

***SPECIALIZED
INDUSTRY
SOLUTIONS***

Company History and Overview

- SIS started in 2006 based on a localized need for specialized and innovative machines in the Upper Cumberland area. With our success, SIS has equipment in production throughout the Southeast and Mexico.
- Project Size Ranges: \$5K to \$800K
- Average Project Size: \$50K to \$75K
- Typical Project Delivery: ranges from 8-10 to 24-26 weeks
- Types of products assembled/tested by SIS machines include:

Automotive:

Fuel rails, injectors, and pumps

Engine covers, pistons, and blocks components

Starters, alternators, ECU modules

Filtration devices Paper products

Windshields

Ball studs and control arms

Consumer Products:

Illumination components

Water

heater

Pill bottles

Company Profile

- Sales

2008 \$2.1M, 2009 \$900K,
2010 \$1.7M, 2011 \$3.1M YTD

- 9500 sq ft (2,000 office space)
- (12) Full-Time Team Members
- (3) Milling Machines
- (1) Lathe
- (2) MIG/TIG Welding & Plasma Cutting Station
- (4) Fabrication and Cutting Machines
- (1) Custom Electrical Cabinet Build Area
- (2) Assembly Bays (allows for information containment)
- (2) Loading and Unloading Truck Docks



Design and Build

- Fully automated assembly/test lines
- Indexing dial machines
- Palletized conveyor systems
- Robotic assembly cells
- Multiple operational assembly/test stations
- Simple operation assembly/test stations
- Simple material handling conveyors
- Fixtures/tooling

Engineering Design Tools

- Solid Works 2010 - Mechanical Design
- AutoCad 2004 – Electrical Design
- Microsoft Office Suite – Excel, PowerPoint, Publisher, Outlook, Word
- Microsoft Project Manager
- RSLogix 5, 500, 5000 – Allen-Bradley PLC's
- CX1 Integrator – Omron PLC's and Panels
- Various HMI Programming Software
- Various Robot/Vision Programming Software

SolidWorks – Mechanical Design

Final Design Review

REV	DESCRIPTION	DATE	APP'D	DATE
1	ISSUE FOR MANUFACTURE	11/11/06	SPECIALIZED	
2	REVISIONS	11/11/06	SPECIALIZED	
3	REVISIONS	11/11/06	SPECIALIZED	

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APPROVED FOR DESIGN AND CONSTRUCTION: _____ DATE: _____
 APPROVED FOR MANUFACTURE: _____ DATE: _____
 APPROVED FOR ASSEMBLY: _____ DATE: _____

APPROVED FOR FINAL DESIGN REVIEW: _____ DATE: _____
 APPROVED FOR FINAL MANUFACTURE: _____ DATE: _____

SPECIALIZED SYSTEMS

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SCALE: AS SHOWN

TOLERANCES: UNLESS OTHERWISE SPECIFIED

FRACTIONS: 1/16" MINIMUM

DECIMALS: 0.005" MINIMUM

ANGLES: SHOWN AS SHOWN

UNLESS OTHERWISE SPECIFIED

DATE: 11/11/06

BY: SJS

CHECKED: SJS

APPROVED: SJS

PROJECT: N 16

DRAWING NO: 126

SHEET: 1 OF 1

DATE: 11/11/06

REV: 1

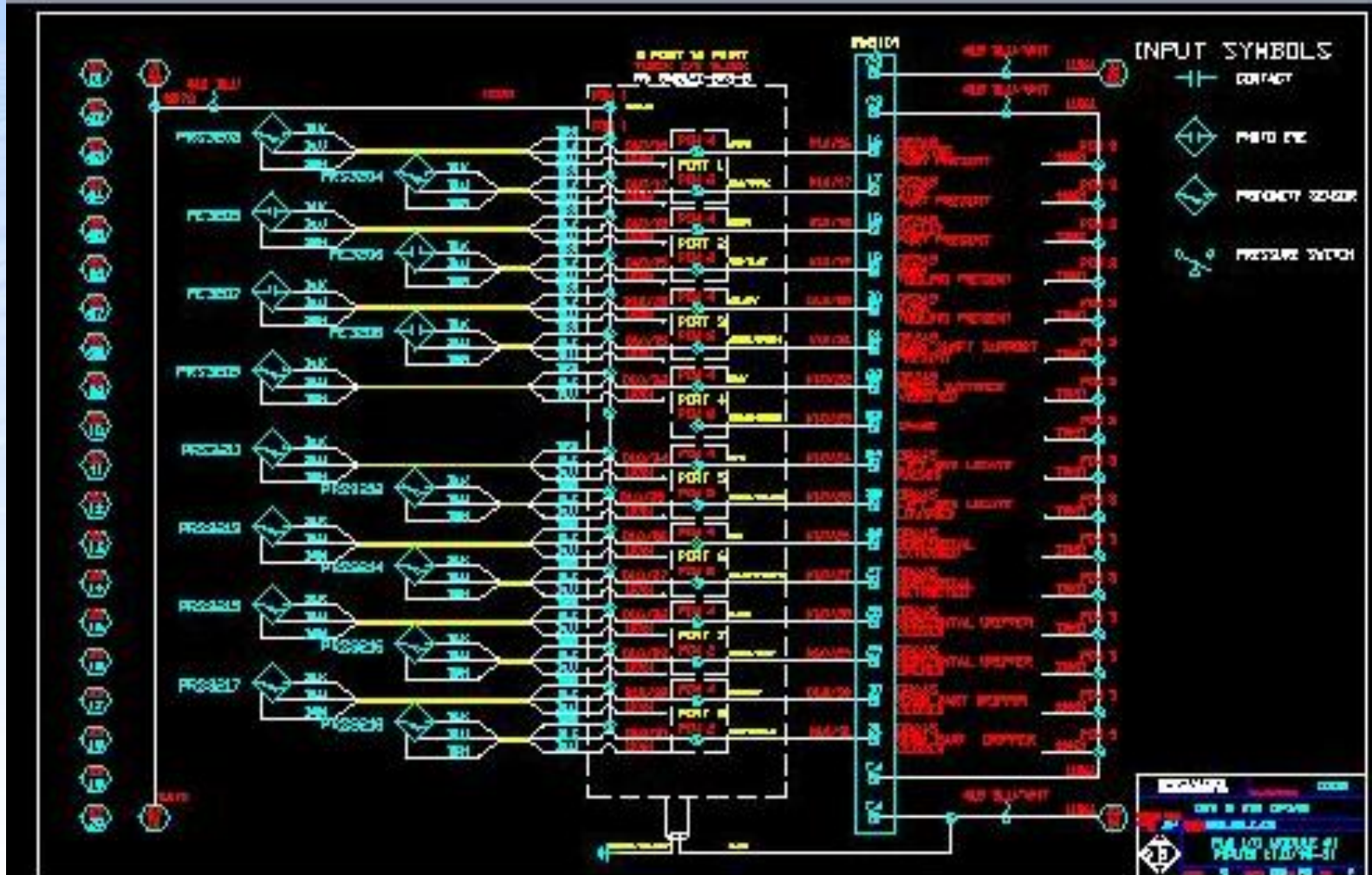
DATE: 11/11/06

BY: SJS

PRD. STATION: 0112

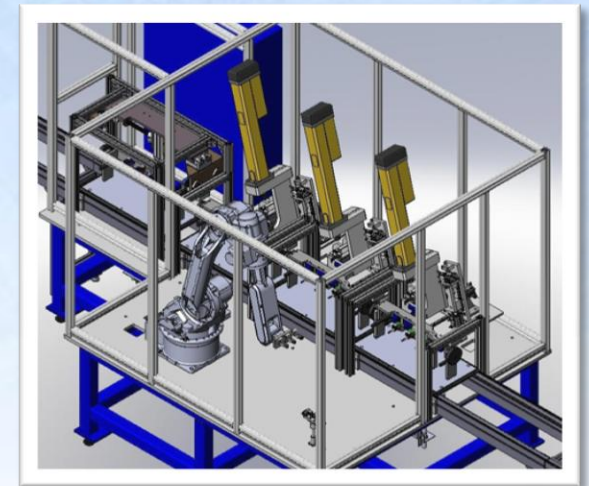
DATE: 11/11/06

AutoCad – Electrical Design



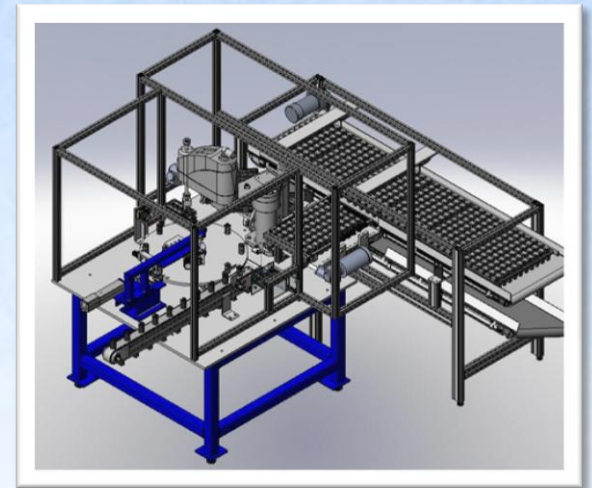
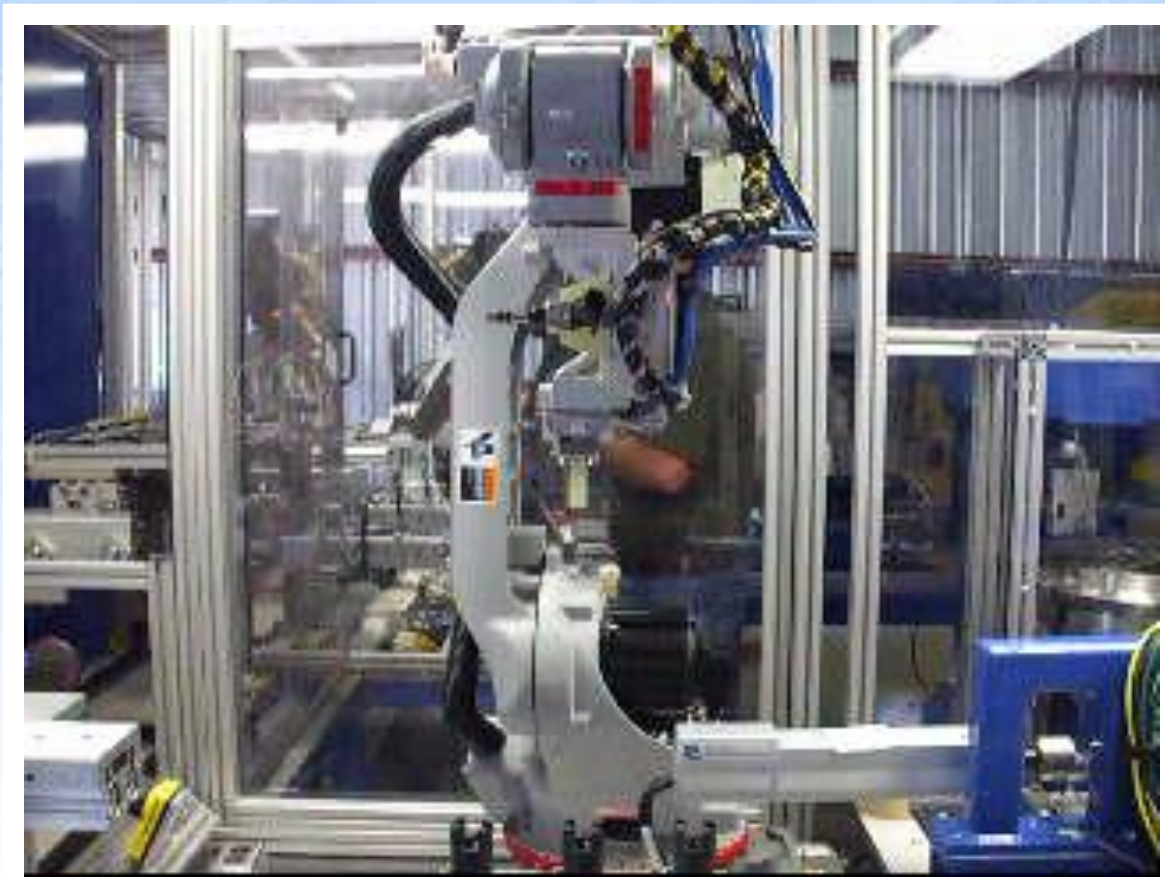
3D Mechanical Design

Robotic Part Handling and Servo Pressing



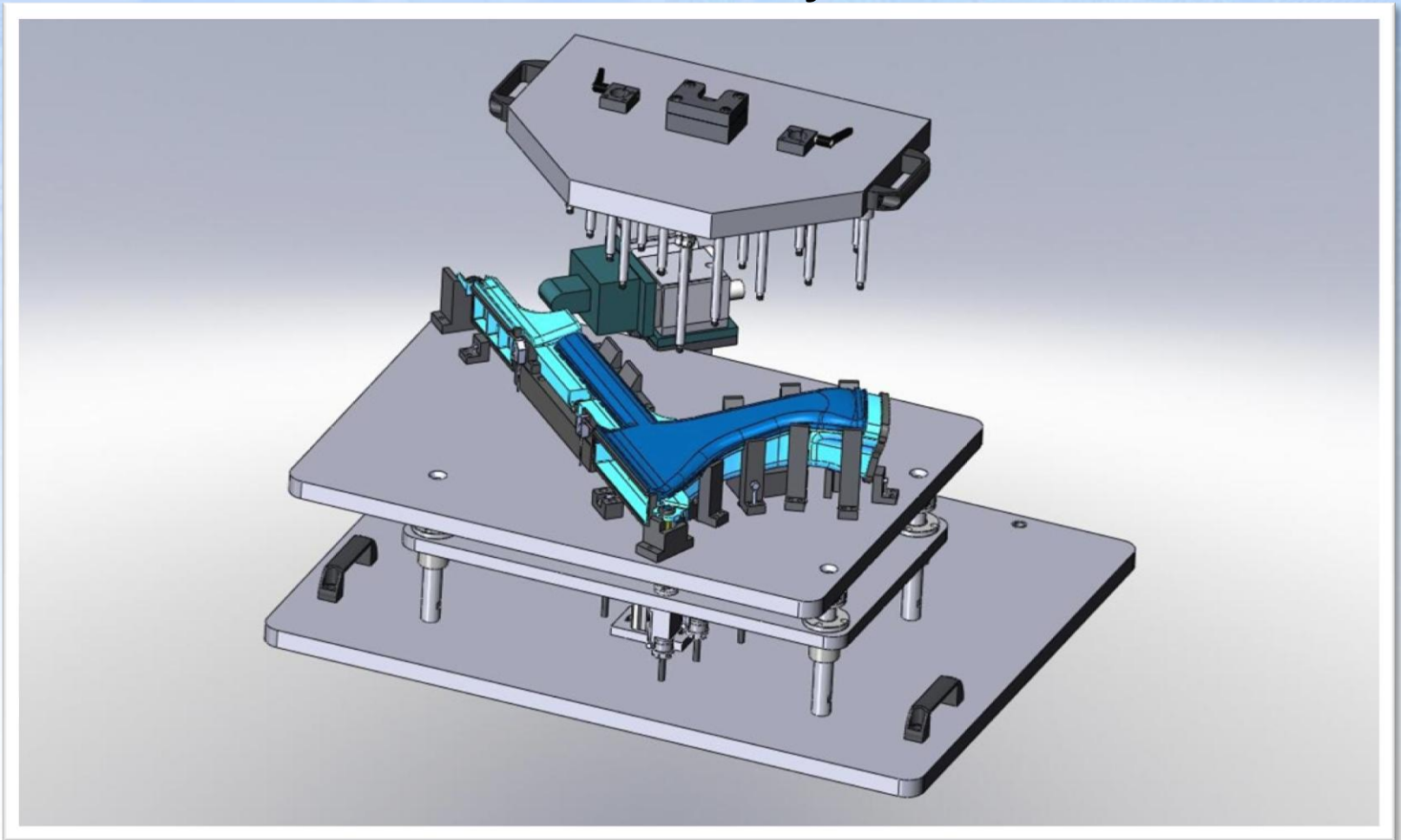
3D Mechanical Design

Robotic Assembly Station



3D Mechanical Design

Plastic Part Assembly Fixture

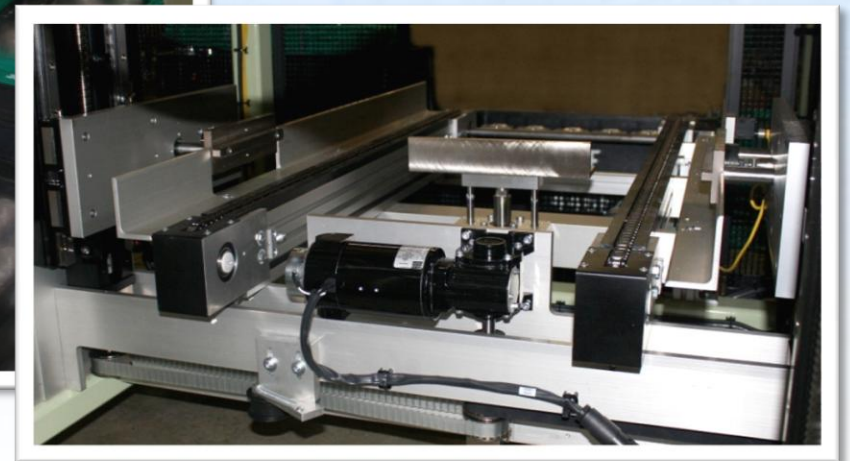


3D Mechanical Design

Servo Driven Tote Palletizer & Piston Unload

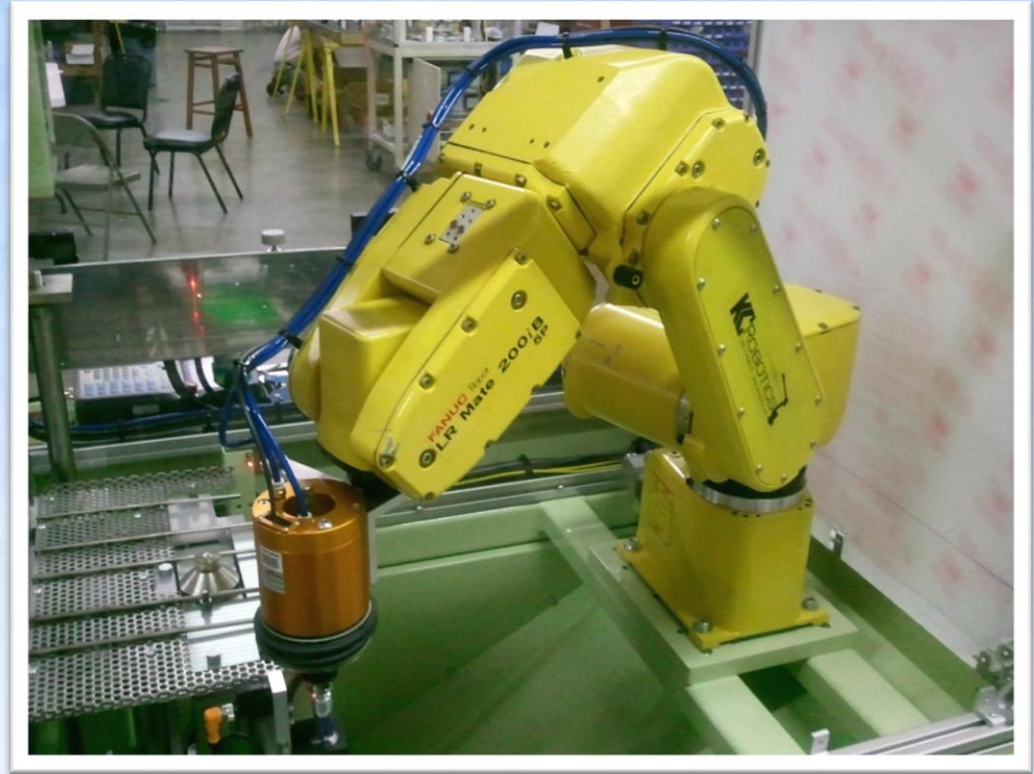
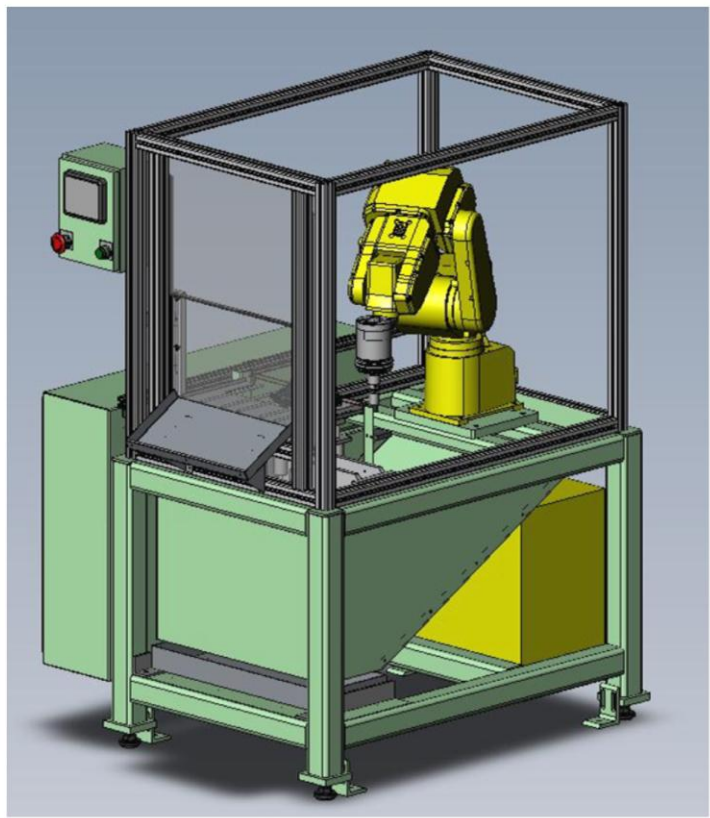


Tote loaded with pistons is unloaded utilizing servo driven components and a vision system.



3D Mechanical Design

Robotic De-Flashing



Casting is loaded into fixture then the robot moves the brush over the casting to remove excess flashing.

3D Mechanical Design

Lubricant Application



Lubricant is applied to internal threads

3D Mechanical Design

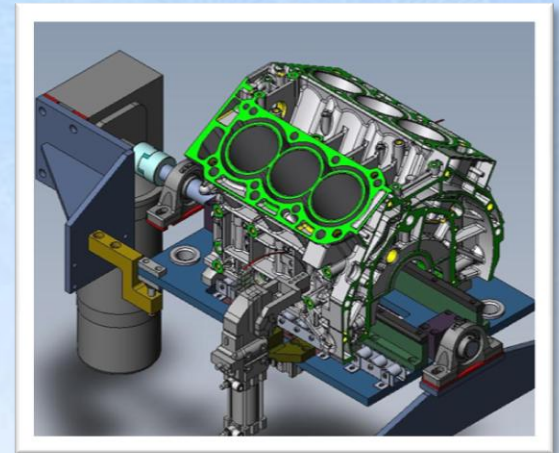
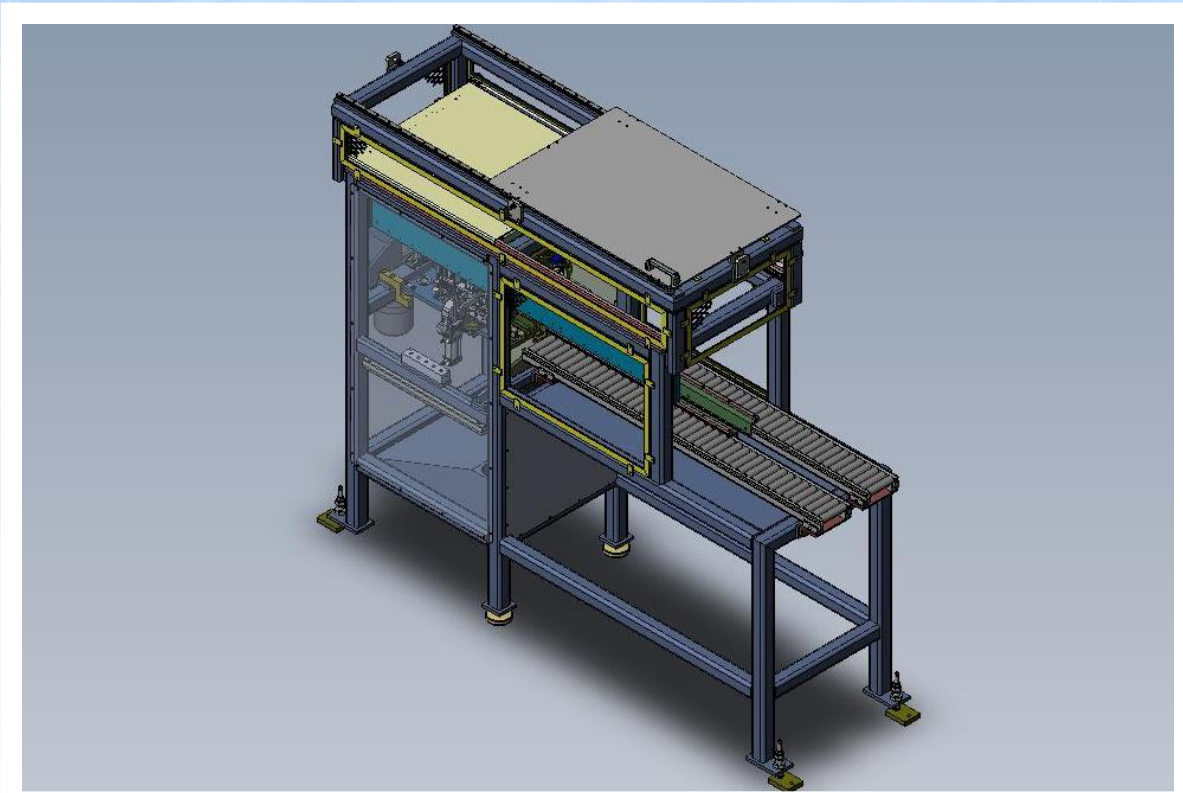
Leak Tester



Casting is loaded into fixture and clamped into position. The casting is then pressure tested.

3D Mechanical Design

Engine Block Wash Station



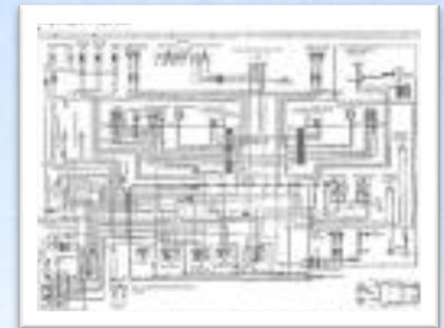
After machining the engine block is loaded into position. The block is rotated as coolant is blown away.

Electrical Design

- Power distribution layouts
- I/O schematics
- Panel layouts
- Safety circuits
- PLC programming
- Interface panel programming

Electrical Design

- Electrical Distribution Panel Build/Layout and Design
- Motor Control Panel Build/Layout and Design
- Electrical Cabinet Panel Build/Layout and Design



Name Brand Components



- Omron – PLC/HMI/Sensors/Safety
- Allen-Bradley –PLC/HMI/Servo/Safety Components
- Proface – HMI Screens
- Keyence –Vision/Sensors/Barcode Readers/Safety Products
- Pilz and Allen-Bradley – Safety PLCs
- Promess and FEC-Servo Press Technology
- CTS and ATEK- Leak Testers
- Cognex – Vision/Bar Code Readers
- Motoman- Robots and Positioners
- IAI-Actuators and SCARA Robots
- Camco-Positioners
- Bosch-Palletized Systems, Screw Drivers, Servo Motors
- Hytrol-Conveyors
- Rivet Forming-Bal-Tec, Orbit Form, and VSI_
- Altas Copco, GSE, and CP Screw Driving
- Yaskawa and Allen-Bradley -Servo Components
- Banner-Safety Products
- Domino-Ink Jet/Label Printers/Laser Printers
- Telesis-Contact Markers
- Kistler-Sensors
- Schmidt and BTM-Pneumatic Presses

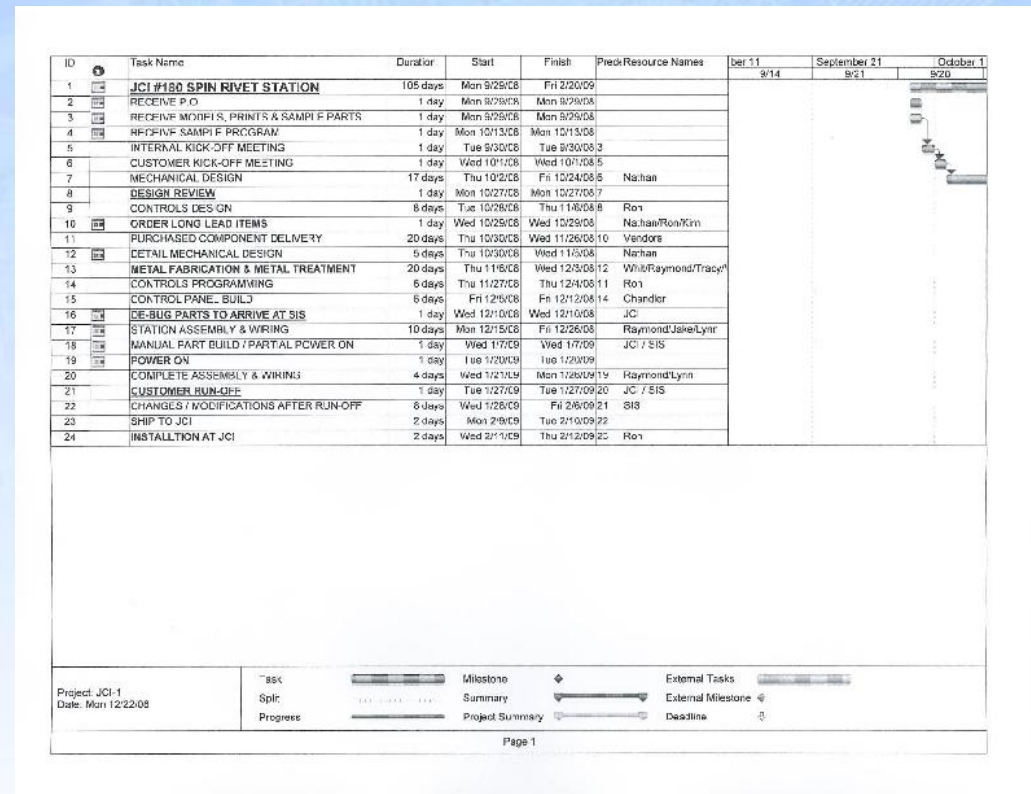


Project Documentation

- Proposal and concept drawing
- Project schedule
- 3D mechanical assembly and part models
- Dimensional mechanical drawings
- Electrical drawings
- PLC and HMI programs
- Operational sequence
- Bills of materials
- Spare parts lists
- Purchased component literature
- Preventative maintenance schedule

Project Milestones

- Project kick-off meeting
- Preliminary mechanical design review
- Final mechanical and electrical design review
- Equipment demonstration prior to shipment
- Installation
- Equipment demonstration after install



Contact Information



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