

# STENCIL CLEANING EVALUATION

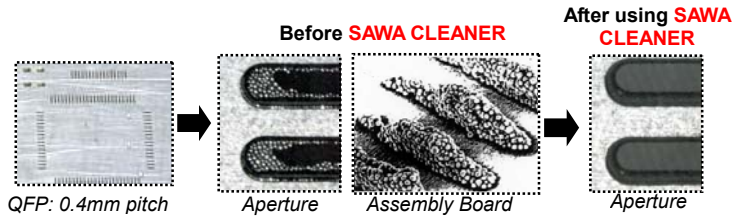
## SAWA CLEANER VS. MANUAL WIPING METHOD

PROVIDED BY: CUSTOMER MANUFACTURING TELECOMMUNICATIONS EQUIPMENT

SUMMARY:

### EVALUATED SAWA ULTRASONIC STENCIL CLEANER

#### ~ CLEANING RESULTS



CONCLUSION:

'SAWA CLEANERS' effectively clean fine pitch apertures better than hand wiping.

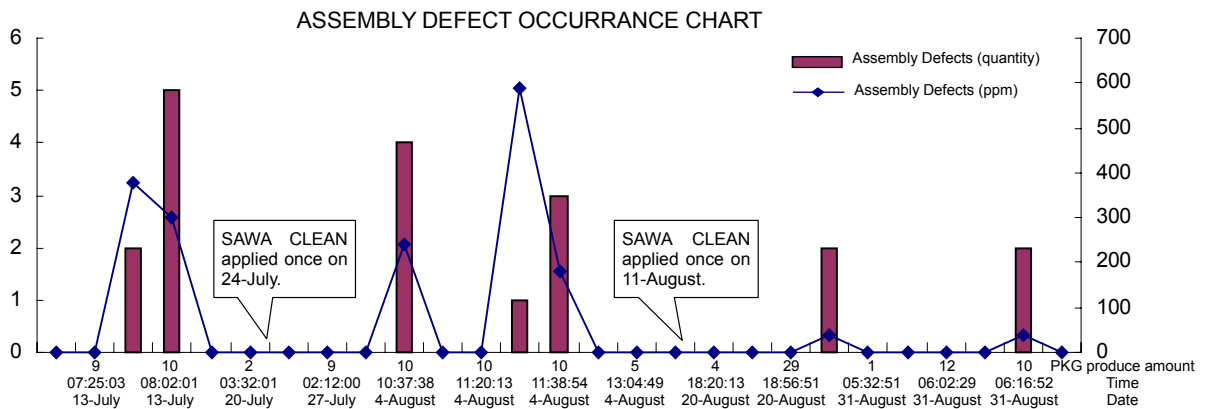
\* Image for reference only.

### SAWA APPLICATION MERITS

- Ease of operation
- Time and labor saving

METHOD	TIME	OPERATION	NOTES
SAWA CLEAN	<b>15 sec.</b>	Use <b>Sawa Cleaner</b> with solvent to clean stencil.	Powerful ultrasonic energy making direct contact to the stencil dislodges solder spheres from the apertures quickly.
HAND WIPING	<b>4 min.</b>	Manually clean stencil with cloth and solvent.	Cleaning time may vary depending on the size of stencils and other factors.

### LOWER ASSEMBLY DEFECTS



### LABOR AND COST SAVINGS

Manual labor elimination: **273.6 Hours / Year**  
 →Equivalent COST SAVINGS: **\$8,481.60 / Year**

## CONTINUOUS PRINT EVALUATION USING **SAWA CLEANER**

☐ PROVIDED BY: CUSTOMER MANUFACTURING CELLULAR PHONES

☐ SUMMARY:

- 1. YIELD RATE INCREASES AND KEPT ABOVE 99.5% AFTER USING **SAWA CLEANER**.**
- 2. UP TO 1000 CONTINUOUS SOLDER PRINTS POSSIBLE USING **SAWA CLEANER****  
Usually, stencils should be taken off for cleaning after solder printing 30 PCBs. The SAWA CLEAN portable ultrasonic cleaners make it possible to clean stencils without being taken off the printers. Therefore, it is possible to print solder paste continuously for 1000 boards.
- 3. CONCLUSION – PRINT QUALITY IS GREATLY AFFECTED BY THE CLEANLINESS OF STENCILS.**

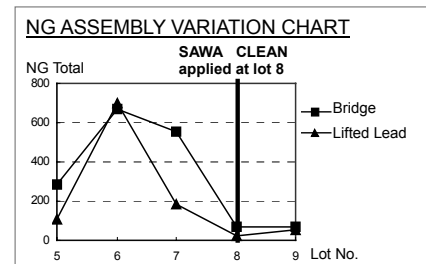
## EVALUATION LOWERING OF REWORK USING **SAWA CLEANER**

☐ PROVIDED BY: CUSTOMER MANUFACTURING INDUSTRIAL EQUIPMENT

☐ SUMMARY:

### 1. NO GOOD ASSEMBLY VARIATION CHART

The NG chart shows that the defect ratio dropped down substantially after implementing the **SAWA CLEANER** on the line (shown in 8<sup>th</sup> lot).



### 2. OPTIMIZING THE PRINTING PROCESS

Poor aperture release is an issue during solder printing which results in defects. Using the **SAWA CLEANER** ensures that stencils are cleaned properly helping to optimize printing.

### 3. CONCLUSION

Especially with fine pitch stencils, poor release during the printing process will result in numerous defects.

Poor assembly control will consequently require labor-intensive rework. The **SAWA CLEANERS** contribute to eliminating repair costs by ensuring the cleanliness of stencils and optimizing the printing process.