

# PRODUCT SOLUTIONS



## SOCKET CLEANING AND PREVENTIVE MAINTENANCE PROCEDURES:

### ⚠ CAUTIONS:

- ◆ **Never immerse the socket in any solution.**
- ◆ **Never use Alcohol.** It can cause problems when it dries. It can leave residue and calcium behind.
- ◆ **Never touch the socket pogo pins with finger tips.** Oil and dermis contaminate the contacts and cause premature failure.

### SOCKET FAILURES:

Sockets typically operate at nearly 100% Yield until electrical performance begins to degrade. There are three (3) primary causes of this degradation in performance.

- ◆ As sockets are used, solder is transferred from the package to the socket contacts. This solder oxidizes and degrades the electrical signal needed to complete the programming operation.
- ◆ The signal can be further degraded as organic and inorganic debris collects on the contact surfaces. This debris comes from the programming environment as well as from the actual devices being programmed.
- ◆ The socket also fails due to the mechanical damage to pogo pins. Each time a device is inserted into a socket, a small amount of mechanical wear can occur. This can damage the critical gold plating which is needed to maintain electrical interconnect.

### PREVENTION:

- ◆ Perform regular visual inspections to identify signs of abnormal wear.
- ◆ The air in the programming facility should be kept clean, and the relative humidity should be kept as low as possible.
- ◆ Do not touch socket contacts with finger tips. Oil and dermis contaminate the contacts and cause premature failure.
- ◆ Ensure proper mounting of the socket to board interface (i.e. load board)
- ◆ Maintain proper hardware alignment and package seating
- ◆ Examine composition of any foreign matter and/or debris
- ◆ Determine and minimize the sources of debris
- ◆ Do not use any form of abrasive chemicals or fabrics against any part of the socket
- ◆ Do not modify, refinish or re-surface any part of the socket

## SOCKET CLEANING AND PREVENTIVE MAINTENANCE PROCEDURES:

### CLEANING AND MAINTENANCE PROCEDURES:

The preventive maintenance frequency will vary depending on the type of socket and the testing environment conditions.

- ◆ 1.) Always ensure the board is clean and free of contaminants (lubricants, flux, particles) whenever sockets are mounted to the board. Wipe the socket pads on the board using a soft cotton cleaning tip (or sponge tip). Soak the tip in alcohol or contact cleaner and use gentle pressure. Follow this step with compressed air to remove any fibers from the pads.
- ◆ 2.) Use dry clean compressed air to clean debris from the sockets periodically. Ensure line pressure is less than 30 psi, and do not touch the socket contacts with the nozzle.
- ◆ 3.) Blow away any debris or foreign matter from both the inside and bottom of the socket.
- ◆ 4.) Brush the socket with an approved soft bristle brush to clean debris from the socket. Do not use non-approved brushes or other abrasive cleaning methods. This damages the contact plating, and eliminates the option of restoring the pogo pins.