

# Building a Well-Designed Maintenance Plan

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## GOALS

- To maintain the proprietary or custom molds to a high degree of production readiness and performance.
- To maximize the yield of the mold's life.
- To reduce to a minimum the “Unscheduled” Mold Stops.



# Current Challenges

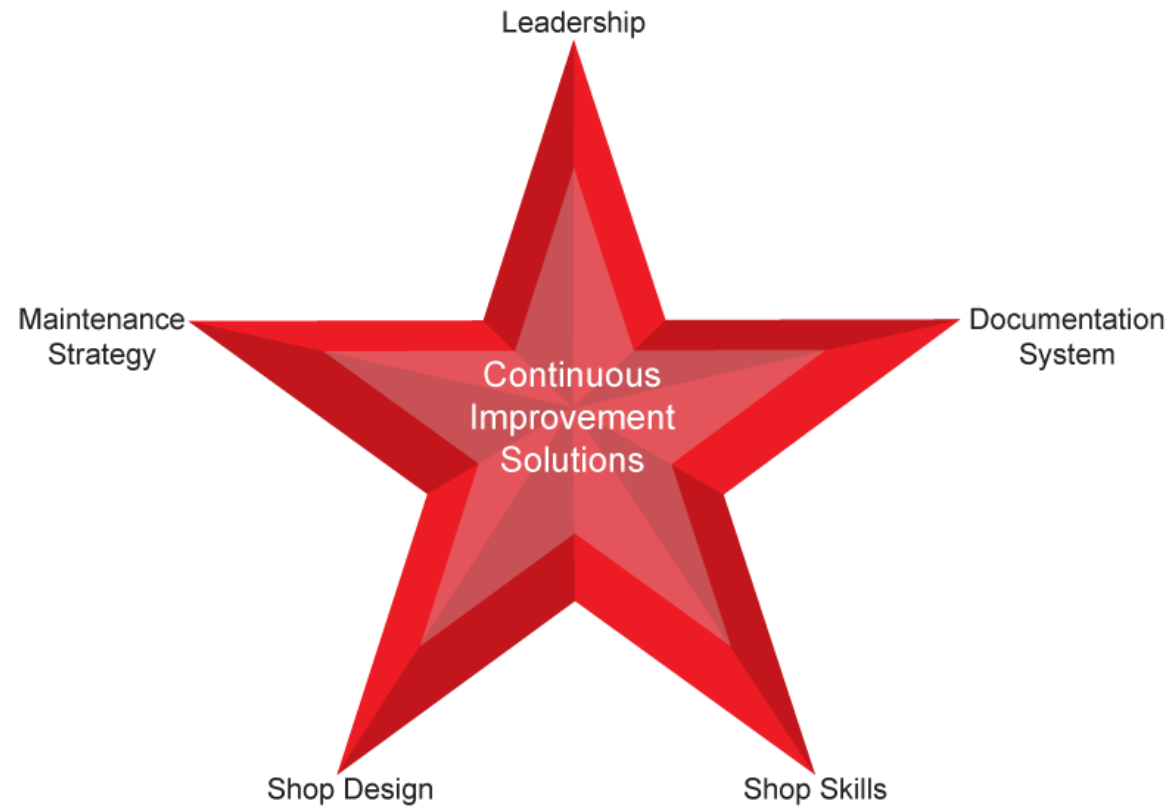
- Shops firefighting the hot issues...over and over.
- No time to improve.
- Shop skills not keeping up with needs (lean practices).
- Freelancing repairs.
  - No repair consistency or sharing of mold knowledge.
  - Everyone doing his/her own thing.
- Record-keeping is fractured – no standard terminology or structure provides little value.
- Limited communication with outside vendors (run or rebuild) concerning mold requirements or maintenance practices.



- It is imperative to embrace a change of Culture.
- Pro-active, systematic approach.
- Implementation of proven Best Practices from the Industry.
- Use and justify latest technology and equipment.



# ToolingDocs Star System



## 4 Levels of PM

All mold PM levels are based upon cycle counts or hours (production) run and determined through visual inspection of tooling residue and wear levels along with specific mold criteria such as class of mold, abrasiveness of resin and type of product.

PM levels are established in order to optimize bench time through targeted maintenance events. This prevents “over cleaning” molds that can result in premature tooling wear and wasted labor hours.

- Level 1 – Wipe down
- Level 2 - Intermediate
- Level 3 - General
- Level 4 - Major



## Latest Technology for Cleaning

- Ultrasonics
- Dry Ice Blaster
- Laser Knife
- Bead Blast



## Latest Technology on Welding

- Tig Welding
- Laser Welding







## Training

- Constant Development of Skills



# Shop Design

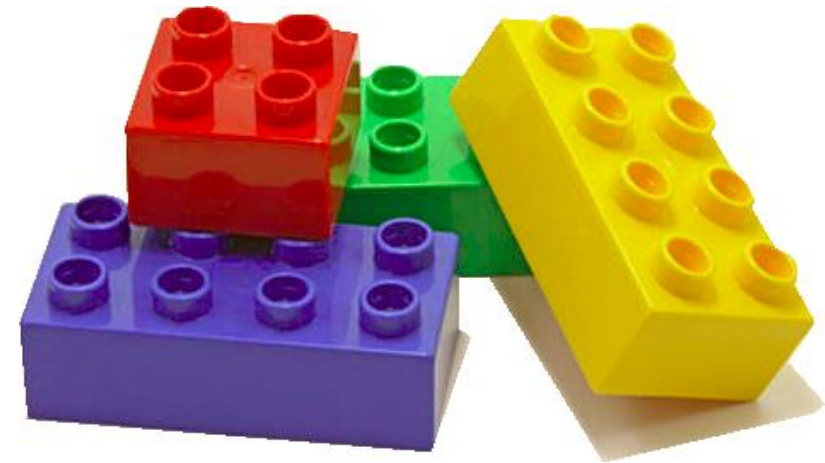


# Shop Design: It's All About Organization!



## How does scheduled PMs lead to profitability?

- No wasted labor hours doing them too early.
- No wasted tooling expense doing them too early.
- No premature tool wear by doing them too early.
- No extensive damage done to the tool doing it too late.
- No expensive tool costs by doing it too late.
- No added labor hours by doing it too late.
- Doing it at the right time saves you time and money.
- The right time is based on documented data per mold.



## Costs of *Unscheduled* Mold Pulls / Stops

### TOOLROOM:

**MPP (Mold Pull Pace)** - How many mold pulls do you typically have per week?

These include Scheduled pulls, change overs, *Unscheduled* pulls, end of run, etc..

50

Of that weekly total of mold pulls, how many do you estimate are *Unscheduled*?

10

For each *Unscheduled* pull, how many hours do you estimate the toolroom works on each mold?

6

What is your hourly toolroom rate? (*Fringed Rate*)

\$ 35

Toolroom Labor Costs of *Unscheduled* Mold Pulls / Year: \$ 105,000

### MOLD PULL and SET UP:

How many hours, on average, does it take to pull and set up each one of your molds?

3

What is your mold pull and set up hourly rate? (*Fringed Rate*)

\$ 25

Mold Pull and Set up Costs / Year: \$ 37,500

### SPARE COMPONENTS and PARTS:

For your *Unscheduled* mold pulls, what percentage of molds need:

A *Low* amount of spare components and parts (*O'-Rings, Seals, Water fittings, etc.*)

80%

A *Medium* amount of spare components and parts (*T/Cs, Heaters Probes, etc.*)

10%

A *High* amount of spare components and parts (*Cores, Cavities, Stripper Rings, etc.*)

10%

\$ (307,500)

Any Questions?

*Thank  
You!*

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