Compliant Pin PC Board Assembly
SCHMIDT® Project No. 2404
Nr. 405 ServoPress
**SCHMIDT® Nr. 405 ServoPress**

**Application, Requirements**

- Assemble a tire pressure sensor/transmitter first by inserting the battery into the housing
- Second step is to insert the PCB board over the battery and into the housing
- Continuity test
- Battery voltage inspection

**Concept Description**

A pneumatic shuttle table is mounted onto the Nr 405 press column. Only one upper tool is engaged to the press ram at any one time.

*Nesting Fixture* – Two separate nesting fixtures, situated next to each other, will locate the housing for each operation. The fixtures will allow the loading of two housings (one is transferred from the first operation, which has the battery installed).

*Battery Insertion, Upper Tool* – accepts and holds the battery in position via vacuum, properly oriented.

*PCB Insertion, Upper Tool* – Very similar to the upper tool for the battery.

*Continuity test* – A continuity test also takes place in this station. A pin verification test is performed upon the completion of the PCB board assembly cycle. The purpose of this is to verify that the single nozzle pin and the two battery pins have been properly pressed through the board.

*Battery voltage test* – The voltage of the battery is also verified in this station.

**Operation**

- Load all components manually into the tooling prior to initiating a cycle.
- Initiate cycle
- No. 405 Servo Press installs battery
- Shuttle transfers to opposite side
- Nr 405 Servo Press installs PC board.
- Verify battery voltage
- Verify continuity of PCB to housing
- Shuttle transfers to opposite side
- Cycle complete

**Equipment, Performance**

- Nr 405 Schmidt Servo Press, complete station
- Custom designed tooling
- Verify for assembly to be completed
- Verify for all pins to be properly pressed
- Verify continuity testing probes
- Battery charge & voltage tester
- Assembly time from part to part: Approximately 20 seconds

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