

CS-400E Training Course

Day 1: Operation and Programming

Recommended participants: Individuals tasked with running, programming, or supervising the machine.

Intention: To instruct individuals on machine operation and programming.

Curriculum covered

- Machine hardware overview
- Machine software overview
 - Auto mode
 - Program mode
 - Configure systems
 - Test mode
- Board setup
 - Board(s) fixturing
 - Program selection
 - Board quantity
 - Zero/skew
 - Auto editing
 - Optional usage features
- Auto mode features
 - Dispenser
 - Auto correct
 - Manual correct
 - Backup/Repeat
 - Cut clinch enable/disable
 - Program lamp
 - Optional usage features
- Configure systems
 - Dispensers
 - Mode lockouts
 - Basic file access
 - Edit cut lockout
 - Display part data
 - Invert shortages
 - Bin shortage warning
 - Double footswitch
- Program mode
 - Programming topics
 - Messages
 - Dispenser commands
 - Polarity/No polarity
 - Part numbers
 - Cut\Clinch parameters
 - Images
 - Clinch types
 - Digitizing
 - System commands

Day 2: Machine Calibration/Maintenance

Recommended participants: Individuals tasked with calibration and maintenance of the machine.

Intention: To train personnel on how to replace wearable items and calibrate machine to specification. Lubrication and cleaning of machine at various time intervals.

Curriculum covered

- Table top and board fixture removal
- Cutter replacement
- Motor replacement
- Pin height adjustment – A guage
- Cam synchronization – B guage
- Cutter height adjustments – guages 1-10
- Cut\Clinch top dead center
- Overall Cut\Clinch height
- Center of rotation
- Rotational zero
- VCD zero
- Clinch adjustment
- X/Y axis repeatability
- Projector light adjustment
- Cleaning
- Lubrication

Day 3: Software Diagnostics and Electrical Systems

Recommended participants: Individuals tasked with the repair of the machine.

Intention: Overview of software diagnostics and electrical systems to aid in the troubleshooting of equipment.

Curriculum covered

- Test mode topics
 - Limit switches
 - Photos
 - Optical sensor calibration
 - Touch screen calibration
 - Monitor sensitivity
 - Dispenser testing
 - Dispenser calibration
- Machine power requirements

- Hardware
 - CPU
 - I/O board
 - Micro-stepper board
 - Serial keyboard card
 - Touch screen card
 - Cut\Clinch processor board
 - Power supplies
 - Relay board
 - Power resistors
 - Driver modules
- Cut\Clinch head
 - Motor functions
 - Photo functions
 - Boot up sequence
- Troubleshooting of electrical bugs
- Question and answer period