Customer Service Letter

To: **FlashCORE Customers** Date: **12/2013**

Subject: **Cleaning HIC Sockets** Document:#**983-5053-001B**

Product: Data I/O Programming machines with FlashCORE programmers (such as RoadRunner, PS Systems, and FLX500)

Dear Customer,

Below are instructions for two methods for cleaning HIC Sockets on HIC (High Insertion Count) Socket Adapters. Tools required and frequency are listed with each.

The move to lead free devices means that sockets require cleaning at shorter intervals to avoid low yields. Poor throughput can indicate that sockets are dirty and should be inspected and cleaned before considering other causes.

Instruction for regular cleaning is listed first.

The second method, ultrasonic bath cleaning, is not a *daily* or *weekly* cleaning procedure.

Best practice for cleaning sockets is to wear rubber, surgical grade gloves or finger cots.

Two Cleaning Methods

- With wipes and brush
- Ultrasonic Bath Cleaning, page 2

CAUTION: Possible damage to contact pins! Do not use Alcohol, Natural Blue, or acidic solvents. These can damage the gold plating on the pogo pins.

Cleaning with Wipes and Brush

Tools Required

Data I/O PN 5655500901 Socket Contact Cleaner, Nanotek Brush 3mm
Data I/O PN 5705500902 Socket Contact Cleaner, ProGold Wipes (50 pcs)

Cleaning Frequency

For most Socket Adapters, weekly cleaning and conditioning is sufficient. In rare cases, daily cleaning may be required to maintain the desired yield.

To clean sockets:

1. Turn the machine power OFF. (Socket Adapters may remain on the programmers.)
2. Brush the socket 10 – 20 times with the Nanotek brush using mild pressure.

3. Condition the contacts by wiping the socket with a pre-saturated DeoxIT® Gold (formerly ProGold) cloth.

Cleaning with Ultrasonic Bath

Tools Required with Ultrasonic Bath Cleaning

- an ultrasonic cleaner such as Emmi brand
- cleaning fluid such as EM 080 is available at the site where you purchased your ultrasonic cleaner or from EMAG (www.emag-germany.de)
- small Phillips screwdriver
- a thin piece of metal, like a steel rule
- a method to dry the sockets such as a cloth or clean, dry compressed air
- distilled, demineralized water

Cleaning Frequency

Sockets should be cleaned when:

- yield drops below acceptable levels.
- excessive continuity errors occur.
- sockets become disabled often.
- you receive an error message such as **Adapter maintenance is required. The cleaning interval has been exceeded** (some programmer models only).

To Clean HIC Sockets with ultrasonic bath:

1. Remove socket(s) from the programmer.
2. Remove springs from the sockets.

   a. Insert a thin piece of metal, like a steel rule, between the coils near the top of the spring.

   CAUTION: Possible eye injury! Springs can fly out when compressing them. Wearing safety goggles to protect eyes from possible injury.

   b. Press the spring down and outward to dislodge it from the cup in the underside of the metal actuator, as shown in Figure 1.

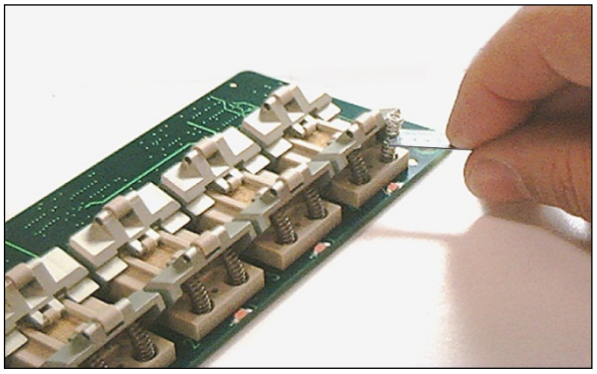

Figure 1: Removing a spring from a HIC (High Insertion Count) socket

c. Remove Sockets from the PCB by unscrewing the screws with a small Phillips screwdriver. There are usually four screws per socket.

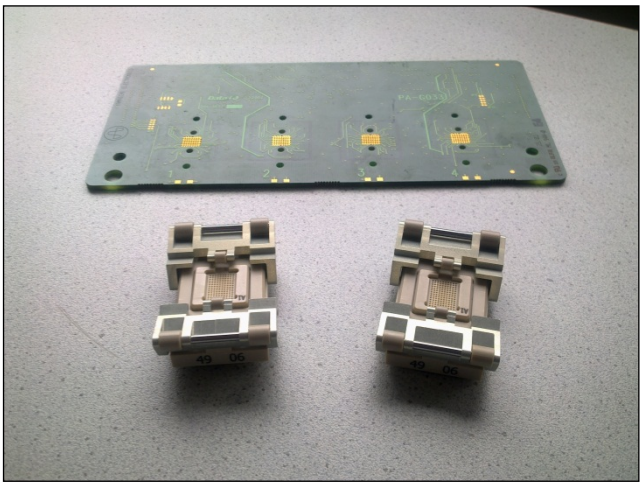

Figure 2: Sockets are removed from PCB

3. Prepare an ultrasonic bath with distilled, demineralized water that is warm to the touch and a small amount of gold cleaning fluid, type EM 080 or similar. Comply with instructions that came with your ultrasonic cleaner.

Figure 3: An ultrasonic cleaner

4. Run the cleaner for 10 to 15 minutes with the sockets submerged.

5. After cleaning, remove and rinse the sockets with pure distilled water to remove any residue.

6. Ensure the sockets are completely dry before re-assembling, storing or reusing.

7. Re-assemble the Socket Adapter in reverse order. To insert the springs;

    a. Place a spring into a cup in the plastic base. Compress it while moving the top forward and into the cup in the underside of the metal actuator.
    b. Ensure that the spring is in place.
    c. Repeat for each spring.
    d. Ensure that the actuator works correctly.

If you have any questions, contact Data I/O.

The best way to get technical support is on our Web site at www.dataio.com, and then click the **Technical Support** button. Your support is forwarded to the nearest Data I/O office or representative.