

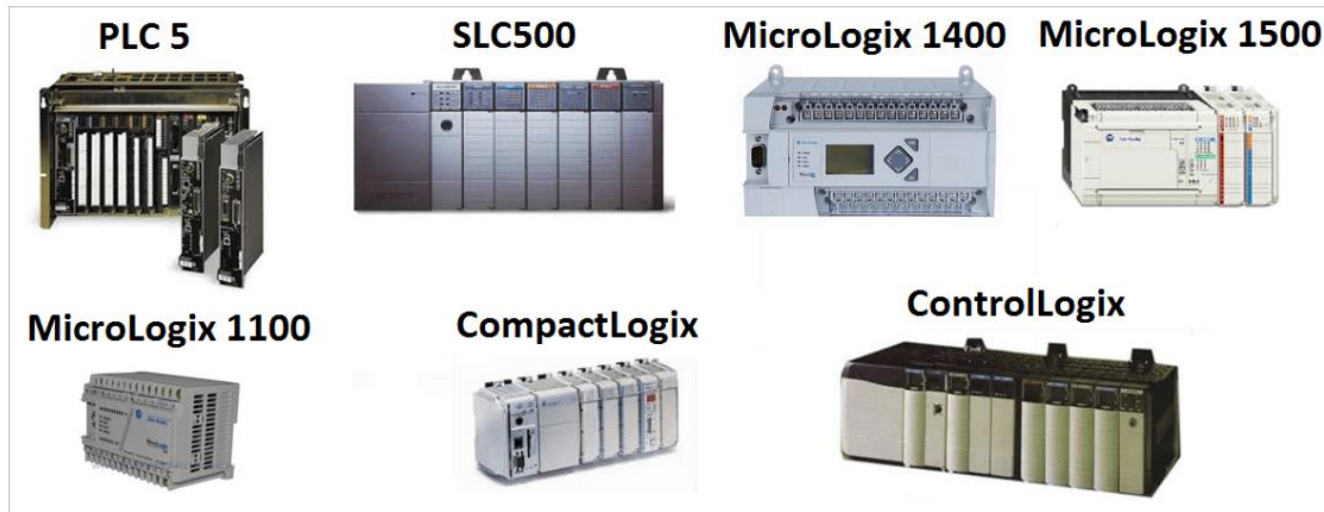
Allen Bradley Capabilities Presentation

# **ELECTRONIC REPAIR**

## PLC Platforms

### Testing

- ✓ Tested in Family System with associated I/O
- ✓ Using proper software to upload test program
- ✓ Loop system test utilizing each input and output
- ✓ Load lights or resistive load
- ✓ Analog and Digital input/output modules
- ✓ Relay and Triac output
- ✓ Processors, Remote processors, power supplies
- ✓ Customer should reload program
- ✓ Back up customer program
- ✓ TCIM modules (thermal couple)



Generations	Obsolete
MicroLogix	SLC500/100/150
ControlLogix	PLC5, 3, 2
CompactLogix	Exchanges available

## Touch Screens

### Common Failures and Services

- Upgrade CRT to LED
- Backlight replacements
- Touchscreen replacement
- Calibrate Touchscreen
- 3D Printing plastic bezels
- Burn in for 24 hours
- Test communication ports RS232, 485, DH+ and Fiber optic
- Upload and download program
- Upgrade firmware revision
- Save customer screens



### Generations Serviced

- Panelview
- Panelview Plus
- Panelview Plus Compact
- VersaView
- Industrial PC

# Variable Frequency Drives

- Test under name plate rated load
- Load test up to 500 HP for 2-3 hours or longer if heat related or intermittent
- Continuous and Peak Load testing
- Replace all electrolytic capacitors upgrading to 105-degree Celsius
- Inspect fan bearings, replace as necessary
- Amplitude and impedance testing on current carrying devices, replace if fatigued or marginal (Signature Analysis)
- Inspect relays and contactors for pitting, replace as necessary
- Test communications, analog and digital, including all associated I/O
- Test communication protocols, fiber optic, Data Highway, Ethernet I/P, RS485
- PowerFlex, Guardmaster, 1336 Plus, 1333, 1305, obsolete and current generations
- AC and DC Versions



## Servo Drives

- Load test with associated servo motor
- Test with frequency generator and software
- Verify communications and associated I/O
- Fatigue testing and replacement of marginal or defective components
- Upgrade Electrolytic capacitors

## Series

- Servo Kinetix
- Ultra 3000
- Electro-Craft BRU200/500
- 1388 DC Servo
- 1391 AC Servo
- 1394 AC Servo
- Legacy and Supported



# Motors

- Servo and Induction
- AC and DC
- Up to 300 HP AC rewind in house
- Check Bearing fits, bore and bush
- High quality bearings
- Induction Grade Wire
- Surge test windings
- Dip, Bake, and Coat
- Align Feedback devices
  - Encoders (incremental and absolute)
  - Resolvers, and hall effect sensors
- Test servo motors with system driver
- Clean, Paint, and Tag with model data
- Full inspection report
- EASA Member
  - *Non Explosion Proof*
  - *Non Stepper*



# Light Curtains

- Tested in sets, transmitter and receiver
- Lenses replaced and cut to size
- Reflow solder and cracked solder joints
- PLC used for data acquisition to check for trip time down to milliseconds
- Mounted to frame and tested with an automated metal rod through each zone and LED of the light curtain
- Repeatable test for 24 hours monitored using data acquisition
- Intertek approved test system co-designed by Toyota Manufacturing and Paragon Technologies
- Full test report included with service
- Cleaned and painted to OEM color



## Summary

- Repairs performed in Warren, Michigan
- No evaluations fees
- 1-year in service warranty
- Pick up available in certain areas
- Exchanges available
- Test Reports provided
- Obsolete products are serviced and supported
- Products are refurbished providing more than just a repair