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**SUMMARY**

Board level assembly and repair is work that is done on small pieces and parts such as capacitors, resistors, and transistors that reside inside integrated circuits and on circuit boards. Several types of organizations engage in board-level assembly and repair of the electronics inside products like cell phones, radios, test equipment, portable music devices, and other electronic devices.

Fabrication of circuit boards and component-level diagnosis of problems can be difficult without the right equipment. It is imperative to have tools and supplies designed specifically for these tasks since many of them take place on equipment of a miniature scale and with special handling requirements, such as ESD.

**FEATURES**

- Specialized equipment
- Safe work environment
- Meet compliance mandates
- Several component types can be repaired
- High-quality tools and supplies

**BENEFITS**

- Improves quality of work
- Saves money due to reduced damage to valuable components
- Keeps employees safe
- Reduces production and repair cost due to the efficiency of using high-quality precision tools

**REAL WORLD EXAMPLES**

**Situation:** A government contractor won a time-sensitive contract working with space flight boards.

**Problem:** Due to outdated soldering equipment and the number of workers sharing the equipment, the processes were taking too long. The contractor was in danger of missing the deadline required by their contract. The biggest drag was the time required to pull components from a board and then repopulate the board with the required chips.

**Solution:** The contractor bought new rework stations that included all necessary soldering tools within one unit. They also purchased heating plates that made it easier to remove components from the board, resulting in a 60 percent drop in work time. Thanks to the equipment upgrades, the contractor beat the contractual deadline by three weeks.

**ADDITIONAL CONSIDERATIONS**

- What types of equipment are being repaired?
- What specific tools are needed?
- Are there lead-free solder requirements?
- What safety equipment is needed?
- Is there existing safety signage?
- Is electrostatic discharge (ESD) protection important?
- What are the quality testing requirements?

**PRODUCTS**

- Work benches
- Precision hand tools
- Repair parts
- Electrostatic discharge materials
- Grounding devices and testers
- Micro screw drivers
- Soldering equipment and supplies
- Inspection lights
- Microscopes
- Fume extractors
- Cleaning supplies
- Safety and protection equipment
- Safety signage
- Tools and installation supplies
- Test equipment

**Knowledge Solutions**

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