Too Big, Too Fast, Too Often: Addressing Ergonomic Challenges in an Incentive Based Environment at La-Z-Boy

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La-Z-Boy Incorporated:

- Specializes in “Mass Customization”
- Manufactures, retails, and wholesales several brands of Residential Furniture
- 8 US Manufacturing Plants
- 155 Company owned retail stores
- 2nd Largest US Res. Furniture Company
- Most Recognized Furniture Brand
- More than 10,000 employees
- Proud to be Made in America for over 93 years

[Image of a woman sitting on a La-Z-Boy chair]
The La-Z-Boy name is known for top notch furniture and we have a reputation to uphold. Many of our jobs including frame building and upholstery are highly skilled, labor intensive, incentive based jobs. Our Ergonomics partnership with Sandalwood has helped us in training a committed management team to identify ergonomic hazards and has provided us the solutions to control these workplace hazards.

Sandalwood is an engineering and ergonomics consulting firm. Sandalwood designs and executes strategic programs for manufacturers which reduce their work-related risks to quality, productivity and employee health. By providing knowledge, research, technology and resources, Sandalwood supports its clients at the executive level as well as on the factory floor.
2012 - WHAT WERE WE FACING?
Traditional Residential Furniture

- Large, heavy products
- High volume demands
- Extreme postures required to complete manufacturing processes

- High Injury rates
- High employee turnover
- High case management costs
- More Ergonomic (MSD) Injuries
Ergonomic Risk Factors

- **High Repetition**
  - Same or similar movements throughout the shift

- **Fast and Continuous Pace**
  - Incentive Rate

- **High Forces**
  - Pushing, Pulling, Gripping, Vibration

- **Awkward Positions / Heavy Weight**
  - Using movements that work the body structures beyond their neutral positions.
INCENTIVE WORK

Everyone else

Ergo Influence

Early Reporting
Attendance
Operator Safety
Enforcement
Production Speed
Quality
What did we do?

• Put the people first

• Let Leaders Lead / Empower

• Education

• Play the long game, but find some quick wins
Ergonomics

- Vacuum Assist with Campaign
- Seeking additional areas of opportunity

- Opportunities with Joybird
- Opportunities with external Seat Building
The BEAST
La-Z-Boy sofa production requires a specific staple shot with a pneumatic stapler weighing 7.5 pounds. This action usually requires the operator to use the gun in an overhead position and sometimes standing on toes. Height adjustable tables have provided some ergonomic support, but the awkward positioning with shoulder abduction while making this staple shot (the Beast) is still in the majority of these operations.

Killing the BEAST
La-Z-Boy engineers have developed a fixture (affectionately called “the Rotisserie”) which will easily allow the operator to make a perfect ergonomic staple shot.

The Challenge
Our challenge as EHS professionals is to get the necessary budget to apply this fixture to all needed applications. Currently 30 fixtures are needed across the La-Z-Boy Residential Division at an estimated cost of 18K per fixture.
Poor ergonomic postures can lead to musculoskeletal issues. Our current experimental method of seat framing requires poor ergonomic posturing to accomplish corner stapling. The tool weighs 7.5 pounds. The operator on the left built 760 seats which means 1520 times his body was in the pictured position for a 9 hour shift!
Management Commitment - ROBOTICS

**Base Assembly Machine** - Attacking potential for long term cumulative injuries and crush / acute injuries
- Eliminates the potential for shoulder, wrist, elbow cumulative injuries
- Eliminates the opportunity for crush / pinch injuries found in manual pressing operations
Multiple injuries at both Neosho and Dayton’s Metal Supply Centers have occurred due to our antiquated process of utilizing operator static hold part positioning underneath Orbitform machines. The EHS team challenged our engineers to help with a solution! The Rivet Dial Table was developed by a cross-functional team of La-Z-Boy Engineers and Operators under the leadership of the Automation Team. The Team has built a machine that is far more efficient than the old method and one that completely eliminates the potential for injury. The EHS team is so proud of these efforts, we have applied for The National Safety Council’s 2019 Green Cross for Safety Award.
Back Bracket Machine - Attacking potential for long term cumulative injuries and crush / acute injuries
- Eliminates the “hand rivet spin” process that has accounted for significant finger crush injuries
- Eliminates manual “fine motor skills” that contribute toward carpal tunnel syndrome
ERGO Team Activities

Swivel Lift allows easier access
Working with Suppliers

That's my Kid!
Working with Suppliers

- We have established corporate guidelines and continue to work with our suppliers on better ergonomic packaging solutions.
Sandalwood Ergonomist Sarah Spiker evaluated the ergonomic challenge of pushing/pulling our loaded frame carts vs using the cart caddy.

Too many workers are attempting to pull the carts / increasing the potential for shoulder injury.

Conclusion: Walking beside the frame caddy as it accomplished the task is much easier on the body than push / pull. Team members are trained on the hazards associated with the pull.
In class education
How did we get there?

- Reducing Injury Potential
- Extreme Focus on Safety
- Extreme Focus on Ergonomics
- Commitment / Top down
- Trend based Safety Teams
- Operator engagement / all levels
- Investigation on all incidents
- Safety Discipline / Accountability
- Benchmarking / Best practices
- “My Brother’s Keeper” mindset
La-Z-Boy Continues to Deliver World-Class Safety

- Over 70% improvement in recognized safety metrics over 6 years

- Currently at 15.5+ million hours with No-Lost-Time accidents, eclipsing the past record of 6.5M
  - 220% better than the U.S. record

- 128 National Awards recognizing our record setting performance

Back-to-back recipient of Corporate Safety Culture Award:
The most prestigious award offered by the National Safety Council, honors corporations who foster a creative and collaborative culture to enhance safety performance and obtain a competitive advantage.
ERGO Injuries - Dayton Tennessee

Ergonomic Related OSHA Recordable Injuries – 5 Year Trend

70% Decrease through 2018
ERGO Injuries - Dayton Tennessee

Ergonomic Injuries Requiring Surgery

2015
2016
2017
2018
2019 (YTD)

Substantial Work Comp Savings $
What’s next?

- **Introduction of standards**
  - Material Handling
  - Carts and Dollies
  - Force Specifications

- **Single Point Lessons**

- **Working alongside Research and Design**

- **Creating the next standardized cell design**
La-Z-Boy’s ERGO focus on retention

- Advanced fixturing and adjustable tables/workstations
- Engineering engagement in best practice design application
- ERGO involvement in newly established process
- Training and Education/all employees
- Management commitment
- Supplier engagement
- Automation for ERGO nightmares
- ERGO Team Engagement
Questions

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