



Introducing Fancort's Lead Reconditioning System for SMD Flat and Quad Packages

Complete System



LEAD CONDITIONING PROCESS

Operator visually inspects parts,
repairs or tosses



Hand preparation, if necessary



F-1B/1RC Recoining tool to reset coplanarity



MLCS for pitch, skew and simple coplanarity correction

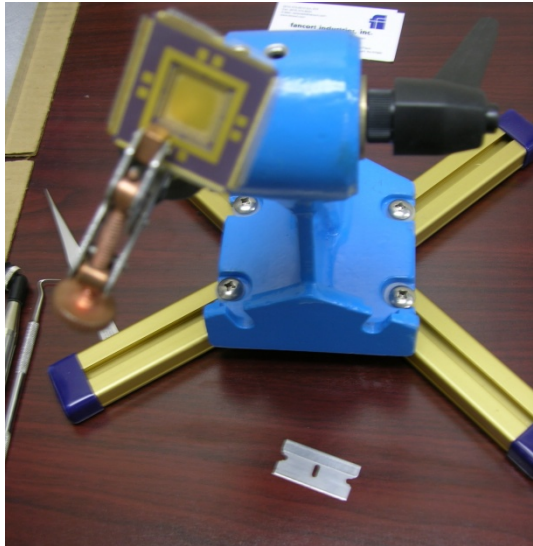


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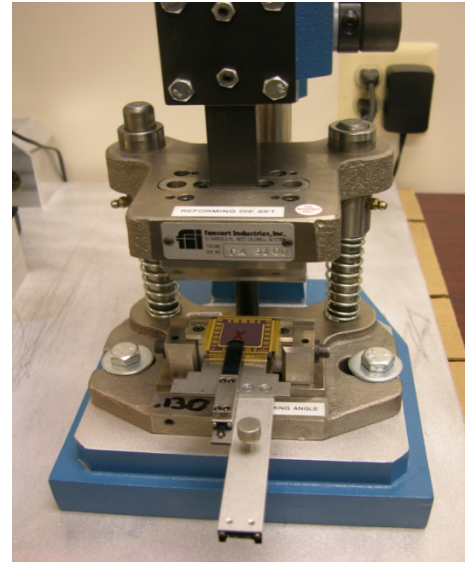
The Process is straightforward and simple:

1. Operator visually inspects the parts and decides to repair or discard
2. Hand preparation, if necessary when leads are crossed, touching or too far out of alignment
3. Use the F-1B/1RC reforming tool to reset coplanarity, one side at a time. The tools goal is the JEDEC Spec of .004" T.I.R.
4. Use the MLCS to "comb" the leads to correct for pitch and skew by oscillating the leads side to side + up + down
5. Inspect the leads on our coplanarity inspection mirror and template if you have one available with the correct pitch

Four Stations Comprise the System



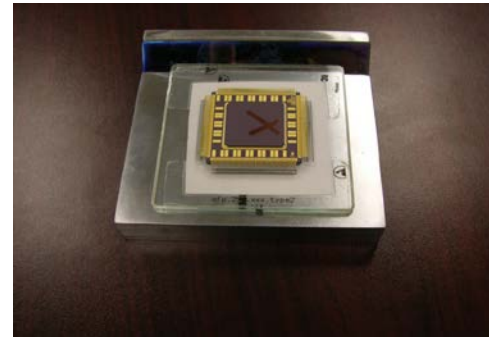
Jerry-Rig Holding Fixture for Prep



F-1B/1C RC Reforming Tool

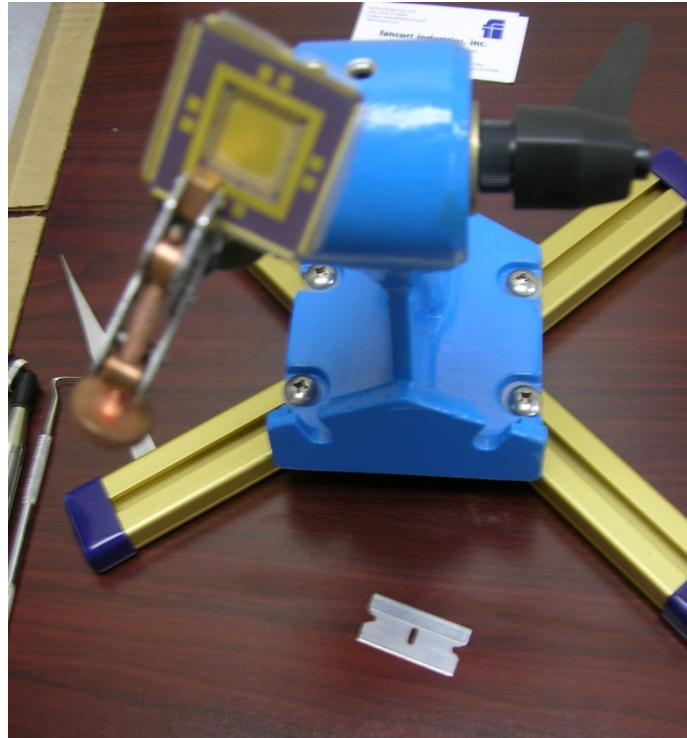


MLCS System



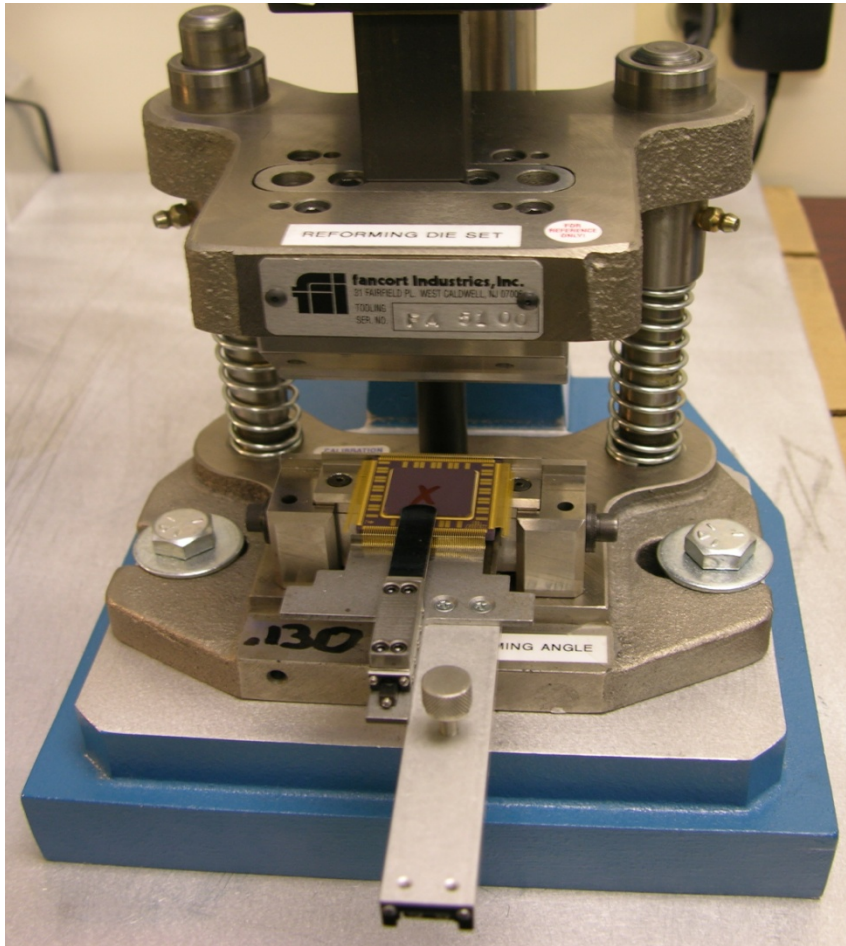
CI-1 Coplanarity Inspection Mirror

“Jerry-Rig”



This optional universal holding fixture allows the operator to hold the device in a clamp while using simple tools to uncross leads prior to going into the lead reformer or lead conditioner. It can be easily rotated in all directions.

F-1B/1RC Reforming Hand Tooling



A modified version of the Fancort F-1B/1 R. C. lead reformer This tooling will reform the leads on one side of the package at a time. It can handle packages up to 2.5” wide. Standoff height can also be adjusted, if required. Inserts and matched former sets are required for specific shoulder dimensions for the best possible reforming.

Coplanarity Inspection



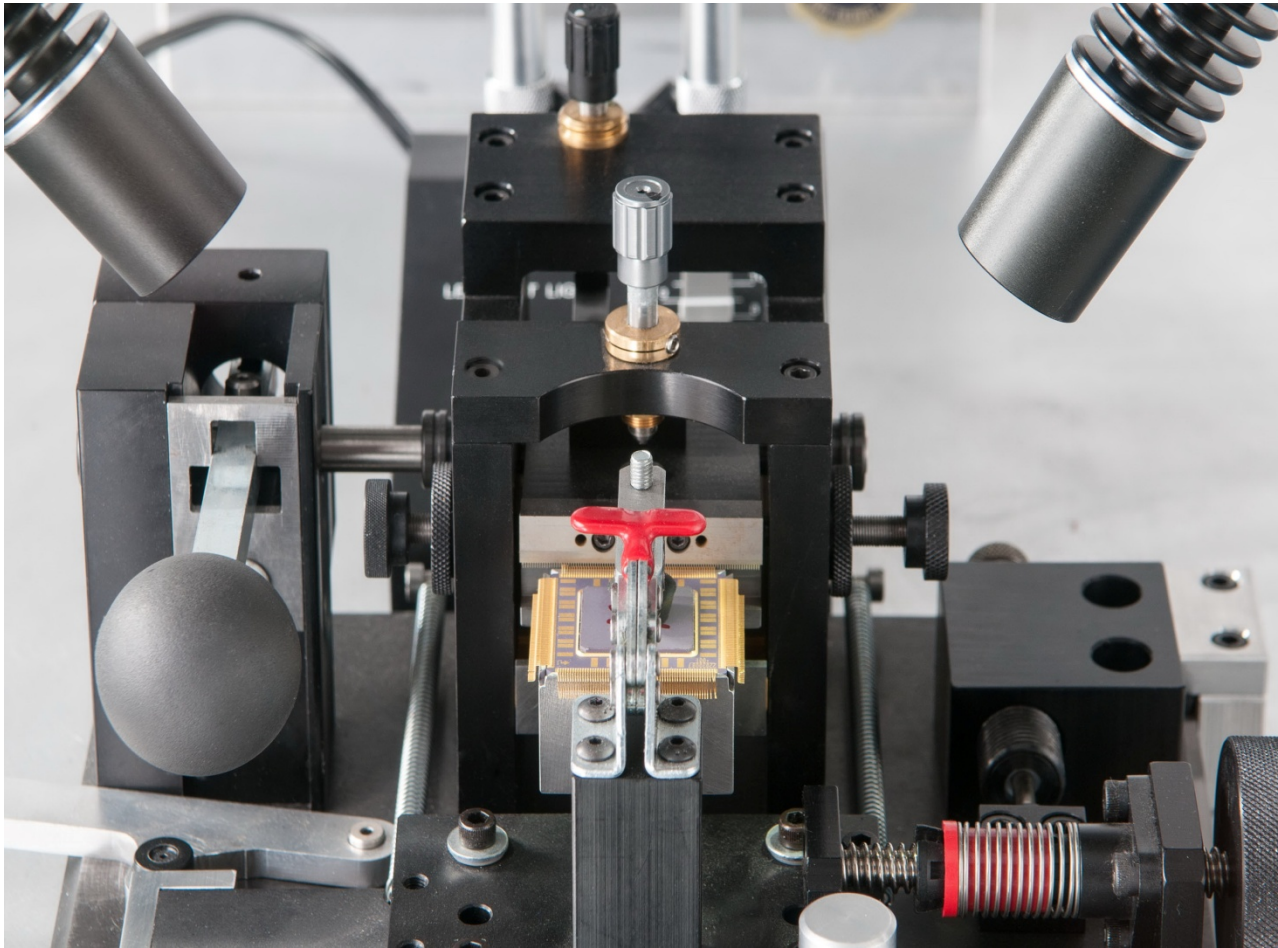
This handy tool allows the operator to visually inspect each side of the reformed package to check for coplanarity before and after inserting into the MLCS lead reconditioner.

Lead Reconditioner

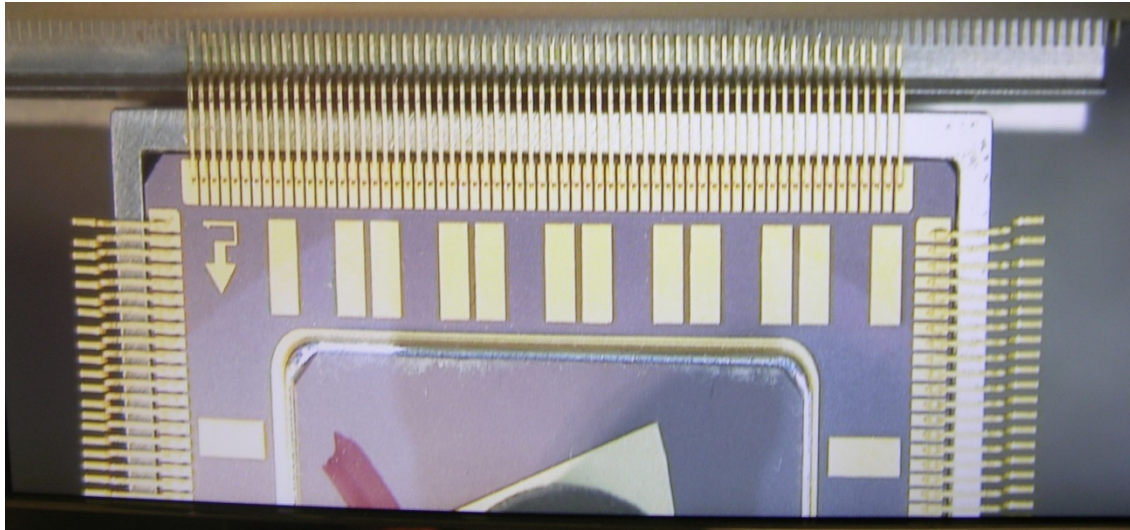


- 1. Operator inserts the package into the nest that is specific to this package body size**
- 2. Using the HD camera and monitor, the operator moves the package in the X direction until the leads are aligned with the teeth in the comb**
- 3. The comb is lowered and engaged between the leads and the operator oscillates the comb, which restores the leads to their proper pitch**
- 4. Rotate the part to any other side that might need reconditioning until the part is finished**
- 5. Remove the hold down clamp and remove the part**

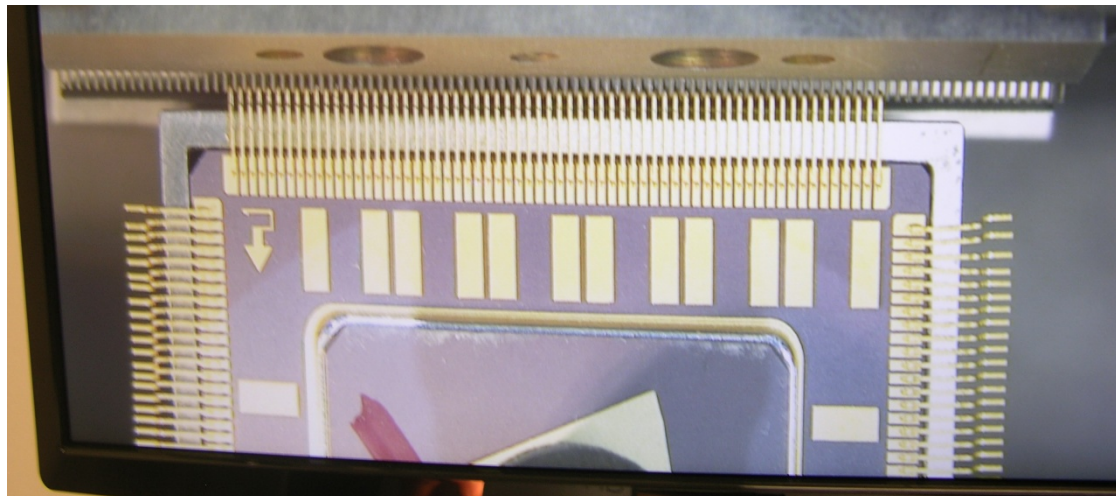
Lead Reconditioner Detail



Using the Camera and Monitor



Shows leads being lifted before comb is engaged



Shows comb being engaged in the leads

MLCS-3, Theory of Process, System and Machine Operation, including limitations:

The component's leads cannot be touching, and should be within about .010" or less of the actual good/ ideal location prior to using the F-1B/1RC. Use the Jerry Rig and hand straightening tools to correct for this condition, prior to reforming.

- The component's leads shoulders need to be exiting the component flat and perpendicular to the parts seating plane, prior to using the F-1B/1RC. Use the Jerry Rig and hand straightening tools to correct for this condition, prior to reforming.
- The F-1B/1RC will reform the leads to improve coplanarity. We will have to increase the standoff height slightly, normally about +.002 to +.004" from the actual supplied forming dimensions of the component to accomplish this. The GOAL of this operation is to get the coplanarity within the JEDEC spec of .004" TIR.
- The MLCS Lead Reconditioner will lead recondition the leads side to side to correct for skew, so long as they have been processed as mentioned above. Normally we move the leads about .010" side to side to correct for SKEW and or Splay, but this value should be adjusted based on the components leg length, material type and hardness.
- The MLCS Lead Reconditioner will lead recondition the leads up and down using the comb and lifter feature to help verify and set coplanarity, so long as they have been processed, as mentioned above .
- Tinned components and solder should be avoided in the machine unless the pitch is large and the customer is committed to ongoing cleaning of the combs and tooling members on both the lead reformer and lead reconditioner.
- A way of inspecting the reconditioned components is needed near the system. We use an optical comparator for the most consistent measuring and inspecting.
- Every component is different and presents unique challenges. The best part about the system is that all internal members of the system are either adjustable and/or can be replaced to allow for more control of the process and results.

Contact Robert Antonelli for more information, or to request a quote

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