

# UPGRADE VS. REPLACE?

## 2650 TON HUSKY D-LINE CONTROLS & HYDRAULICS UPGRADE



“The customer’s machine had numerous obsolete control and hydraulic components which are expensive to replace, if you can find spare parts, and the risk of extended machine downtime when a failure occurs is a huge concern.”

- Rodney Rotman  
Owner and Founder  
2R Automation

When your equipment isn't performing to the best of its ability, we can help you determine whether to upgrade, or replace the machinery all together.

## BACKGROUND

When a Grand Rapids, MI manufacturing company was experiencing unreliable process control and repeatability variation issues with their 2650 Ton Husky D-Line injection molding machine, they called on 2R Automation to step in and help improve the equipment's overall performance.

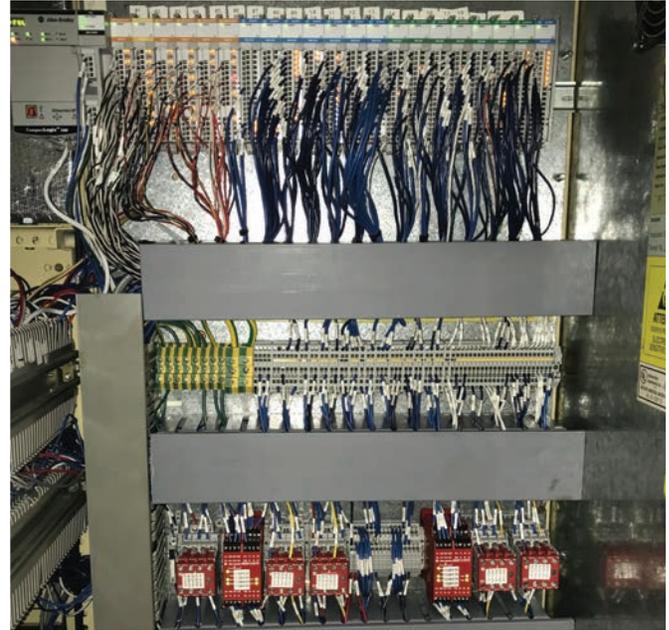
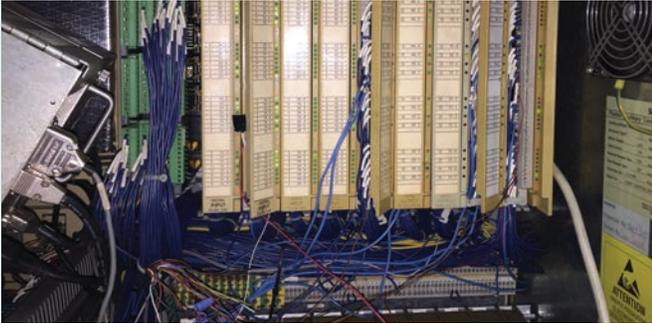
## THE CHALLENGE

We completed a full evaluation to help the customer determine if they should invest in the machine by upgrading the control and hydraulic systems or if our data would support replacing it. Based on our findings, the customer felt the best option was to move forward with an upgrade, as opposed to a full replacement. That decision was based on the following:

- Total project cost
- Expected machine performance after the upgrade
- Machine downtime required to complete the upgrade
- Easy access of current controls and hydraulic components
- Improved operator safety system improvements



HMI before (left) and after (right) the upgrade



Main control panel before (left) and after (right) the upgrade

**“After the upgrade with 2R,  
our 1990 machine’s process  
control is as good as our brand  
new 3000 ton machine.”**

**- Manufacturing Customer  
Grand Rapids, MI**

## RESULTS

As we predicted, our solution achieved the following results:

- The upgrade cost was approximately 10% of the cost to replace the machine
- Obsolete components were replaced, drastically reducing the machine’s risk for downtime
- The results were so beneficial that the customer awarded 2R Automation three additional upgrade projects

## SOLUTION HIGHLIGHTS

Over the course of four weeks, we worked on-site to complete the control and hydraulic projects. We were responsible for machine tear down, installation, programming, and machine start-up. Highlights include:

- Complete electrical and hydraulic system design with updated print sets for both systems
- Replace Husky Siemens controls platform and install Allen-Bradley 1769 CompactLogix PLC and Allen-Bradley 1734 I/O to sequence the machine
- Install Bosch Rexroth Ethernet controller for closed loop clamp and injection control
- Install Allen-Bradley 15” Panel View Plus operator interface
- Install Balluff position & pressure transducers
- Install dual channel switches and safety relays
- Complete robot and auxiliary equipment interface with new control system
- Replace all Husky manifolds and valves with new universal injection, clamp, CEN, accumulator manifolds and Bosch Rexroth valves. The hydraulic system was designed and built by 2R Automation and Bosch Rexroth.
- Machine programming and machine start-up

# CONNECT

Do you have an injection molding or structural foam machine that isn’t performing to your expectations? Let’s talk.

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