



# Leader Standardized Work

**By: Walt Miller**

Operation Excellence Coach

**Columbus Mid-Range Engine  
Plant – CMEP, Columbus, In.**

**Cummins, Inc.**

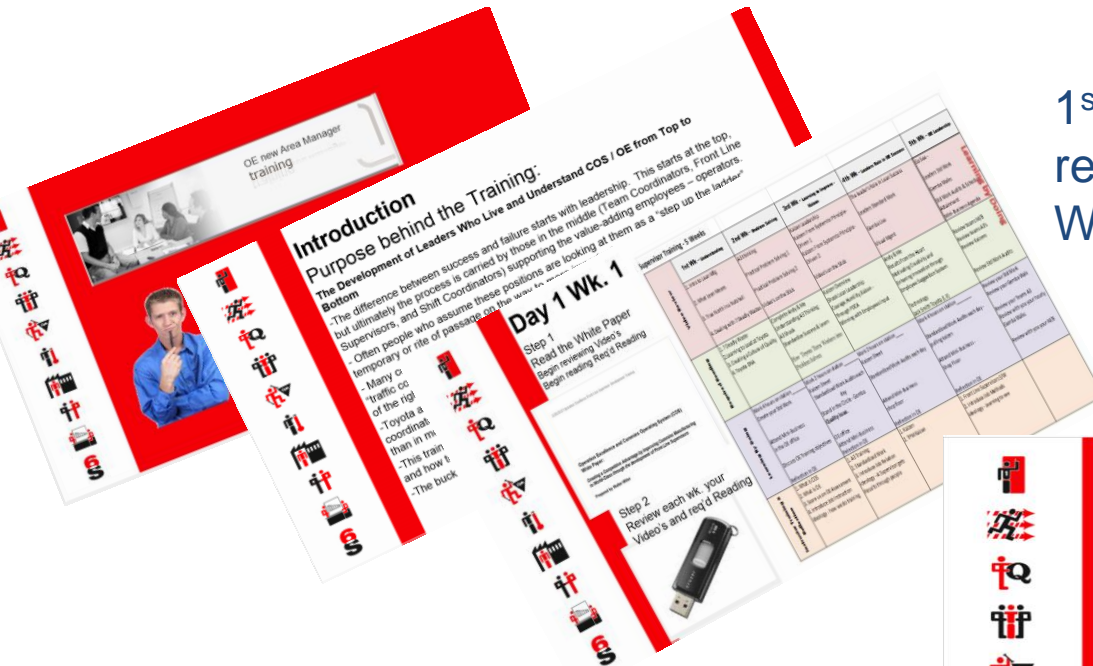


***Purpose-driven Excellence***



# Building the Foundation for Leaders Standardized Work – 5 week training

1<sup>st</sup> – 4 hours in the office  
reviewing videos and reading  
White Papers



2<sup>nd</sup> – 4 hours on the shop floor working  
on the line with your team

## OE new Area Manager Training

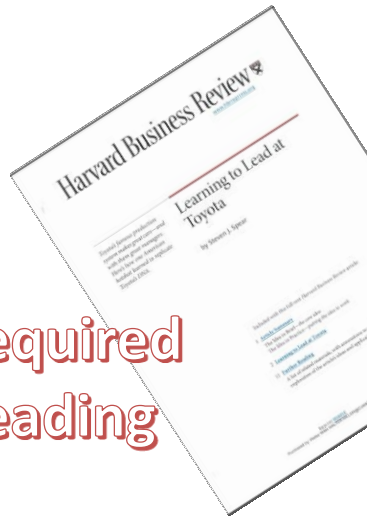


**Daily Work Book**  
Please fill in each day or wk. as requested  
Book can not leave the OE office until the end of the class

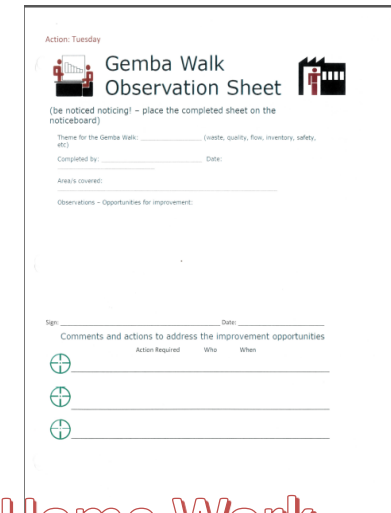
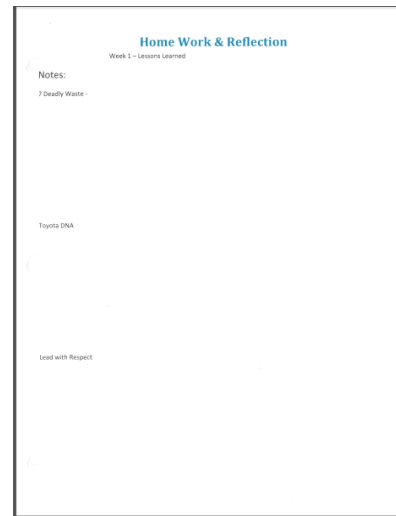




# Building the Foundation for Leaders Standardized Work



Required  
Reading



Home Work  
Assignment

Learning by doing

- Required Reading listed in the Workbook  
(write down your thoughts)
- Daily Assignments – Learning by doing

End of the week – Reflection on notes – Lessons Learned discussion with the OE trainer



# Building the Foundation for Leaders Standardized Work

**This is a 5 week training class that every Supervisors attends**

**Week 1** – What is Operation Excellence – New Role of a Leader as a Coach and Teacher

**Week 2** – Kaizen (My Role as the Supervisor to ensure we continue the Kaizen Culture)

**Week 3** – Problem Solving (First as the student and 2<sup>nd</sup> as the teacher)

**Week 4** – What is a Mini-Business (Running my own Business, developing my skills as a manager and as a leader)

**Week 5** – On the Job Training (working as a Supervisor with a coach beside them)







# Planning for Success – Standardized Work



**Area Manager**



**Operations Mgr.**

Every Morning  
the team  
comes in 15-30  
mins early and  
develops their  
plan



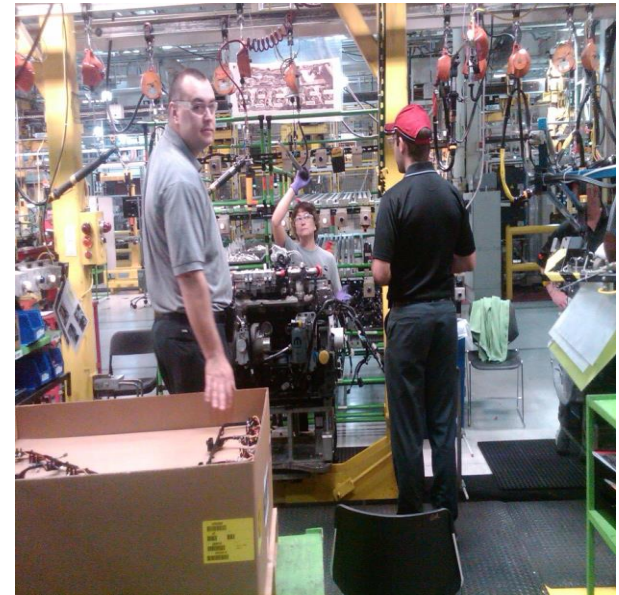
# Planning for Success – Standardized Work

## Things that are part of every Supervisors Standardized Work

1<sup>st</sup> – **Daily Auditing Operator Standardized Work.** One Operator audit per team within his or her Mini-Business, we average 4-6 teams. This is coordinated with the Team Leaders Standardized Work audit within each team. Rule is that both audits must be on the same operator and within the same hour. Lots of coordination is key

2<sup>nd</sup> – **Hourly walks** gathering data on down time or issues within the teams – **Respect for People**, helping supporting, and enabling through problems solving teams

3<sup>rd</sup> – **Mini-Business daily meeting** – 9:30am each day on the floor with cross-functional team members and Team Coordinators with the Supervisors





# Planning for Success – Standardized Work

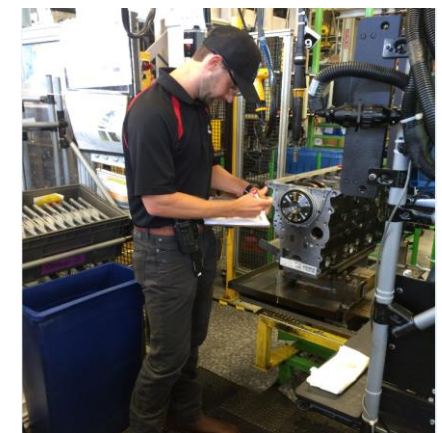
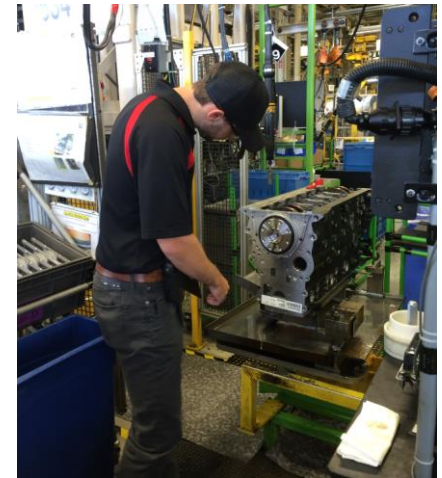
## Things that are part of every Supervisors Standardized Work

4<sup>th</sup> – **Gemba 20 min review** – they can pick from – Top Quality concern station, Safety concern Station, Top Over Cycled station during the week. Goal is to pull ideas from the team and transfer information onto my Std Work sheet and work with their team to write Kaizen sheets for improvements.

5<sup>th</sup> – **Review weekly all my teams A3s.** Goal is ensure that the team is thinking correctly – 8 Step problem solving methodology. Not telling but inquiring and challenging them “what do you think about this or that”.

6<sup>th</sup> – **Critical meetings**

7<sup>th</sup> – **Reflecting on yesterday** to add anything important







# Planning for Success – Standardized Work

**SHORTBLOCK** # Produced: \_\_\_\_\_ % Produced: \_\_\_\_\_ EPH: \_\_\_\_\_ Business Unit Manager: Tyler L. Date: \_\_\_\_\_

**Daily Follow Up**

Time	Task	Work Hrs	8:00-7:30	7:30-8:00	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00	5:00-6:00	6:00-7:00
6:00	Staffing meeting 10:25	SB	29	11	74	-4									
6:30	Staffing	Running Total	63	0	15										
7:00	VPS Gumbo														
8:30	Break / Email														
9:30	Mini Bus														
10:30	Staffing														
11:00	Lunch														
11:30	Std work Audits														
12:00	Talk w/ cor.														
12:30	LPA														
1:00	Talk w/ cor.														
1:30	Write Plan														
2:00	Shift notes														

**Hourly Production**

Hour	1	2	3A	3B	Comments
1	30	36			
2	28	35			
3A	30	25			
3B	29	31			
L-Set	29	36			

**Hourly Staffing**

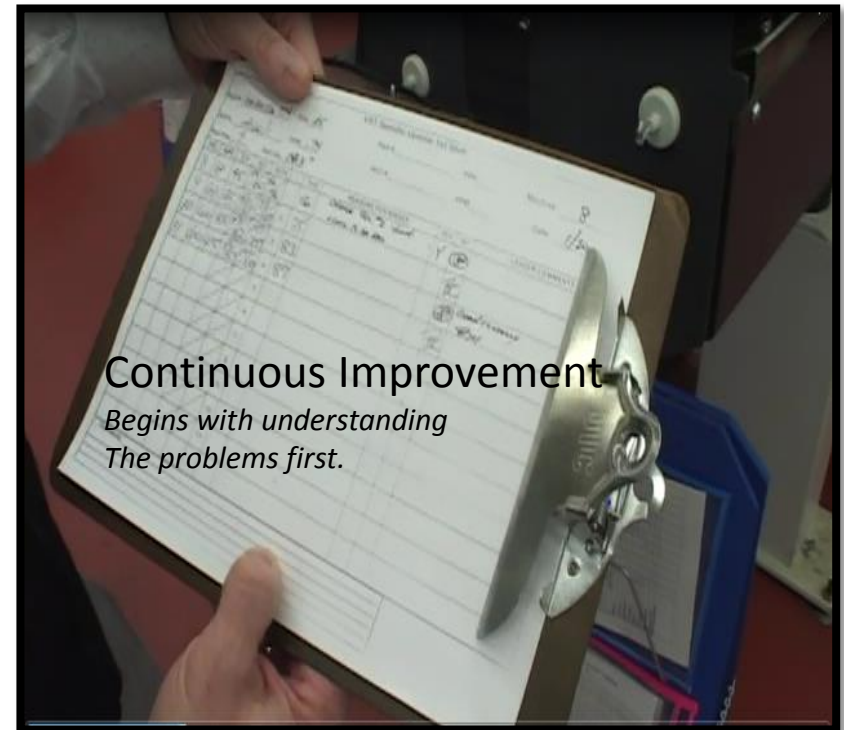
Hour	1	2	3A	3B
1				
2				
3A				
3B				

**Block / Starve**

Block	1900	2510	2510
1900			
2510			
Total	1900		

**Staffing - Block Starve Comments**

Reason: \_\_\_\_\_  
• Employee: \_\_\_\_\_  
• BDM: \_\_\_\_\_  
• Based on business need, per up.







**Every hour now the Supervisor walks the shop floor.**

Matching expectation with reality

No Blame - just gathering data & helping where necessary

And now that they have good data.  
Prioritizing Problems and then helping the team in problems solving

## **How do we create LSW? (Step 2)**

Never allow one bad hour to creep into the next hour if you can help it.

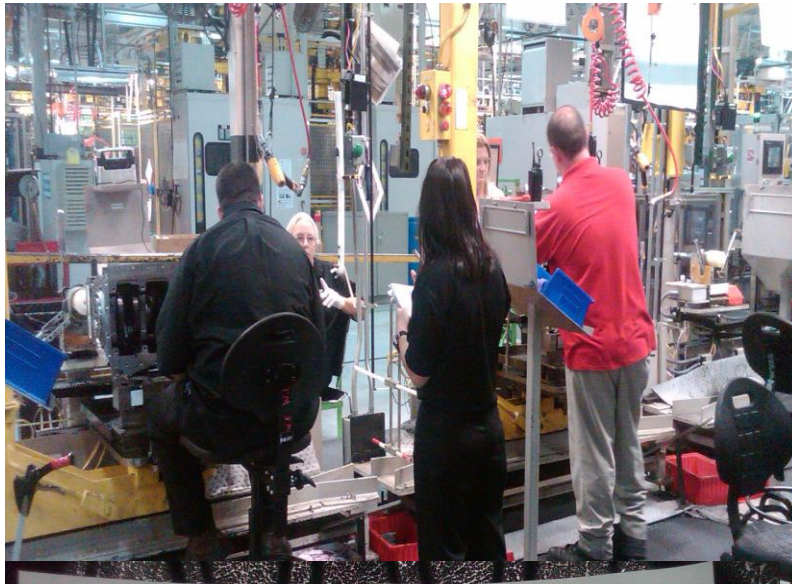
If you can't help it document every detail of the problem.

Wkly review with your team for the top problems and move to PDCA





# Daily auditing operators Standardized Work



Standard Work Audit Tracker Week 46 Nov. 12- Nov. 18

## TEAM

Week	SB			LB1			LB2			PA			Materials			Maintenance			Total		
	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.
WK30	0	0	#DIV/0!	0	0	#DIV/0!	30	9	30.0%	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	30	9	30.0%
WK31							32	11	34.38%										32	11	34.38%
WK32							32	8	25.0%										32	8	25.0%
WK33							32	11	34.38%										32	11	34.38%
WK34							30	8	26.67%										30	8	26.67%
WK35							30	30	100.0%										30	30	100.0%
WK36							30	9	30.0%										30	9	30.0%
WK37							32	8	25.0%										32	8	25.0%
WK38							32	8	25.0%										32	8	25.0%
WK39							30	9	30.0%				10	9	90.0%				20	18	90.0%
WK40							32	12	37.5%				10	5	50.0%				22	17	77.27%
WK41							32	10	31.25%	12	10	83.33%	12	10	83.33%				36	30	83.33%
WK42							32	10	31.25%	13	13	100.0%	13	12	92.31%				38	35	92.11%
WK43							33	10	30.30%	13	12	92.31%	13	12	92.31%				39	34	87.18%
WK44							8	8	100.0%	8	8	100.0%	5	8	160.0%				24	24	100.0%
WK45							14	14	100.0%	14	13	92.86%	14	11	78.57%				42	38	90.48%
WK46							33	10	30.30%	33	33	100.0%	13	11	84.6%				39	34	87.18%

## BUM

## Qtrly Tracker Sheet

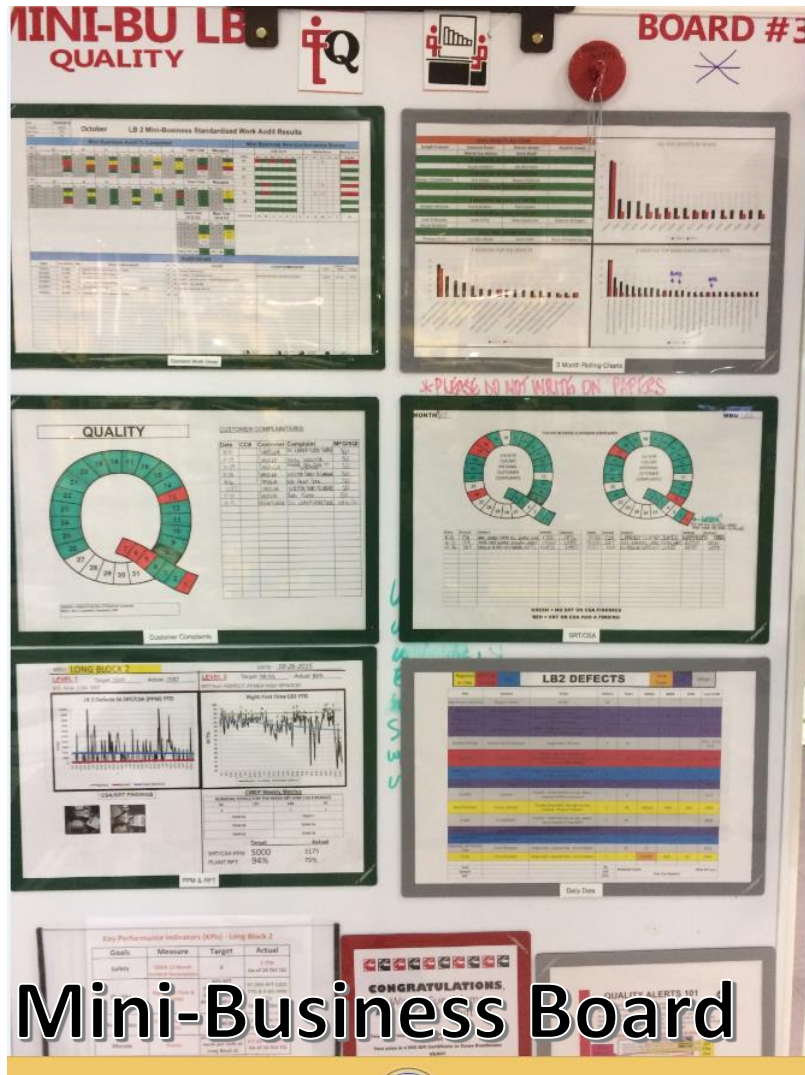
Week	SB			LB1			LB2			PA			Materials			Maintenance			Total		
	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.	Reqd.	Comp.	% Comp.
WK30	0	0	#DIV/0!	0	0	#DIV/0!	30	8	26.67%	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	30	8	26.67%
WK31							32	6	18.75%										32	6	18.75%
WK32							32	6	18.75%										32	6	18.75%
WK33							32	6	18.75%										32	6	18.75%
WK34							30	8	26.67%										30	8	26.67%
WK35							30	5	16.67%										30	5	16.67%
WK36							30	4	13.33%										30	4	13.33%
WK37							32	6	18.75%										32	6	18.75%
WK38							32	10	31.25%										32	10	31.25%
WK39							30	9	30.0%				10	10	100.0%				20	19	95.0%
WK40							32	12	37.5%				10	8	80.0%				22	20	90.91%
WK41							32	12	37.5%	12	11	91.67%	12	11	91.67%				36	34	94.44%
WK42							33	11	33.33%	13	12	92.31%	13	12	92.31%				39	35	89.74%
WK43							33	9	27.27%	13	12	92.31%	13	12	92.31%				39	33	84.62%
WK44							8	8	100.0%	8	8	100.0%	8	7	87.50%				24	23	95.83%
WK45							14	11	78.57%	14	13	92.86%	14	11	78.57%				42	38	90.48%
WK46							33	11	33.33%	33	32	96.97%	13	12	92.31%				39	35	89.74%

# Audit Sheet

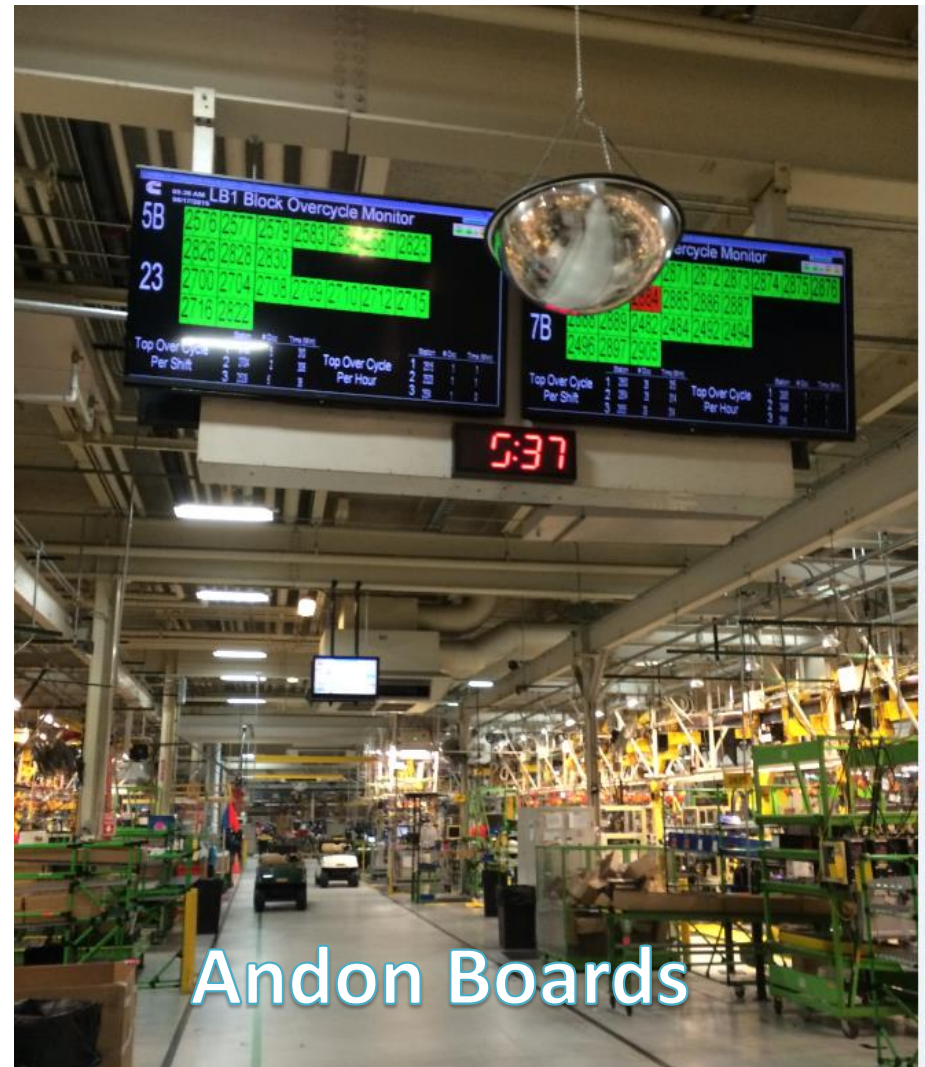




# Standardized Work



Mini-Business Board



Andon Boards





# Standardized Work

## Hourly walks or reacting to the Andon Boards



Andon Boards track any abnormality to the cycle time (70 seconds) – Indicated by Red on the station

It also tracks top station delays within in the hour

It also tracks top stations delays for the entire day



## 1<sup>st</sup> shift and 3<sup>rd</sup> Shift Coordinator – Report outs

CMEP  
Long Block 2

Hour	0	0	1	2	2.75	3.75	4.75	5.75	6.5	7.5	8	9	10	11	12	Total	300
Goal	0	0	0	40	40	30	40	40	40	30	40	30	40	30	40	300	
Total	0	0	0	0	0	0	80	180	150	230	250	300	300	300	300		TARGET
6A	0	0	0	34	32	29	30	40	30	31	42	284	300	94.67			EPH
6B	0	0	0	34	32	34.5	35.5	36.4	31.3	37.2	39						
6C	0	0	0	35	33	34.9	35.7	36.6	31.2	37.2	38	285	300	95.00			
7	0	0	0	37	30	31	36	40	38	31	42	285	300	95.00			
7B	0	0	0	37	33.5	35.6	35.7	36.6	31.4	37.4	38						
7	0	0	0	40	25	31	37	40	38	30	42	287	300	95.67			
0	0	0	0	40	25	31	37	40	38	30	42	287	300	95.67			
0	0	0	0	45	44	38	45	39	38	40	29	41	292	300	97.33		
0	0	0	0	45	44	38	45	39	38	40	29	41	292	300	97.33		

Block/Starved

2828	HR.	19	20	21	22	23	0	1	2	3.6	4.6	5.6	6.6	Tot
Blocked Count	0	0	0	0	5	11	0	0	18	19	22	8	2	85
Blocked Minutes	0	0	0	0	3	6	0	10	18	11	4	2	4	44
Starved Count	0	0	0	0	5	3	4	7	6	3	7	9	5	50
Starved Minutes	0	0	0	0	2	1	2	6	2	4	2	3	22	

2904	HR.	19	20	21	22	23	0	1	2	3.6	4.6	5.6	6.6	Tot
Blocked Count	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Blocked Minutes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Starved Count	0	0	0	0	0	2	3	4	3	1	3	2	18	
Starved Minutes	0	0	0	0	0	10	21	2	30	0	16	2	81	

STD. WORK AUDITS

Team	Station	Score	Comments
6A	2856	0	
6B	2856	0	
6C	2882	0	
7	2922	0	
7A	2883	0	
7B	2897	0	

Hourly Top Overcycle Observations

0.00p to 9.00pm						9.00p to 10.00pm						10.00p to 11.00pm						11.00p to 9.00a						12.00a to 100a					
Team	Station	Valid	Minute	Count	Count	Team	Station	Valid	Minute	Count	Count	Team	Station	Valid	Minute	Count	Count	Team	Station	Valid	Minute	Count	Count	Team	Station	Valid	Minute	Count	Count
6A	2847	LY054	7.25	16	6	6B	2854	JY054	7.28	5	6A	2949	OF021	4.08	15			6A	2947	OF021	4.08	15		6A	2947	OF021	4.08	15	
6A	2849	LY054	4.8	14		6B	2856	JY054	2.72	6	6A	2947	OF021	0.12	2			6A	2947	OF021	0.12	2		6A	2947	OF021	0.12	2	

6 Issues for the shift:

Overcycles @ ST2854/2855

B1 Starved

Blocked and Starved at 2904:

M1 Starved	0	Blocked	0
L2L Issues	0	Starved	0
F-Block Issues	0	Blocked	0
Line balancing	n/a	Starved	0

General Production Issues:

TEAM 6A Starved & Blocked

Doubled up from 10p to 2a.

TEAM 6B:

S1 Starved

S2L

S2L

S2L

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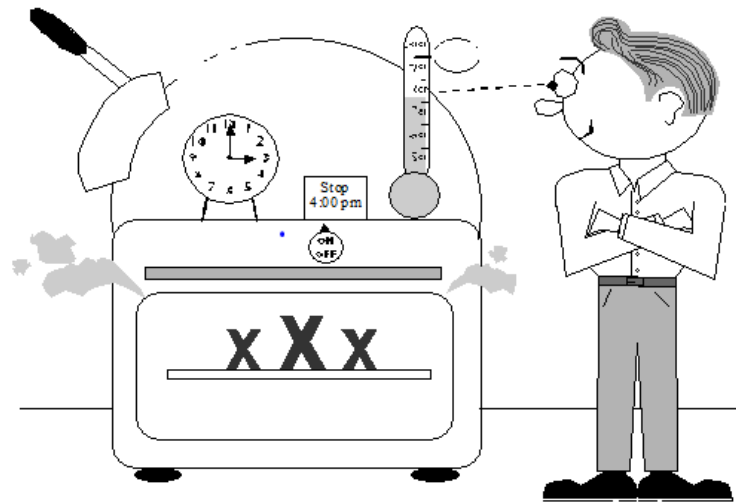
# Standardized Work

## Application of the Mini-Business

- Display standards and reliable methods
- Identify abnormal conditions immediately
- Prompt quick action and communication

### Underlining questions

- How to Communicate?
- How to Empower Operator?
- How to Utilize the Talent of people?
- How to Innovate?
- What is the expected Management behavior?



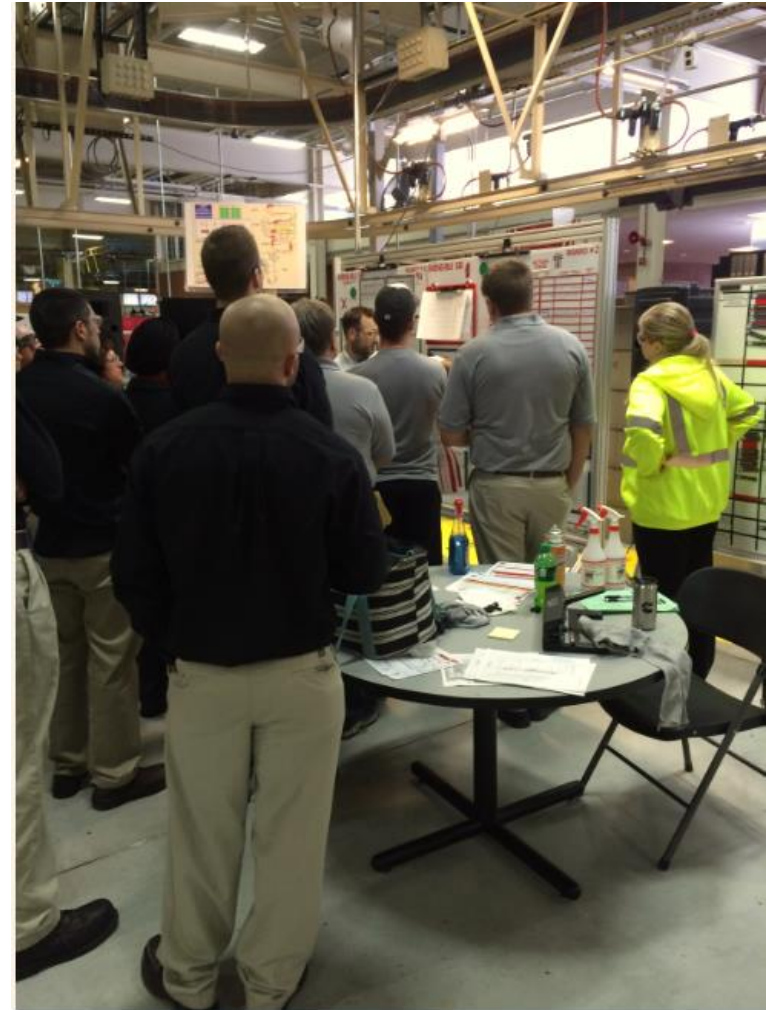




# Standardized Work

## Core Values of the Mini-Business

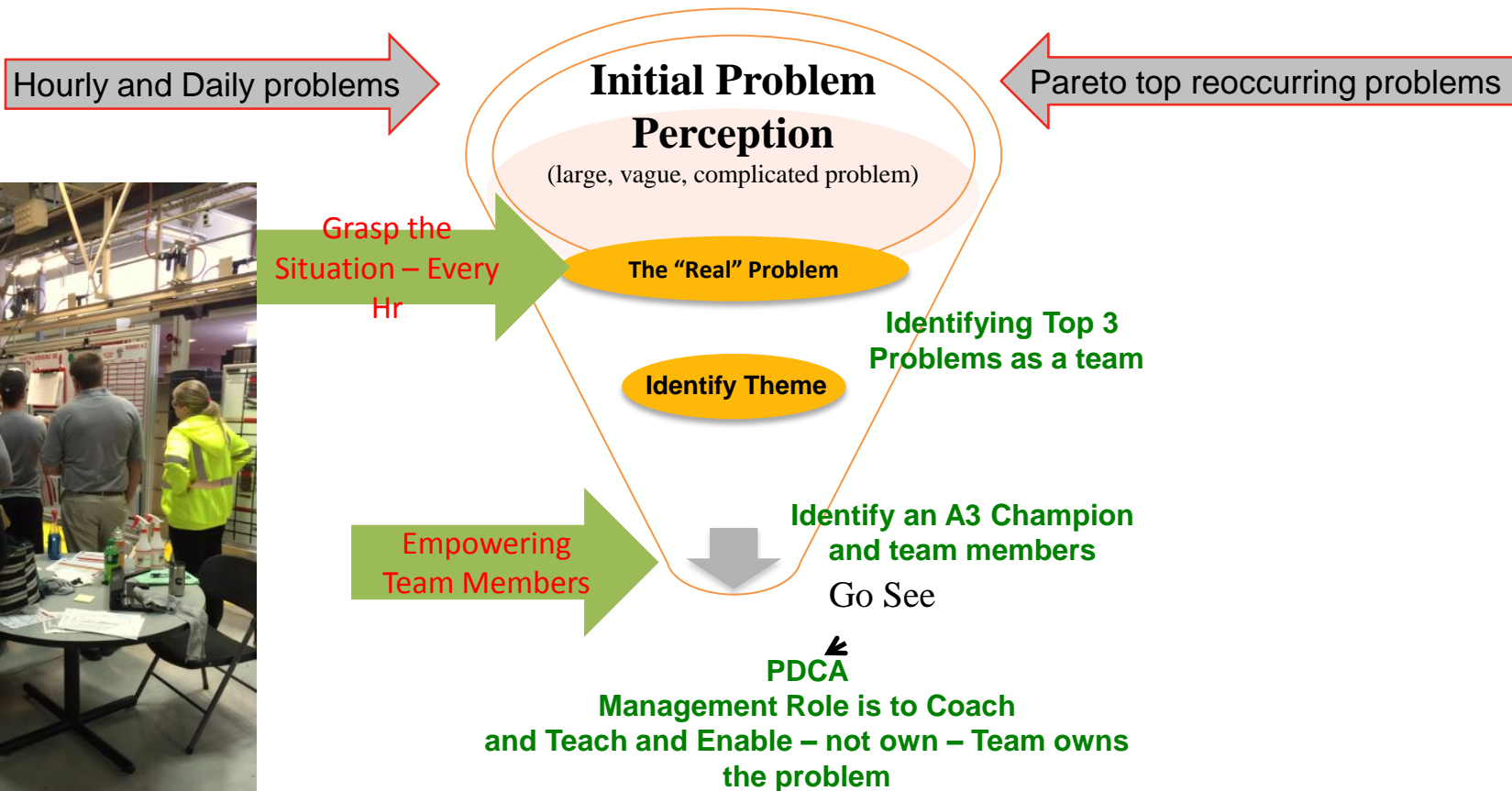
- Continuous Improvement
- Respect for People – Problem Solving Skills are developed
- Clarity, Focus, Discipline, and Engagement – Putting the Customer first
- Plant Communication & Critical Information sharing
- Support teams work with Shop Operations
- Resource Alignment – Team Work Develops future leaders
- Performance is understood – Customer & Supplier relationship
- Regular meetings
- PDCA





# Standardized Work

Mini-Business thinking is a “funneling” thought process





# Standardized Work

Enabling Problem Solving Teams and Kaizen



**Kaizen**



**Reviewing Team  
A3's**





# Standardized Work

## End of the Day – Daily Reflection



**Plant Mgr. with Operations  
Mgr. & Coach**

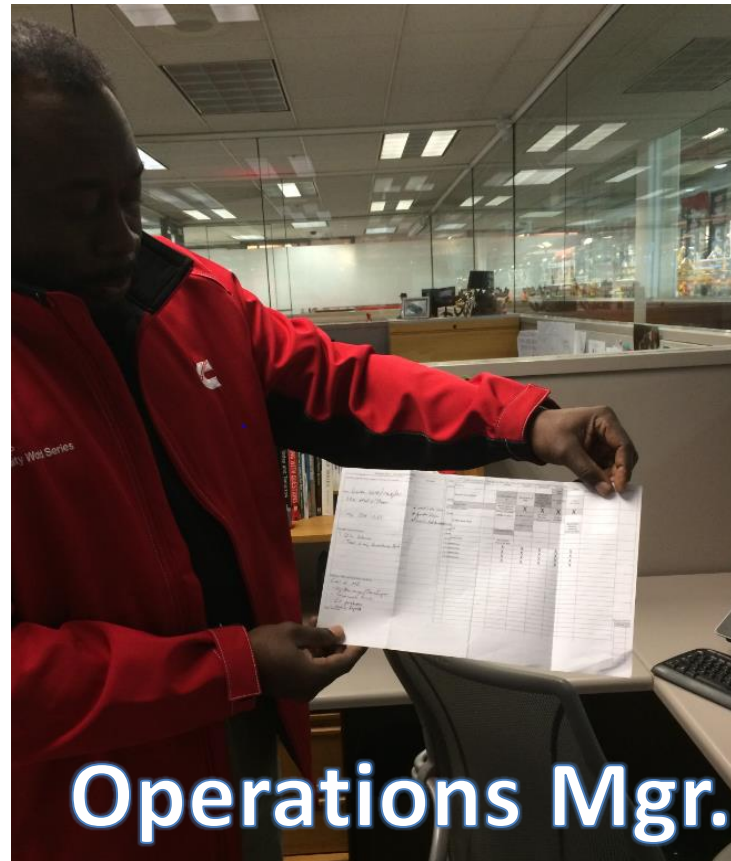
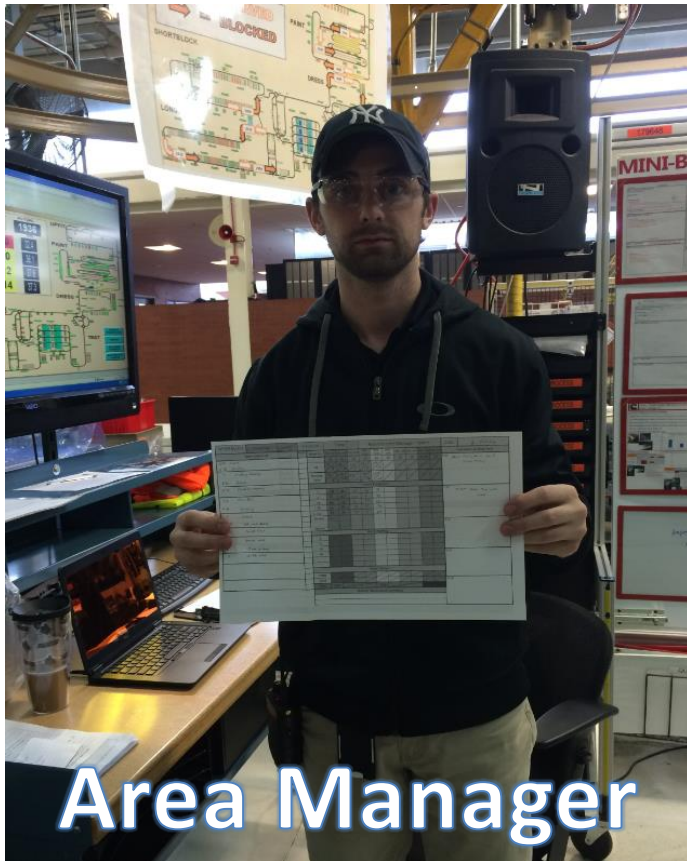


**Operations Mgr. and  
Area Mgr.**



# Standardized Work

Then we start again tomorrow

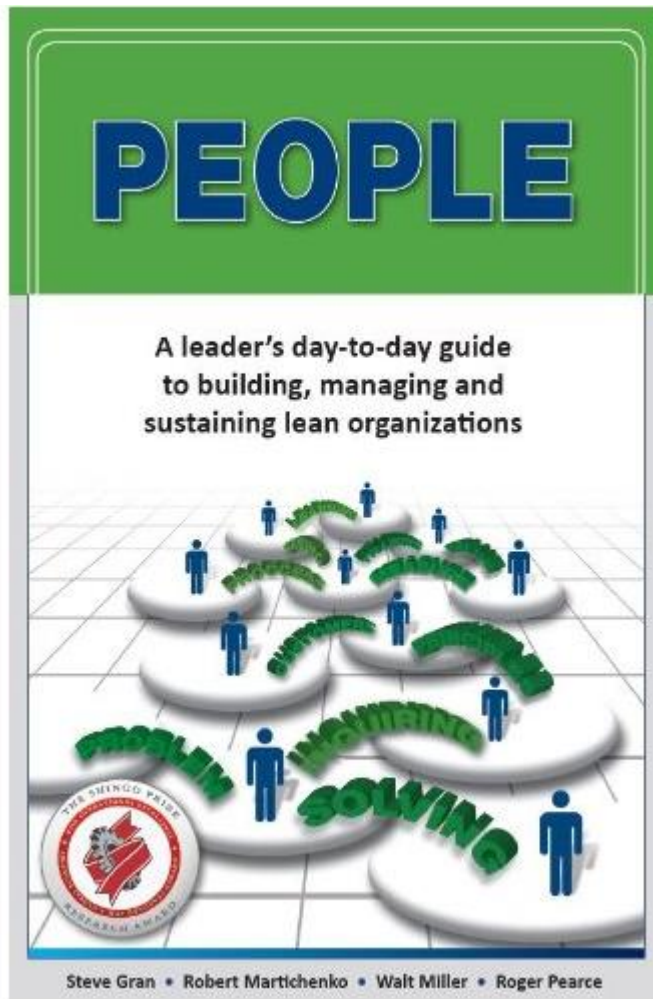






# Standardized Work

## Any Questions







# Thank You!

**Your opinion is important to us!**

Please take a moment to complete the survey using the conference mobile app.

**Session Code: TP/07**

**Leader standardized work – planning for success**

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