# Grappone Collision Center’s Lean Journey

# WHY TOYOTA'S "THINKING PRODUCTION SYSTEM" (TPS)?

# Why TPS?

- The fifth generation: a long-term solution
- The “Respect for Humanity” system
- Improving others’ processes (i.e., vendors)
- Commitment to bettering society

# Why TPS?

**The Eight Forms of Waste**

1. Motion
2. Delay or waiting
3. Conveyance
4. Defects
5. Overprocessing
6. Inventory
7. Overproduction
8. Underutilized Team Member Creativity

# Why TPS?

- Our daily tasks involved more stress than productive work
- No standardization of tasks
- Nebulous definition of quality
- Heavy reliance on just the right person who can fight fires
- Grappone customer expectations not being met

***In a nutshell: long hours, mad customers, poor quality (though we were making lots of money!)***

# Timeline

- **2007**

  Exposed to concepts of "lean manufacturing" through industry conferences – research begins. Purchase The Toyota Way and The Toyota Way Fieldbook. Become hooked.

# Timeline

- **2008**

  **May:** Attend Baldridge/Lean conference, hosted by Granite State Quality Council.

  **December:** Formally engage NHMEP to train us on the fundamentals of lean. Secure grant from State of NH to pay for half of all costs.

# Timeline

- **2009**

  **February:** Lean 101 with NH MEP

  **March:** Convert pay in shop

  **April:** Tour Marshall Auto Body

  **June:** Bring Aaron Marshall to NH

  **August:** Follow up visit from Aaron

  **October:** Present to Jeff Liker

# Pre-conversion

- In business since 1958
- 21 staff
- About 11,500 sq. ft. production space
- Processed about 35 cars/week
- Annual sales $3.1-$3.5m
- Several DRPs

# Pre-conversion

Without a plan, it was every man for himself.  Whoever could get to the frame machine or spray booth first won!

# Pre-conversion

Clean & organized but no flow.  Once inside, it was hard for cars to move through, or move out.

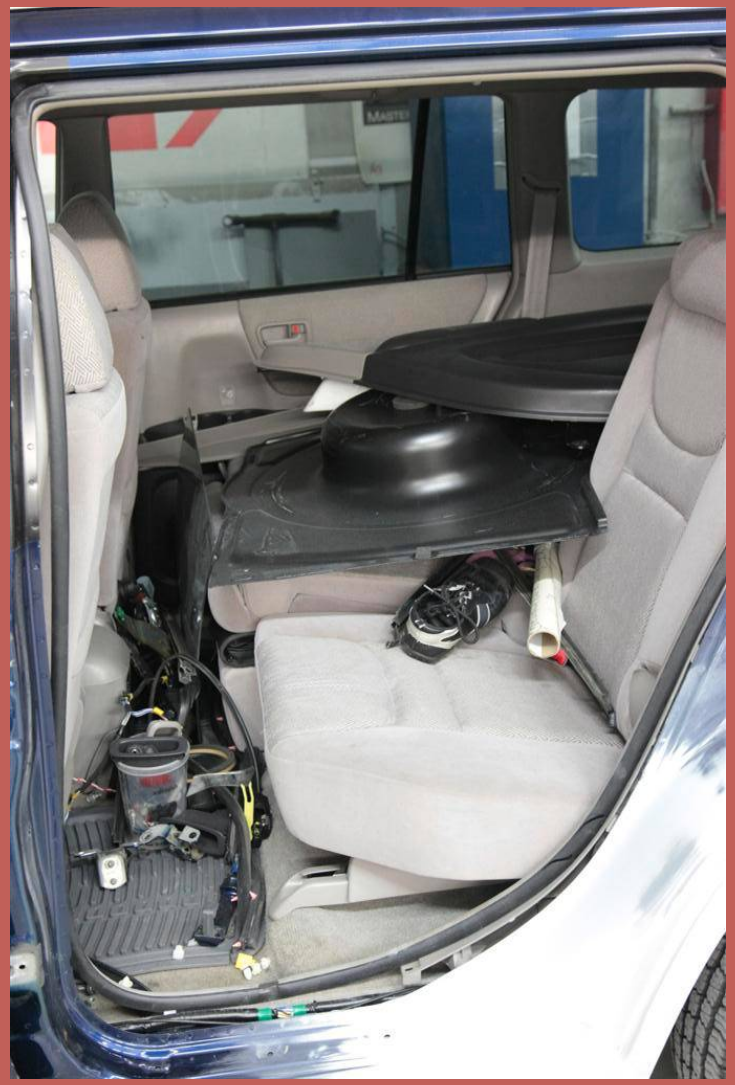
# Pre-conversion

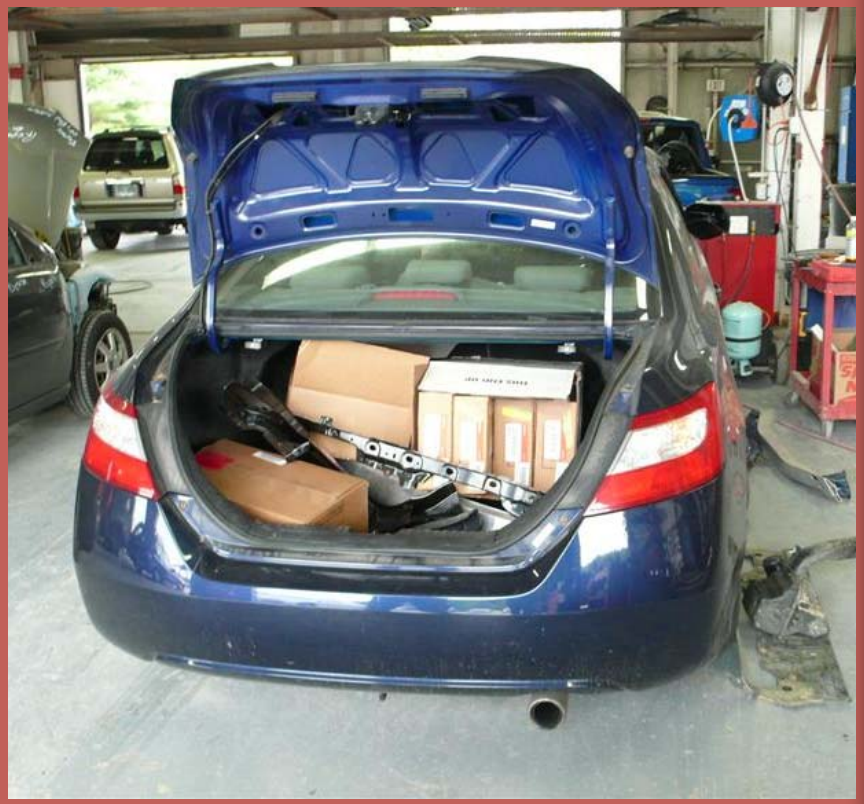
Vehicles waiting to be brought in for work by individual Technicians- which car is in what phase of repair? Are the right parts here? Who knows?

# Pre-conversion

Technicians could work on multiple cars at the same time – potential quality/safety issues

# Pre-conversion





New Parts and R&I parts often stored in the car

# Post-conversion

All parts stored on carts – cart travels with job throughout production

# Post-conversion

Defined workspaces, “looks less busy,” but more actual work gets done.

# Post-conversion

Parking lot a component of the “Visual Management System”

# Post-conversion

# Timeline

- **2010**

  Spend the year “thinking about what we just did.”

  **July:** Downsize operation in preparation for move at end of year

# Timeline

- **2011**

  **January:** Move into new space

  **February:** Continue to settle in

  **March:** Grand re-opening, unveiling of the new refinishing system

# The New Shop

- 12 staff
- About 5,500 sq. ft. production space
- Process about 20 cars/week
- Projected annual sales $2m
- No DRPs

# Frame Machine

# Small Frame Machine

# Mixing Room

# Break Room

# The Eighth Form of Waste

# The Old Way

Two hours of prep time/ entire car in booth

# The Old Way

Heavy use of materials (tape, paper, bags)

# The New Way

Roughly 35 minutes of prep time (compared to two hours in job just seen); several vehicles' panels can be baked in the same cycle

# The New Way

Note the lack of tape, paper, bags

# Benefits of Unleashing Creativity

- Reduced cycle time
- Natural gas consumption down
- Prepping time drastically reduced
- Cars not running as much in shop
- Better finished product