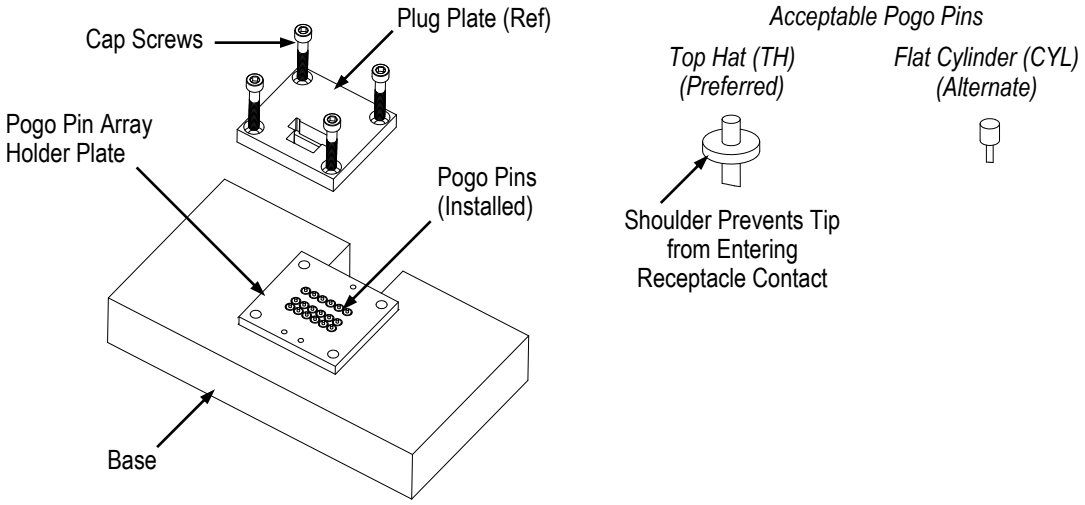

Figure 1

NOTE
Dimensions in this instruction sheet are in metric units. Figures are not drawn to scale.

The test fixture consists of the components shown in Figure 1. Drawing 1969744 provides design geometry, instruction of component assembly, and shows the following options. Models are available upon request.

- pogo pins: made-to-order top hat (TH) (preferred) available from Lone Star Industrial or off-the-shelf cylindrical flat tip (CYL) (alternate) available from Everett Charles Technologies
- pogo pin array holder plate: TH, which accepts TH pogo pins or cylindrical flat tip (CYL), which accepts CYL pogo pins
- plug plate: 1 for each housing configuration (for example, 1×5)

NOTE
For information concerning PTL connector system, refer to 114-106118.

1. TEST FIXTURE DESIGN

1. The test fixture should be machined from stiff plastic such as FR-4 (as opposed to acetal homopolymer resin) for optimum retention of the pogo pins and fixture longevity.
2. Select a pogo pin tip geometry and size that will not cause damage to the receptacle contact if the pogo pin is jammed or mis-inserted. Consider these guidelines:
   a. The tip of the pogo pin should have a maximum diameter of 1.52 mm.
   b. A rounded tip is not recommended because it can enter the receptacle contact and cause it to enlarge.
   c. A long travel length is not necessary to achieve a minimum level of receptacle contact resistance. A short travel length decreases the likelihood of deformable receptacle contact damage due to pogo pin failure.

      Pogo pins with a preload of at least 0.2 N will ensure that continuity is met regardless of the travel length. Figure 2 illustrates the relationship between the travel length and position of the pogo pin.
   d. Circuitry should be added dictated by the application.

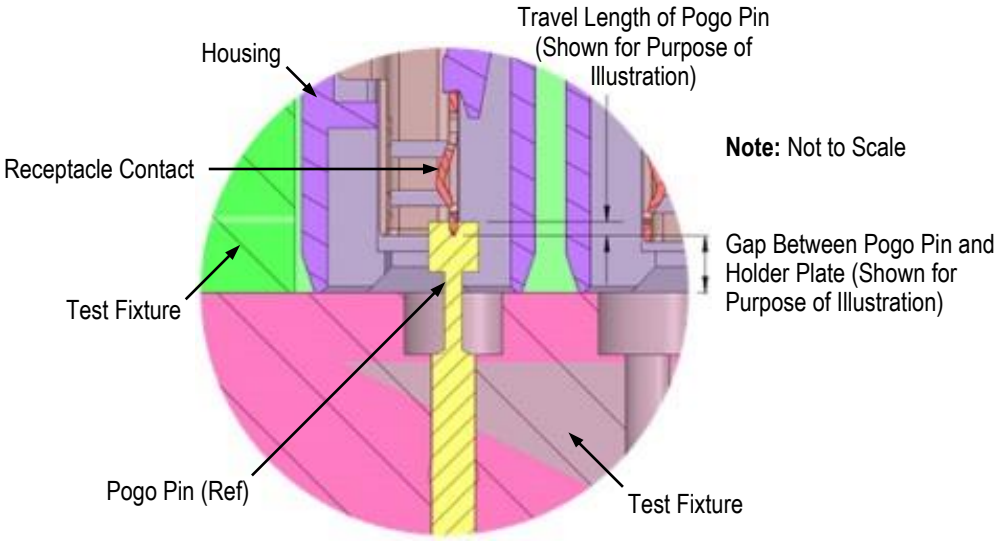

Figure 2

2. PROBING

Probe the receptacle contact at the location shown in Figure 3.

CAUTION
To avoid deformation of the receptacle contact, do not probe inside of the receptacle contact.

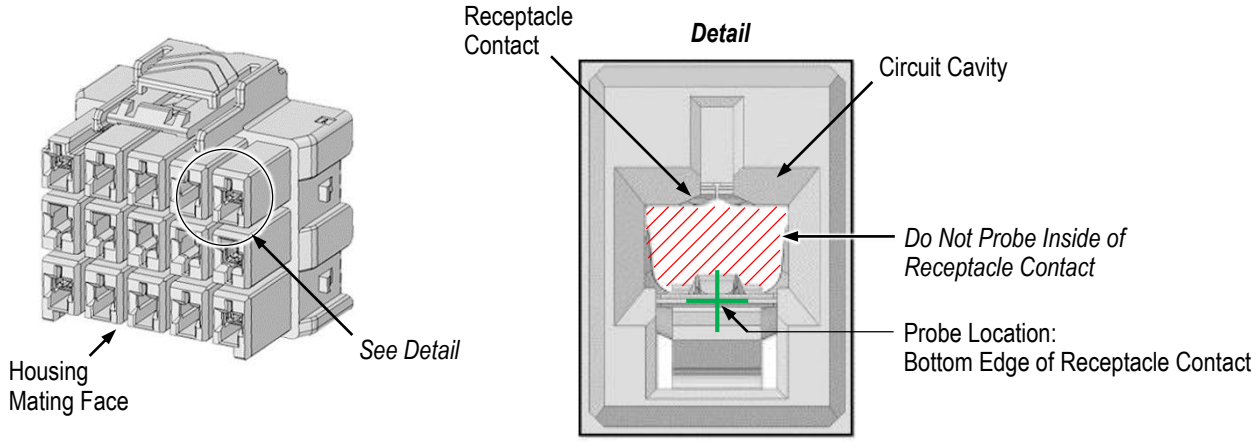

Figure 3

3. REVISION SUMMARY

Initial release of instruction sheet