

ASQ Section 1302
Summer 2004 Series
Mahoney State Park

The Tools of Lean- The 5Ss of Workplace Organization

Stan Gidley
Managing Director
Institute of Business Excellence
July 15, 2004

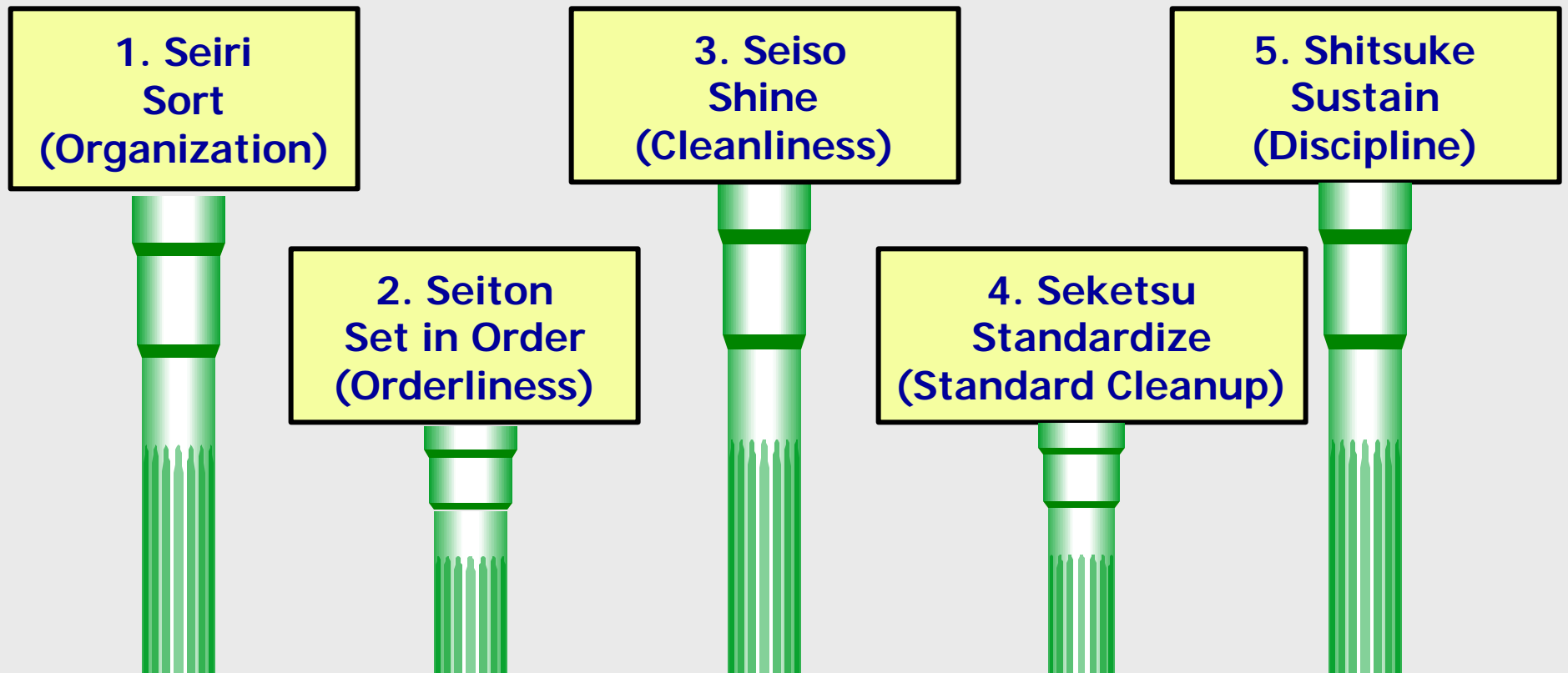
5S - Workplace Organization

“5S Standards are the foundation that supports all Phases of Lean Enterprises.”

- The system can only be as strong as the foundation it is built on.
- 5S leads to a **CLEAN** and **SAFE** work environment.
- Employees and the company must be **COMMITTED** to initiating and maintaining it.

5S - Workplace Organization

The five pillars that provide the foundation for 5S methodology are defined by 5 Japanese words that start with 'S'. We can adopt a loose English translation - Sort, Set in Order, Shine, Standardize and Sustain.



Do you know a squirrel?



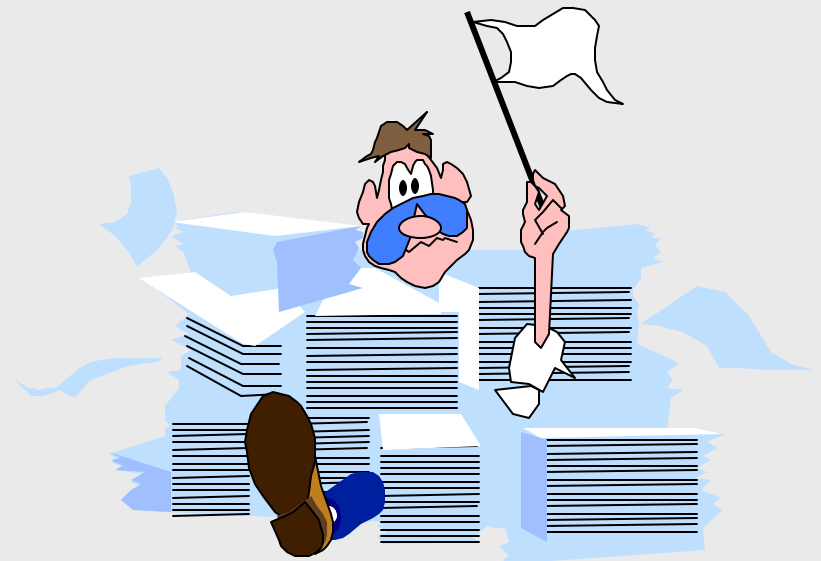
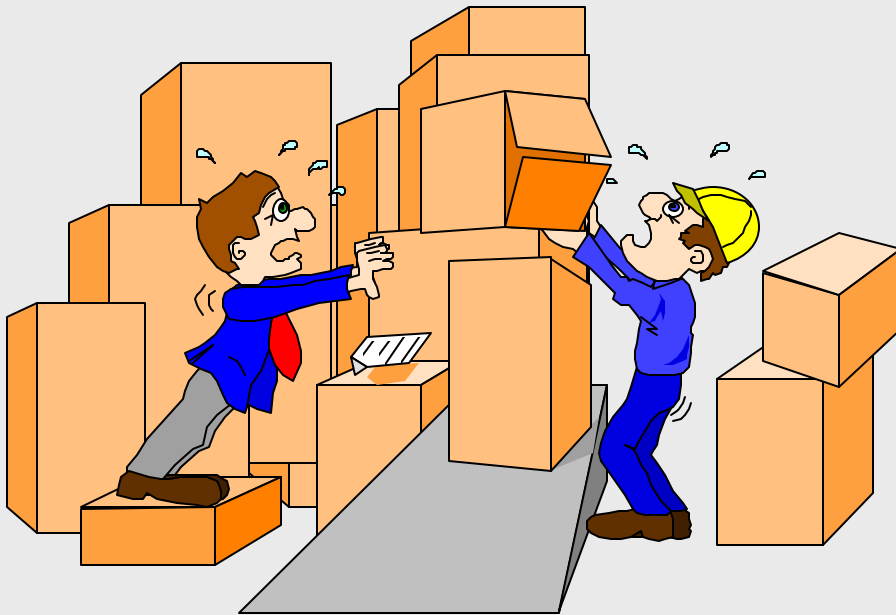
5S - Before



5S - After



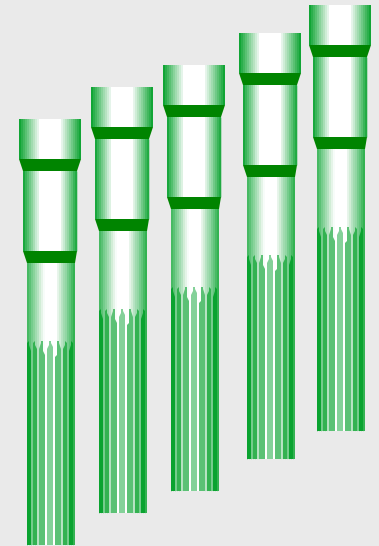
Why the 5S's?



5S – Why?

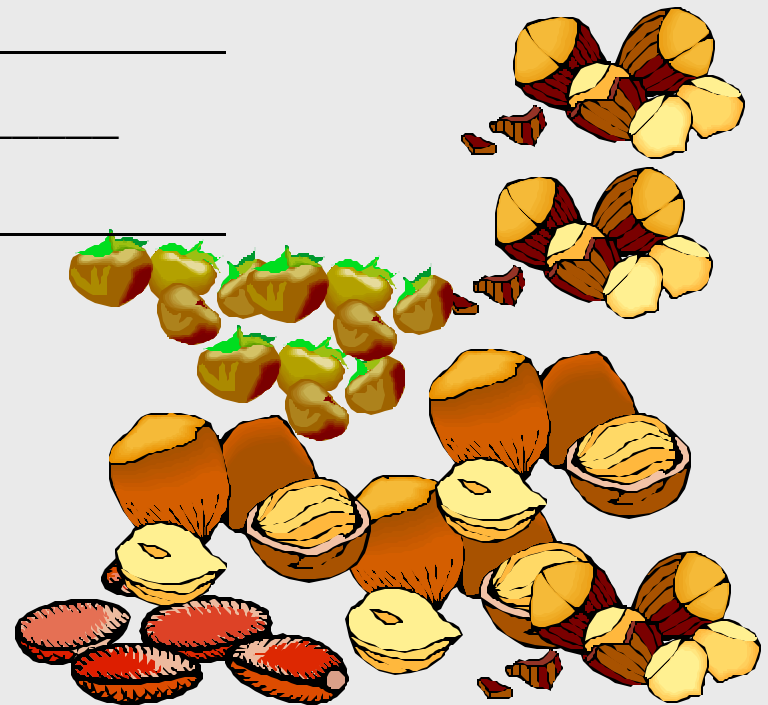
What are the benefits of
Neat and Clean?

- _____
- _____
- _____
- _____
- _____



Exercise

List five areas where squirrels live in your organization.



5S #1 - SORT

Definition

- To sort out necessary and unnecessary items.
- To store often used items at the work area, infrequently used items away from the work area and dispose of items that are not needed.

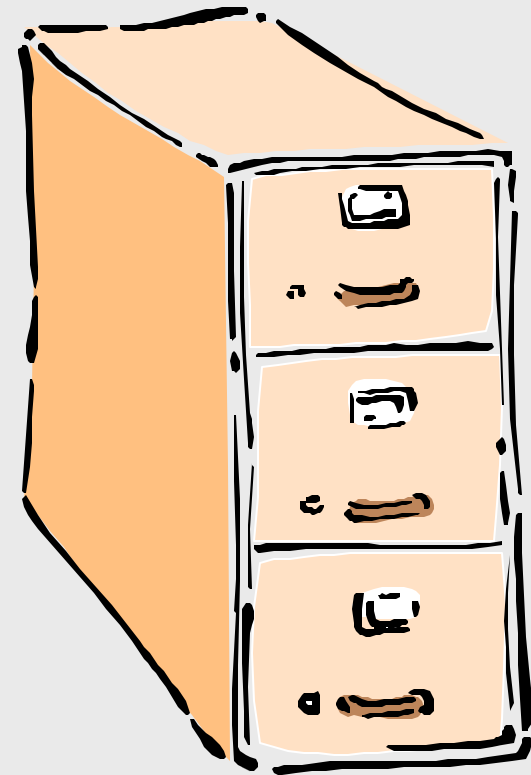
Why

- Removes waste
- Safer work area
- Gains space
- Easier to visualize the process

How

- Start in one area, then sort through everything
- Discuss removal of items with all persons involved
- Use decontamination/ environmental/safety procedures
- Items that cannot be removed immediately should be red tagged

5S #1 - SORT



SORT: The Red Tag Tactic: Visual Clearing Up

What is the Red Tag Tactic?

- **This is a vital clearing up technique.**
- **It provides a non-threatening, structured approach to clearing away the unnecessary clutter in a workspace.**

“The use of red tags can be one secret to a company’s survival.”

SORT: The Red Tag Technique

The **Red Tag Technique** involves the following steps:

- 1.** Establish the rules for distinguishing between what is needed and what is not.
- 2.** Identify needed and unneeded items and attach Red Tags to all potentially unneeded items. Write the specific reason for Red Tagging and sign and date each tag.
- 3.** Remove Red Tag items and temporarily store them in an identified holding area.
- 4.** Sort through the Red Tag items; dispose of those which are truly superfluous. Other items can be eliminated at an agreed interval when it is clear that they have no use.
Ensure that all stakeholders agree.
- 5.** Consider ways to improve the workplace so that unnecessary items do not accumulate.

5S #2 - Set In Order

Definition

- To arrange all necessary items.
- To have a designated place for everything.
- A place for everything and everything in its place.

Why

- Visually shows what is required or is out of place.
- More efficient to find items/ documents (silhouettes/ labels).
- Saves time, not having to search for items.
- Shorter travel distances.

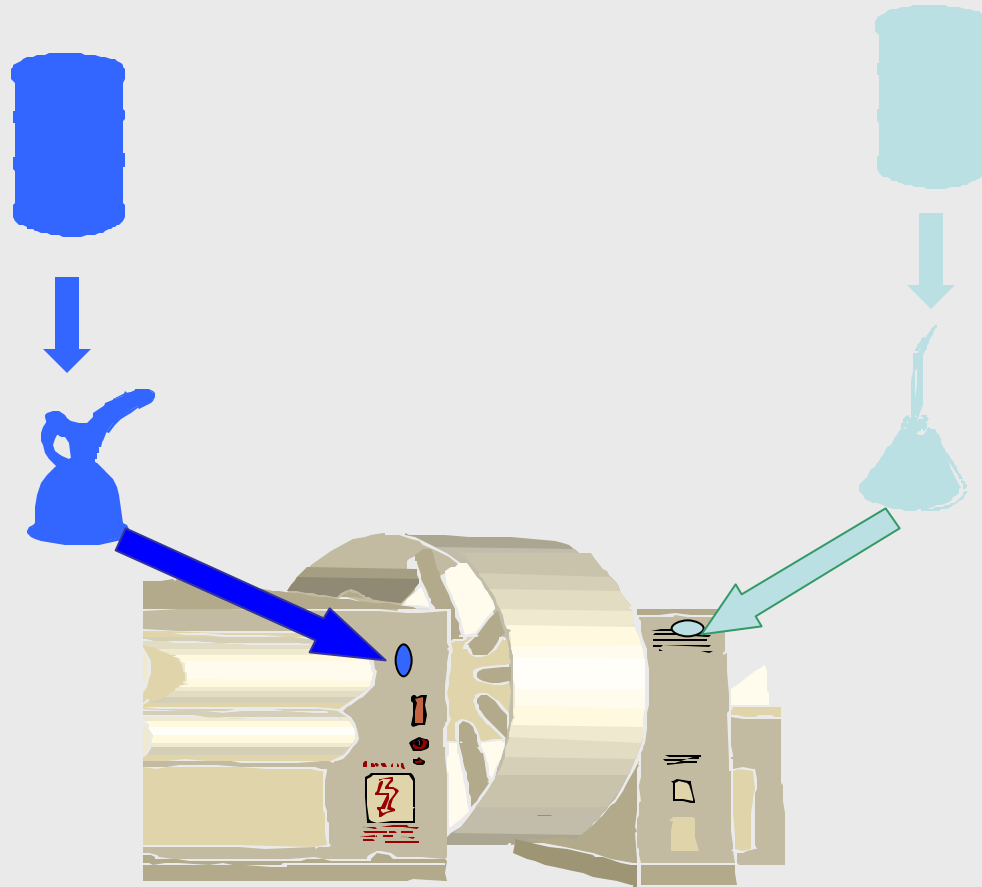
How

Keep things used together - kept together.

Use labels, tape, floor markings, signs, shadow outlines.

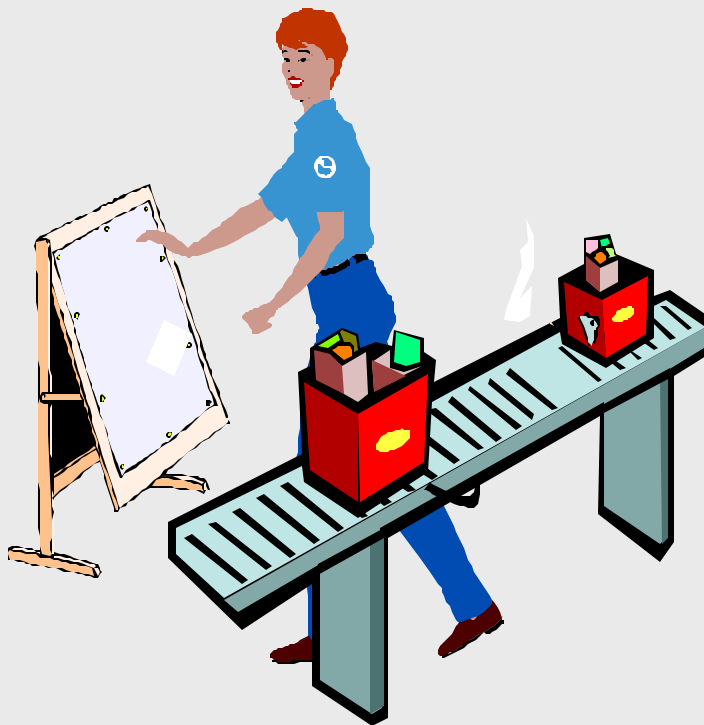
Sharable items keep at central location (eliminate excess).

Color-coded Orderliness for Lubrication

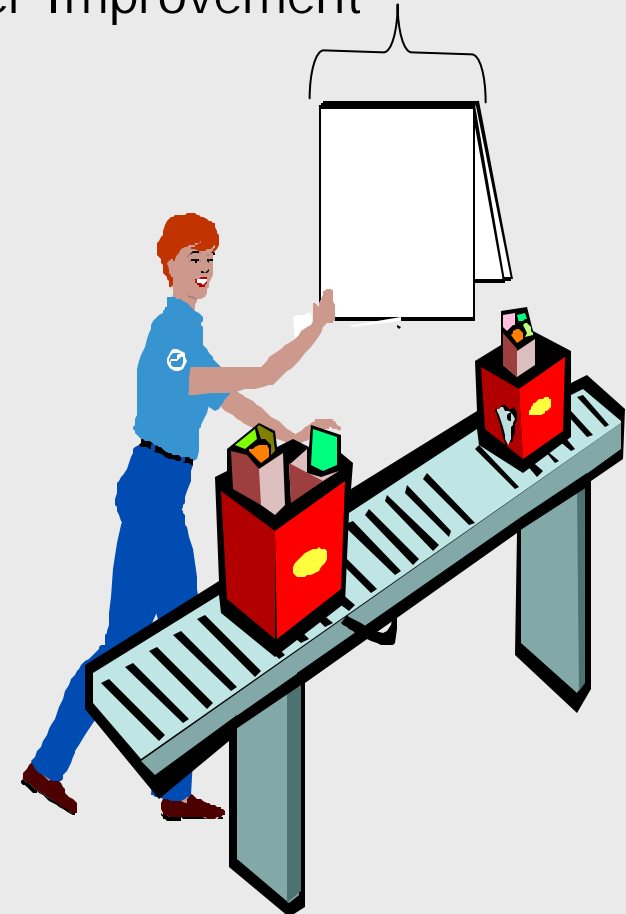


Improvement in Parts Layout

Before Improvement



After Improvement



Improvement in Picking up Parts

Before Improvement



- Worktable was too wide
- Parts stand was too far away
- Parts were laid out horizontally, making them hard to see and reach.

After Improvement



- Worktable was made smaller (2/3 width reduction).
- Parts were put within closer reach
- Parts were laid out on a slant, making them easier to see and reach.

Personal Tools



5s #3 - SHINE

Definition

To keep your area clean on a continuing basis.

Why

- A clean workplace is indicative of a quality product and process.
- Dust and dirt cause product contamination & potential health hazards.
- A clean workplace helps to identify abnormal conditions.

How

Use a plant layout as a visual to identify individual responsibilities for cleaning - eliminates "no man's land."



5S #4 - STANDARDIZE

Definition

- To maintain the workplace at a level which uncovers and makes problems obvious.
- To constantly improve our plant by continuous assessment & actions.

Why

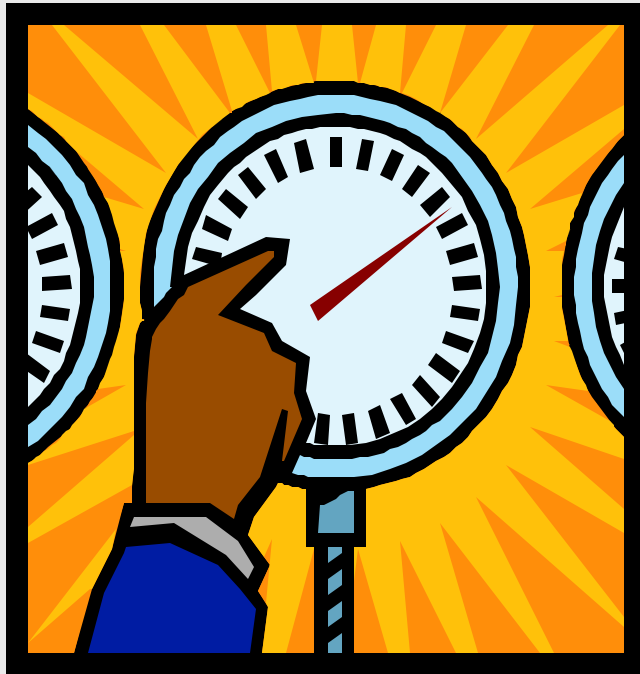
- To build 5-S's into our every day process to maintain "neat" and "clean"

How

- Build into everyday routines and checklists
- Develop schedules and checklists.

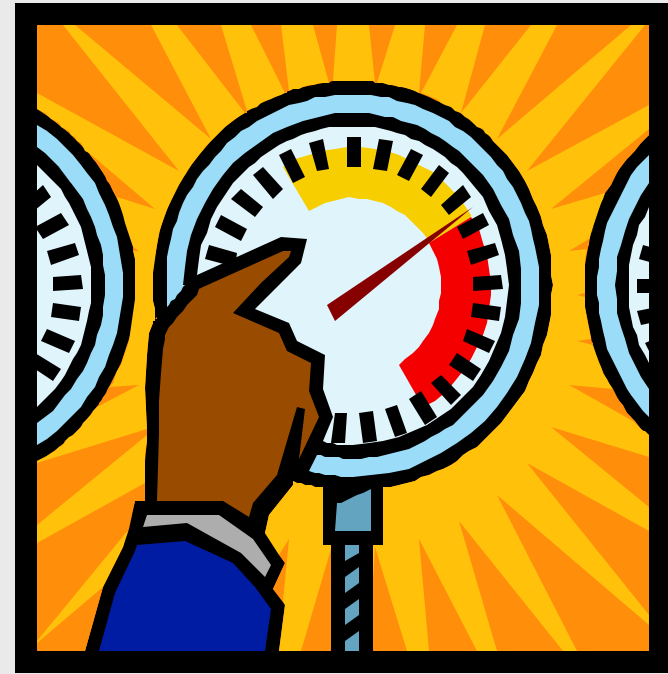


Before Improvement



Gauge readings checked against standards in manual

After Improvement

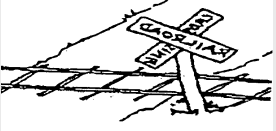
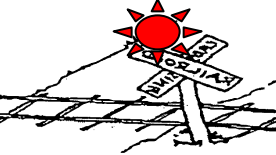




Gauge readings checked against standards indicated on gauge displays

Eliminating the need to check a manual for Standards -
KEEP Standardization Easy. **A VISUAL Solution.**



Four Types of Visual Devices / The Need Leads

Type of Visual Defect	Visual Indicator	Visual Signal	Visual Control	Visual Guarantee*
Power Level	Passive (tells only)	Assertive (grabs our senses by changing)	Aggressive (narrows our response options)	Assured (allows correct response only)
Impact on Behavior	Influences / Informs / Indicates / Shows / Suggests	Alerts / Warns / Alarms / Signals / Prompts / Announces	Confines / Contains Obstructs / Constrains Regulates / Restricts Restrains / Directs Hinders / Controls / Limits	Compels / Forces / Ensures / Eliminates / Prohibits / Inhibits / Guarantees
Icon				
Work Place Examples	Directions / Instructions / Prototypes / Maps / Displays / Self Numbers / Bin Address / Floor Tape / Painted Borders / Bench Markings / ETC....	Andon / Alarms / Lights / Digital Boards / Production Control Boards / ETC.....	Shelf Height / Shelf Width / Bin Size / Container Size / Pallet Size / Weight / Raised Borders or Edges / Aisle Width / ETC.....	Detect Chutes / Sensors / Limit Switches / Guide Pins / Locator Pins / Templates / ECT....
* Also Known as ; mistake-proof, failsafe, poka-yoke devices.				

5S #5 - SUSTAIN

Definition

- To maintain our discipline, we need to practice and repeat until it becomes a way of life.

Why

- To sustain sorting, storage and shining activities every day.

How

- Good habits are hard to break.
- Commitment and discipline toward housekeeping is essential in taking the first step in being World Class.

PLAN to Implement 5S

- PART 1 (Sort, Set in Order, Shine)
 - > What areas can you 5S?
 - > Which area will you start with?
 - > Who is responsible?
 - > Communicate and Train - When?

- **PART 2 (Standardize and Sustain)**

- >How? Who? When?

You MUST do PART 2 to have a lasting impact.

5S Focusing Tools

- “Red Tag” Technique
- Before & After photographs
- Improve Area by Area, each one totally
- Clear Responsibilities
- Daily Cross-Department Tours
- Schedule ALL Critical Customers to Visit
- Regular Assessments with defined Metrics

Benefits of 5S Implementation

- A cleaner workplace is a safer workplace
- Contributes to how we feel about our product, our process, our company and ourselves
- Provides a Customer Service Showcase to promote our business
- Improved Product Quality with less contaminants
- Efficiency will increase
- Reduces Stress