

Module: **Workplace Management**

Element: **5C**

Aims and Objectives

Target Audience :

5C Facilitators/Trainers, Operations and Support Management

Purpose of Module :

To give a full understanding of the 5 C's, their importance and how they can be effectively introduced.

Aims & Objectives :

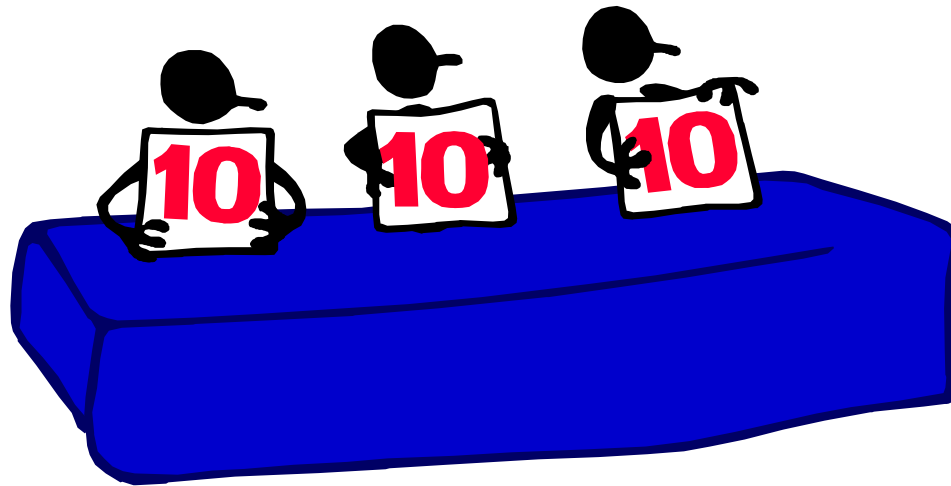
- Understand the basis for 5C
- What each of the steps are
- Measuring Improvement

Contents

- **Introduction**
- **5C Overview / Getting Started**
- **Clear Out & Classify**
- **Configure**
- **Clean & Check**
- **Conformity**
- **Custom & Practice**

5C Overview

‘There are no world class manufacturing companies without 5C in place’

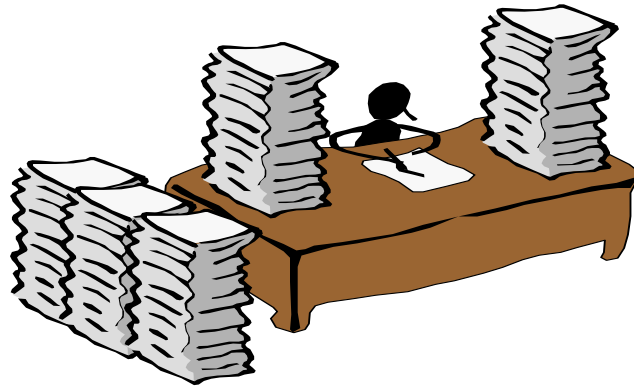


The 5C Approach

5C is a systematic approach to workplace organisation and housekeeping. Encouraging ownership and self discipline to sustain and further develop working practices.

It aims to :-

- Remove waste from the workplace.
- Provide an environment where continuous improvement is embraced.
- Improve safety.
- Increase quality.



Things to consider before 5C Implementation



....involving everyone with 100% communication!

5C Workplace Audit

- **Establish current state.**
- **Using recommended audit sheets.**
- **Capture current state using colour photo's.**
- **Record other problem areas, such as safety issues or machine breakdowns.**

5C Workplace Audit

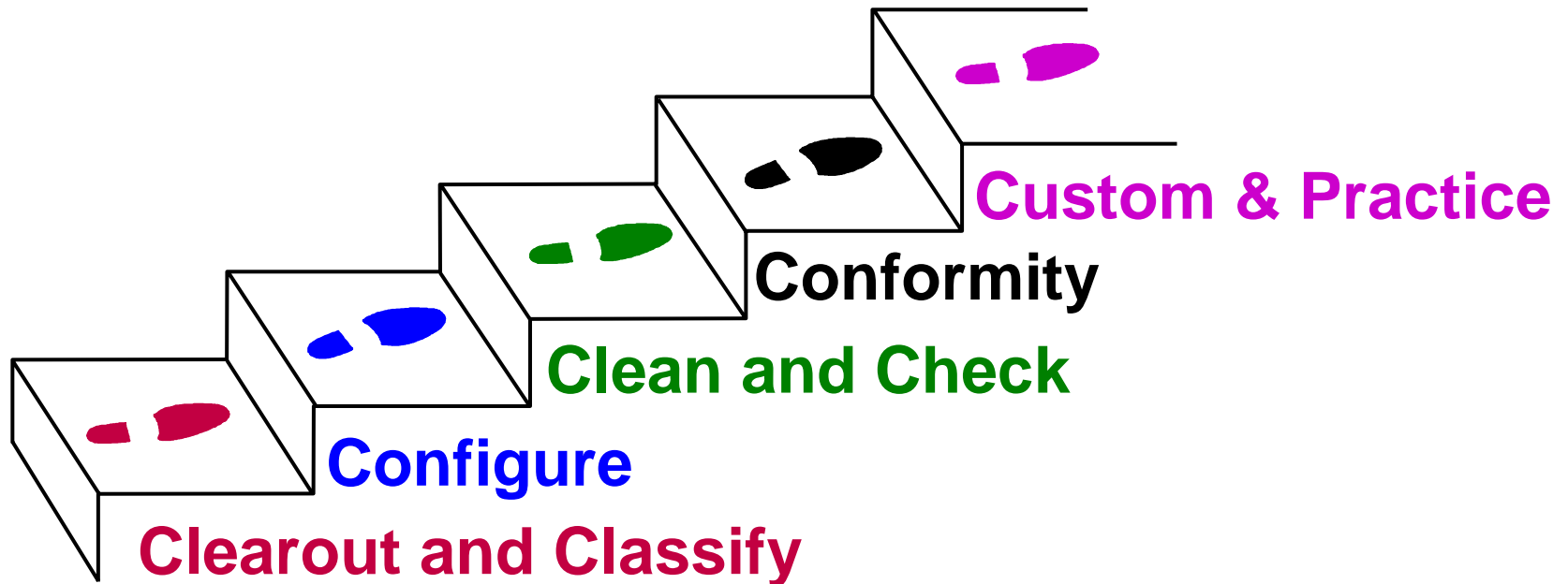
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COMMENTS	TOTAL	IMPROVEMENT POTENTIAL		

5C Office Audit

ITEMS	INDIVIDUAL INSTANCES IN OFFICE AREA AUDITED	TOTAL No. OF INSTANCES	SCORE	POINTS
Floor & isle untidy,waste bin dirty/ overflowing.Items left on floor			0 = No Dirt/Rubbish 5 = 1 - 5 Instances 10 = >5 Instances	0 5 10
Unnecessary items / documents left on desks / tables.			0 = All desks/ tables clean 10 = 1 – 5 desk / tables 15 = >5 desks / tables	0 10 15
Document & equipment storage not defined Locations of documents not defined.			0 = All locations defined 10 = 1 - 5 instances 15 = >5 Instances	0 10 15
Notice / bulletin boards untidy & out of date .No ref. to QCD data.			0 = QCD Up-to-Date 5 = <50% incorrect 10 = >50% incorrect	0 5 10
Fire equipment/ safety procedures not adhered to.			0 = Safe operation 15 = Some procedures not used	0 15
Lights left switched on, energy wasted.			0 = No instances 5 = <3 Instances 10 = >3 Instances	0 5 10
Unnecessary items & equipment in work areas / conference rooms.			0 = All necessary 5 = 1 – 5 Instances 10 = >5 Instances	0 5 10
Out-of-date documents not clearly identified or segregated.			0 = All clearly identified / segregated 15 = Not all identified	0 15
COMMENTS	TOTAL	IMPROVEMENT POTENTIAL <hr/>		

What are the 5 C ?

The 'C' are five words, which provide the steps to improvement.



1st Step - Clear Out & Classify

- Conduct major clean-down.
- Remove all items that are not required or have become unnecessary over a period of time.
- Includes repairing broken tools & equipment.
- Frequently used items should be stored at the work area.
- Infrequent used items stored away from the work area and dispose of items that are not needed.
- Never assume. Ensure everyone is in agreement.

...Remember! Redundant items cost money to store - If you don't need it, don't keep it!



Classify

Classify tooling / equipment by frequency of use

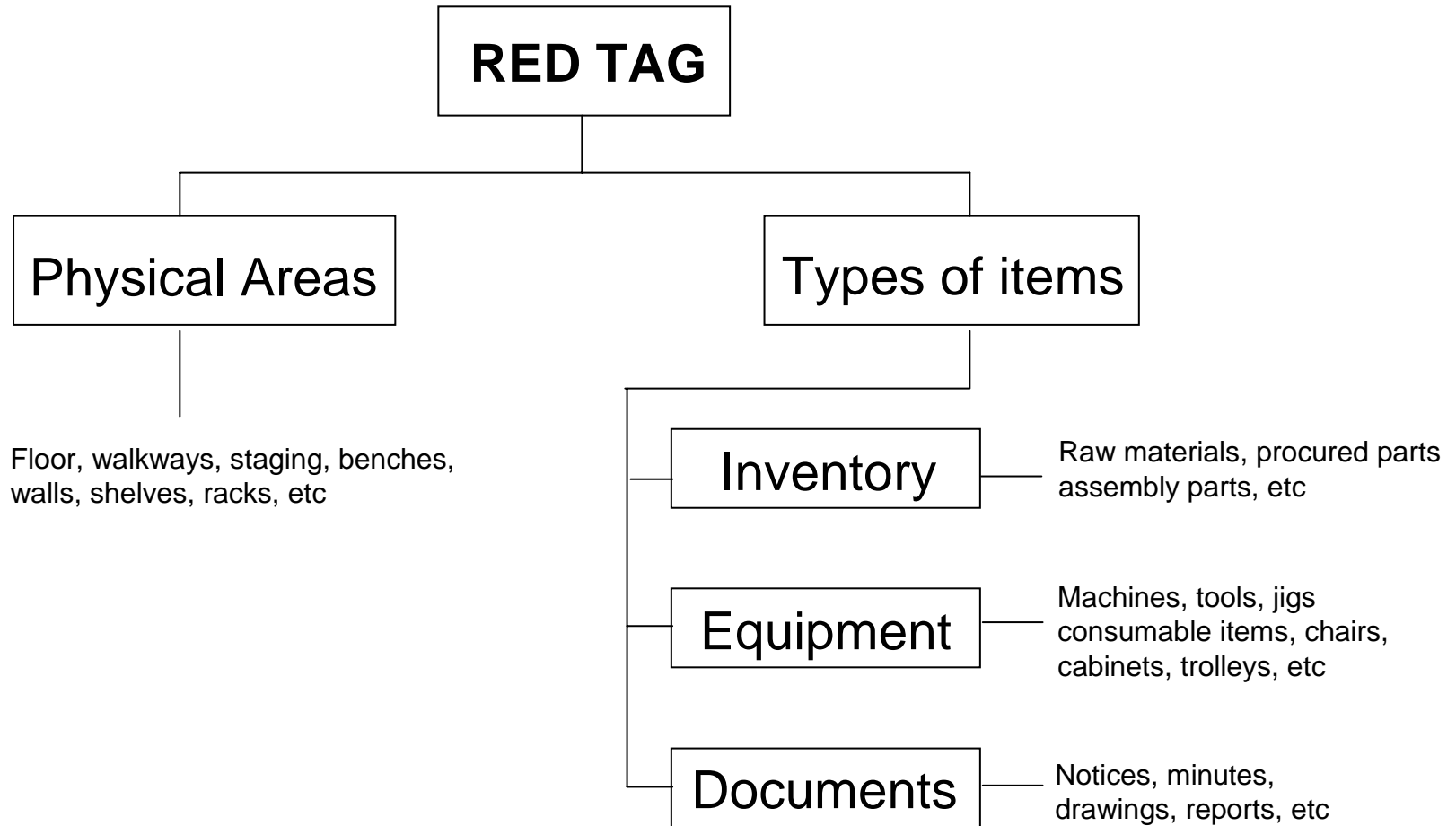
Code	Description	Action
HIGH	Hourly	Keep at workplace
MEDIUM	Daily/Weekly	Store at dept store
LOW	Quarterly/6 Monthly	Store away from area or dispose

.....within the LOW category, retrieval MUST still be quick!!

Red Tag Strategy

This means putting red tags on any items not required for the current production, any items kept in excessive amounts and any items used infrequently. Then removing these items from the area/cell.

How do we Red Tag ?



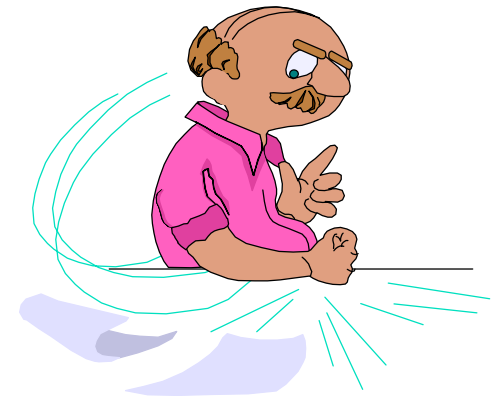
.....Red Tag Targets

Red Tag Auction

Team evaluate Red Tagged items

Options :

- Keep item where it is.
- Move to new location of work area.
- Store away from work area.
- Hold in Red Tag Quarantine Area for evaluation.
- Dispose of e.g throw away, return to stores.
- Agree min/max quantities.



Record Results

- Records need to be kept of items moved to a Red Tagging Area or disposed of.

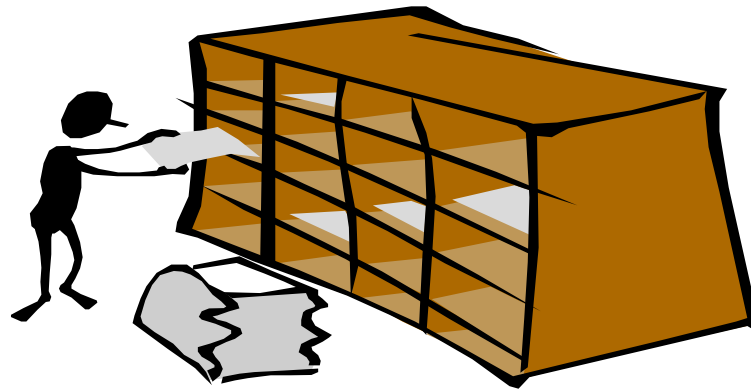
Why Clear Out & Classify ?

- Frees up space.
- Removes clutter/obstacles.
- Stops people adding to it.
- Stops hoarding.
- Improves safety.
- Gives control of what is in your area.
- Begins the orderliness process.



2nd Step - Configure

- To arrange all necessary items for economy of movement.
- Place according to frequency of use.
- To have a designated place for everything to label, classify and make easily visible.
- A place for everything and everything in its place.
- Provide safe storage - heavy items low, light items high.

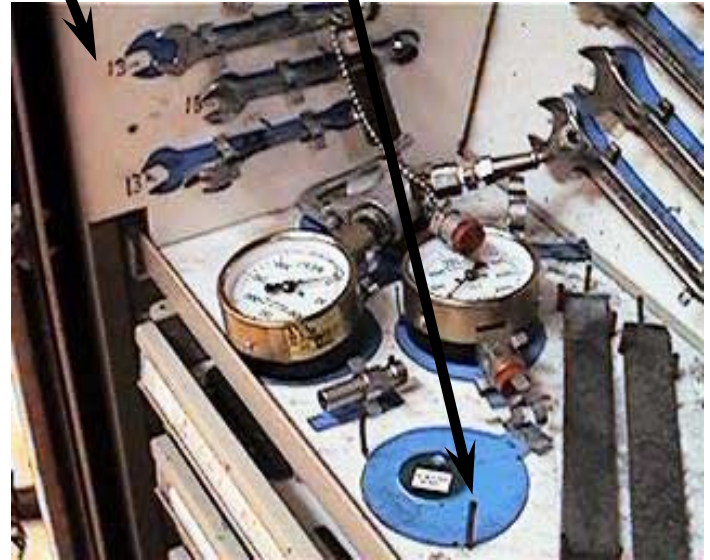


Configure Examples



Personal Identity Tags

Shadow Board
used



Configure Examples



Colour coded rubbish stations

i.e..

Blue - Metallic materials

Red - Electrical wiring



Colour coded Direct Line Feed

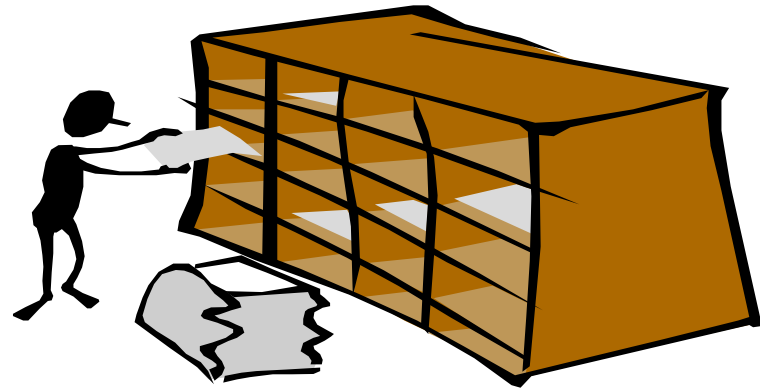
i.e..

Green - Rivets

Red - Fasteners

Why Configure ?

- Makes things easier to find, use and return.
- Removes frustration of searching for items.
- Creates a better working environment.
- Reduces accidents.
- Assists cleanliness.
- Begins standardisation.



3rd Step - Clean & Check

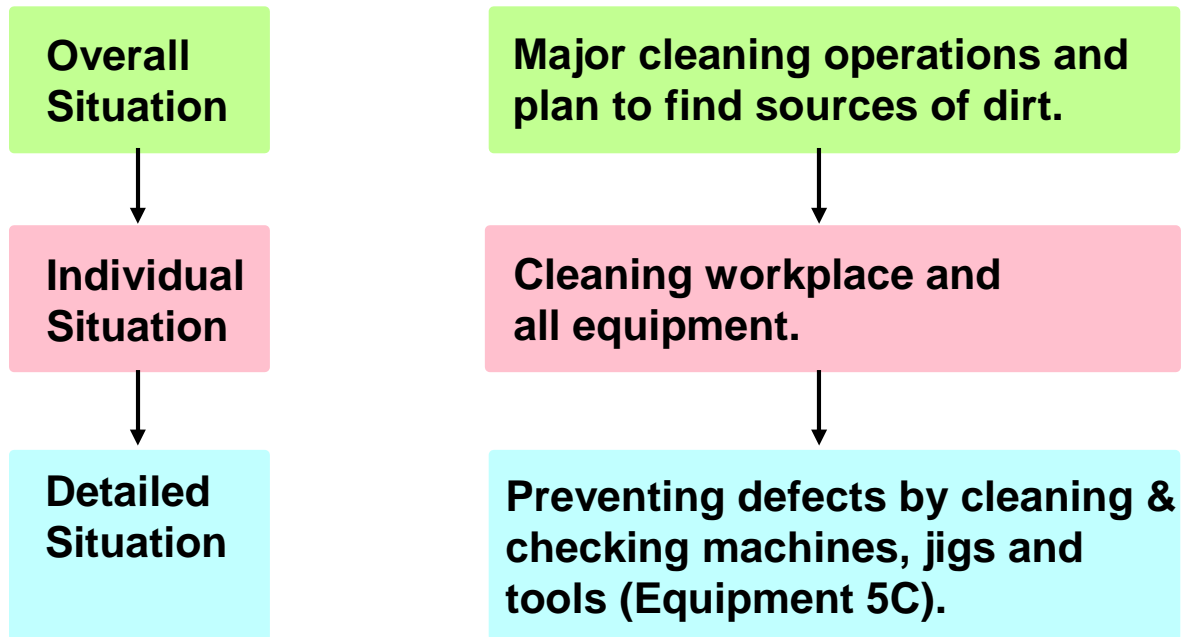
- Identify Cleaning Zones.
- It is everybody's responsibility.
- Set targets and work to them.
- Keep your area clean and tidy on a continual basis.
- Cleanliness extends to non-seen areas (eg under the jig!, behind cupboards etc).
- Routine maintenance may be incorporated (TPM).

.....**Agree & Visualise**



Clean & Check

Can be divided into 3 sections :-



.....Creating a spotless workplace

Clean & Check

Machine conc



**.....through cleaning you touch, through touching you find
when you find, you fix !!**

Clean & Check Fault Finding Sheet

Machine: M/c 1265		Date: 15/08		Completed by: J Brown						
No	Location / Fault	Code class	Cause	Temp Perm	Countermeasure	Who	When			
1	Pressure Gauge not within limit	H3	Poor labelling	T	Ensure manual setting on label	Team	1/11			
				P	Write Setting on Setting sheet	Team	1/11			
2	Measuring probe unprotected next to pallet	E9	Poor design	T P	Cover to be made Review machine specification	NCMT MR	Wk 26 Wk 26			
3	Oil Leak next to twin pallet	L4	Poorly installed	T P	Fix leak Review installation procedure	Maint MR	Wk 25 Wk 27			
Code	E Electrical		M Mechanical		L Lubrication		H Hydraulic		P Pneumatic	W Water
Class	1 Loose	2 Worn	3 Broken	4 Leaking	5 Missing	6 Dirty	7 Difficult to clean	8 Location / Routing	9 Poor design	

Clean & Check Fault Finding Sheet

Machine:		Date			Completed by:					
No	Location / Fault	Code class	Cause		Temp Perm	Countermeasure	Who	When		
Code	E Electrical		M Mechanical		L Lubrication		H Hydraulic		P Pneumatic	W Water
Class	1 Loose	2 Worn	3 Broken	4 Leaking	5 Missing	6 Dirty	7 Difficult to clean	8 Location / Routing		9 Poor design

Clean & Check Concern / Fault Analysis

CONCERN / FAULT ANALYSIS

	E	M	L	H	W	P	TOTAL
1							
2							
3							
4							
5							
6							
7							
8							
9							
TOTAL							

CODE CLASS

E = ELECTRICAL
 M = MECHANICAL
 L = LUBRICATION
 H = HYDRAULIC
 W = WATER
 P = PNEUMATIC

1 = LOOSE
 2 = WORN
 3 = BROKEN
 4 = LEAKING
 5 = MISSING
 6 = DIRTY
 7 = DIFFICULT TO CLEAN
 8 = LOCATION & / OR ROUTING
 9 = POOR DESIGN

Clean & Lubrication Sheet - Example

Date:		Machine: Lathe		Cleaning Items	
Process: JIG REMOVAL		C	Item to Clean		
<div style="display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="display: flex; align-items: center; margin-bottom: 20px;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">C1 + D1</div> <div style="font-size: 2em;">→</div> </div> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">C3 + D2</div> <div style="font-size: 2em;">→</div> </div> </div>		1	LOCATING PINTLE		
		2	AREA AROUND SHAFT		
		3	SUPPORTING ACTUATOR SHAFT		
		4	GENERAL AREA		
		Lubrication & Inspection Items			
		D	Item		
		1	LOCATING PINTLE - INSPECT FOR		
			WEAR, LUBE WHERE NECESSARY		
		2	SUPPORTING ACTUATOR SHAFT -		
			AS ABOVE		
		3	REPORT ANY DAMAGE TO TEAM LEADER		

Clean & Lubrication Standards Sheet - Example

Machine: Gleason		Process: Gear Cutting		Date: 06/07/2000		Frequency				
Cleaning Item	Method	Tools Required	Std / Lub	Time Min	Shift	Day	Week	2 wk	Mon.	Who
1 Hydraulic Tank	Wipe	Rag	Clea	2	●					
2 Machine body	Brush	Brush	No swarf	3	●					
3 Machine base	Wipe	Rag	Clean	1	●					
4 Liquid lines	Wipe	Rag	Clean	4		●				
5 Motor Fan	Wipe	Rag	Clean	1				●		
6 Motor Fan	Wipe	Rag	Clean	1			●			
Lubrication Standard	Method	Tools Required	Std / Lub							
7 Pump	1 Stroke	Grease gun	No excess	1		●				
8 Spindles	2 Strokes	Grease gun	No excess	1		●				
9 Lubricator	2 Pushes	Pump	GP Oil	1	●					
10 Filter	Visual	handle	No water	2		●				
11 Regulator	Visual		To limits	1		●				
10 Lubricator	Visual		To limits	1		●				
13 Press Gauge	Visual		In limits	1	●					
14 Temp Gauge	Visual		In limits	1	●					
15 Main Spindle	Wipe	Rag	No play	2	●					
			Total		11	10	1	1		Min

Why Clean & Check ?

- Makes defects easier to detect.
- Better customer perception.
- Creates a better working environment.
- Aids efficiency and reduces accidents.
- Helps standardisation.



4th Step - Conformity

- Use visual controls.
- To maintain the workplace at a level which uncovers and makes problems obvious.
- To continuously improve by continuous assessment and generating actions.
- To include routine health and safety.

.....the system must be controlled and maintained (using agreed standards.)



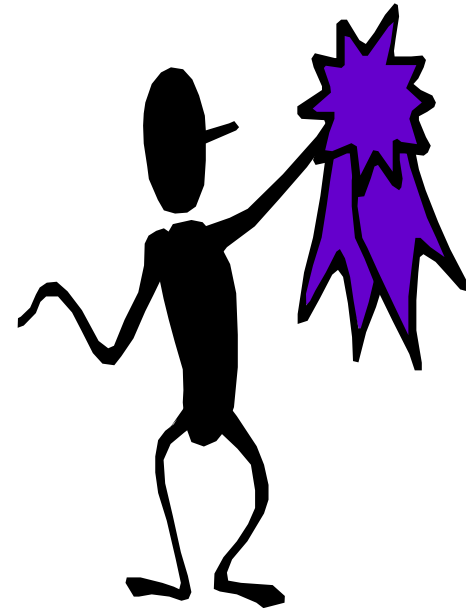
Conformity

Location Indicators

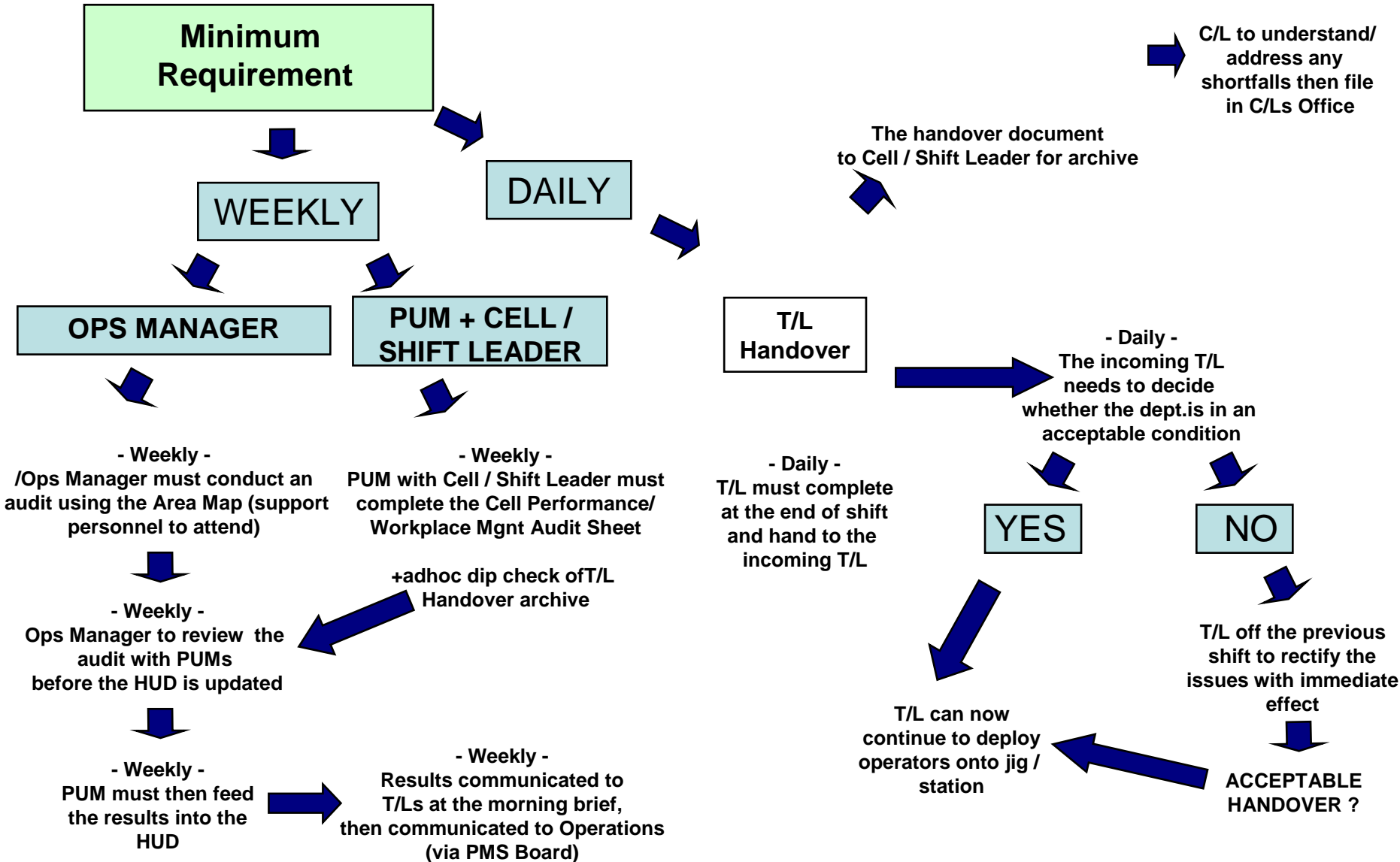
Aspect	Method
Location indicators	Address signboards Location / limit lines Labels
Set limits	Height lines Fixed length racking Std container sizes
Danger indicators	Walkways Danger signs

5C Audit Check Sheet

- Continual assessment.
- Periodically but not scheduled.
- Help maintain the set standard.
- Apply common sense.
- Enables Plan, Do, Check, Action cycle.
- Promotes safety first.
- Publish scores on notice boards.
- Impresses the customer.



Audit Process



T/L Self Audit / Hand-over

Process

- Every day Team Leader self audits workplace & performance against a check list.

- Forms part of the Team Leader handover from shift to shift.

- Agreement between Team Leaders on the current state.

Looking for:

- Housekeeping to the required standard.

- Performance management measures up to date and on target.

- Quality standards are adhered to.

- Work is being performed to the standard.

- Issues identified & customer protection/counter measure underway.

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5C Audit Check Sheet

Process

- At the appropriate frequency (min. once per week) the PUM and Cell / Shift Leader to audit team performance.

- T/L to attend in appropriate area.

- Coach and task against non-conformances

- Audit scores feed into a weekly HUD for the Dept. and/or Cell

- Dept. Audit Scores made available for Site HUD

Looking for:

- 5C to the required standard.

- Performance management measures up to date and on target.

- Quality standards are adhered to.

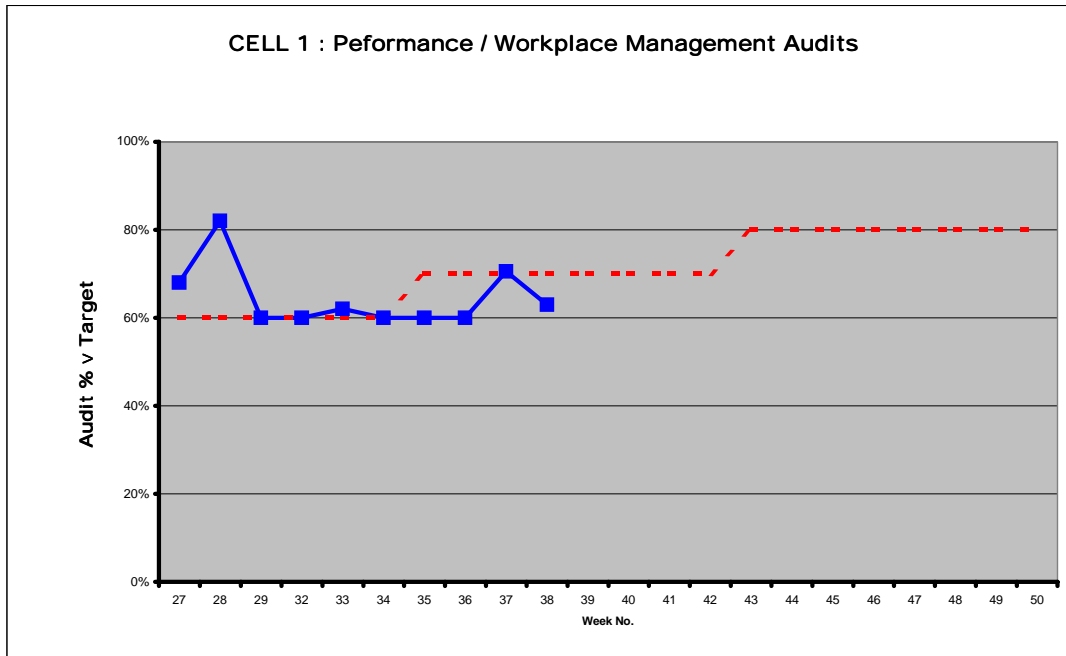
- Work is being performed to the standard.

- Issues identified & customer protection/counter measure underway.

Ensure a clear standard exists for each element audited

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Management Audit Scores



DEPARTMENT

- Management audit conducted weekly
- One of the KPIs for the department and as such reviewed regularly.
- Targets set and trends monitored.
- Displayed openly on section.

Housekeeping Area Map

- To be used by HOB and Ops/Logistics Managers
- Once per week audit, PUMs to lead Ops Manager around appropriate cells.
- Display on “Info. Centre” boards
- PUM to feedback major non-conformance's back to Cell / Shift Leaders and T/Ls immediately following audit

Why Conformity ?

- Provides schedule of 5C activities.
- Ensures deterioration does not occur.
- Gives a standard to work to.
- Starts problem solving/improvement activities.
- Makes first 3C's a habit.
- Promotes ownership.



5th Step - Custom & Practice

- Probably the most difficult of the 5C's.
- Make it a habit.
- Setting review frequency.
- Cleaning checklist matrix.
- To maintain our habit we need to practice and report until it becomes a way of life.
- Visual communication instead of verbal!

.....Ownership !!
Without it the other steps will fail!



"Its everyone's responsibility"

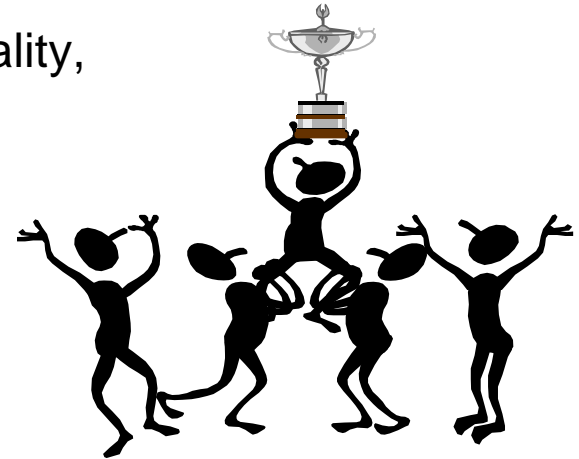
Why Custom & Practice ?

- **It makes 5C routine.**
- **Sustains all improvements.**
- **Builds on the improvements already made.**
- **Maintains agreed procedures.**
- **Ensures we don't fall back into our old ways.**



5C Summary

- Improves safety.
- A structured approach.
- Applicable to the General Manager and everyone else.
- Improves productivity.
- Improves quality.
- Improves morale and teamwork.
- Enjoy - working in a clean, organised, quality, successful, safe environment.
- You do it at home why not at work?



Finally

Improvements should be in-expensive. The more money we spend, the less ingenuity we use to find solutions.

