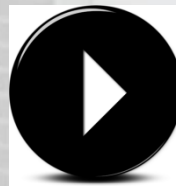


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SERIES 2 – OPERATOR EQUIPMENT MANAGEMENT STEP 2

B&D DOORS & OPENERS REVESBY AUSSIE CUP 2014 TEAM PRESENTATION



Contents of Presentation



- ☐ Team Members
- ☐ Mandate
- ☐ Attendance & Schedule
- ☐ Four Lists
 - Defect List
 - Sources of Contamination
 - Difficult to Access
 - Key Questions
- ☐ Clean for Inspection
 - In feed & Sheet Delivery Line
 - Press & Swagger
 - Axle & Notcher
 - Stitcher
 - Roll Up
- ☐ One Point Lessons
- ☐ Improvement Sheets
- ☐ Root Cause Analysis
- ☐ Before & After Photos
- ☐ Assessment Sheets
- ☐ History Sheet
- ☐ Questions

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Team Members

Bill Diab
Charge Hand

Steve S
Operator

Meng Troung
Operator



Ricardo Jara
Manual Handler

Binh Doan
Operator

Jacob Foster
Operator

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Mandate



Work towards Basic Equipment Conditions through countermeasures to **Sources of Contamination and Difficult to Access Areas** activities by working through the 10 parts of Operator Equipment Management Step2 (OEM-2)

Enhance standards and checklists for your Improvement Area to ensure that WAM, OEM-1 and OEM-2 improvements to date are sustained

Ensure appropriate Visual Controls are created or enhanced to communicate standards and to make any deviation from standard easy for all to see;

Achieve and sustain a final OEM-2 Assessment Rating of at least 80%

Contribute along with all other Area Based and Cross-functional Teams in your Defined Production Area to help improve the OEE and the Goal Aligned Performance Measure for your Defined Production Area

Complete within 12 weeks

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Team Attendance



OEM-2 Attendance & Schedule Sheet

Team: Series 2Kick-off Date: 04 / 02 / 14

Attendance	Week											
Team Members (4 – 8)	1	2	3	4	5	6	7	8	9	10	11	12
BILL DIAR	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
RICKY JARA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RICHARD NAIR	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
JACOB FOSTER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BEN JIDA	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
THANH NGUYEN	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
BINH DOAN	✓	✓	✓	A	A	✓	✓	✓	✓	✓	✓	✓
STEVE STATHOPOULOS	✓	✓	✓	✓	✓	✓	✓	A	✓	✓	✓	✓
Time of meeting:	1:00 PM	1:00 PM	1:00 PM	1:00 PM	1:00 PM	11:00 AM	1:00 PM	1:00 PM	1:00 PM	1:00 PM	1:00 PM	11:00 AM
Date of meeting:	4/2	11/2	18/2	4/3	11/3	18/3	25/3	8/4	15/4	22/4	29/4	6/5

✓ = Attended x = Unnotified Absence A = Notified Absence

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Team Schedule



Week 1: 04 / 02 / 14 Mid Cycle Presentation: 18 / 03 / 14

Final Presentation: 06 / 04 / 14

Schedule	Week											
Task	1	2	3	4	5	6	7	8	9	10	11	12
0. Half-day kick-off workshop												
1. Confirm Mandate & Boundaries												
2. Form Team & Scope Activities												
3. Review Sources for Contamination & Difficult to Access Areas												
4. Develop Actions for Sources of Contamination & Difficult to Access Areas												
5. Identify Requirements for Workplace												
6. Obtain Approval to Proceed												
6a. Prepare presentation and Present to Leadership Team												
7. Implement Approved Improvements												
8. Review and Improve Cleaning and Inspection Process												
9. Self-Assess Achievements & Team Skills												
9a. Prepare presentation and Present to Leadership Team												
10. Communicate Results & Share Learnings												

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THE FOUR LISTS



Defect List



OEM Defect List

Defined Production Area:Series 2.....

Date: 04/02/14

Team:Series 2.....

Section of Line / Equipment:Series 2.....

Legend

A – Repaired by Operators
B – Repaired by Mechanical Maint
C – Repaired by Electrical Maint
D – Referred to Mechanical Maint
E – Referred to Electrical Maint

Priority

P1 - Low
P2 - Medium
P3 - High

No.	Defect Tag No.	Description	A	B	C	D	E	Estimated Time	Priority / Comments	Target Date	Completed Date
1	111	Renew brake labels R/H side	X					45mins	P1	29/01/14	04/02/14
2	112	Hydraulic tank site glass need indicator to show correct level	X					15mins	P2	29/01/14	04/02/14
3	106	Hydraulic booster for tool change loose on floor		X				10mins	P2	04/02/14	04/02/14
4	148	Leaking air line on hand drill L/H side				X		30mins	P3	04/02/14	11/02/14
5	150	Taped up sensor			X			30mins	P2	11/02/14	25/02/14
6	149	Open grommet into electrical box in centre of back table			X			30mins	P2	25/02/14	25/02/14
7	120	Belt webbing wrapped around shaft under belt		X				1.5hrs	P2	25/02/14	11/03/14
8	119	Air leak				X		1hrs	P3	11/02/14	11/03/14
9	147	Broken switch handles			X			30mins	P1	11/02/14	15/03/14
10	146	Broken seal on gauge allowing oil into gauge		X				30mins	P1	15/02/14	15/03/14
11	109	RAM wiper stuck at top of RAM notcher side of press		X				1hr	P3	20/03/14	04/04/14
12	108	Bolts missing that secure lid to hydraulic reservoir		X				15mins	P2	04/03/14	04/04/14

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Source Of Contamination List

OEM Sources of Contamination List

Defined Production Area:Series 2..... Date: 04/02/14

Team:Series 2.....

Section of Line / Equipment:Series 2.....

Legend

A – Team to Address
B – Referred to Maintenance
C – Referred to Engineering

No.	Defect Tag No.	Type of Contaminant	Description of Source of Contamination	Comments	A	B	C	Target Date	Complete Date
1	101	Hydraulic Oil	Leaking Hose	Tagged awaiting Maintenance		X		04/02/14	11/02/14
2	102	Over Greasing	Over Greasing nipples + pivots	Tagged awaiting Maintenance		X		04/02/14	11/02/14
3	N/A	Leaking Oil from hydraulic hose	Swagger	Tagged awaiting Maintenance		X		25/02/14	04/03/14
4	N/A	Foreign objects falling in pit	Press pit	Improvement Created	X			25/02/14	04/03/14
5	N/A	Dust/Dirt	Stitcher Motor#1	Improvement Created	X			04/03/14	04/03/14
6	N/A	Dust/Dirt	Stitcher Motor#2	Improvement Created	X			04/03/14	04/03/14
7	N/A	Off cut scrap under SDL	From guillotine	Improvement Created	X			01/04/14	08/04/14
8	N/A	Off cut scrap under Lock Seamer	Lock Seamer	Improvement Created	X			15/03/14	22/04/14

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Difficult to Access List



OEM Difficult to Access Area List

Defined Production Area:Series 2.....Date: 04/02/14

Team:Series 2.....

Section of Line / Equipment:Series 2.....

Legend

A – Difficult to Clean
B – Difficult to Inspect
C – Difficult to Lubricate

No.	Defect Tag No.	Description	Comments	A	B	C	Target Date	Complete Date
1		Under press		X	X		04/03/14	04/03/14
2		Under Press Table		X	X		04/03/14	11/03/14
3		Under Front of Press	Due to hanging hoses + cords	X	X		04/03/14	11/03/14
4		On top of press + swagger	Due to height	X			18/03/14	18/03/14
5		Under cables leading from swagger to control	Need to get cables off ground		X		25/03/14	25/03/14
6		Access to roll up pin			X		04/04/14	04/04/14
7		Under lock seam rolls		X			22/04/14	22/04/14

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Key Questions



OEM Key Questions List

Defined Production Area:Series 2..... Date: 04/02/14

Team:Series 2.....

Section of Line / Equipment:Series 2.....

Legend

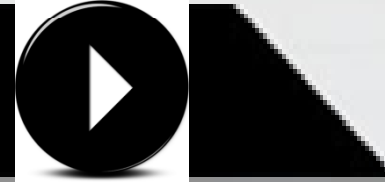
A – Referred to Team Leader
B – Referred to Mechanical Maint
C – Referred to Electrical Maint

No.	Question	Response	A	B	C	Target Date	Complete Date	OPL #
1	How to conduct a clean for inspection on De-coiler snubber arms?	Refer to One Point Lesson #10		X		6/2/14	13/2/14	#10
2	How to conduct a clean for inspection on De-coiler motors	Refer to One Point Lesson #09			X	19/2/14	20/2/14	#09
3	How to check oil level in notcher machine	Refer to One Point Lesson #11		X		26/2/14	26/2/14	#11
4	How to release water from air regulators	Refer to One Point Lesson #05		X		18/3/14	20/3/14	#05
5	How to & how often does the bottom rail machine gets lubricated?	Refer to One Point Lesson #08	X			9/4/14	9/4/14	#08
6	How to refill oil lubrication in bottom rail punch	Refer to One Point Lesson #03	X			23/4/14	30/4/14	#03
7	How does the glad wrap air regulator work?	Regulator is set at 30psi for ease of applying plastic wrap		X		6/5/14		In Progress
8	What powers the roll up?	Pneumatic & electrical power controlled by a computer program/system			X	13/5/14		In Progress
9	What powers the conveyors?	Electrical power controlled by a computer program/system			X	19/3/14		In Progress
10	What powers the stitcher heads?	Pneumatic & electrical power controlled by a computer program/system			X	26/5/14		In Progress

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CLEAN FOR INSPECTION





Isolation Checklist

CLEANING FOR INSPECTION (CFI) - CHECKLIST

Machine : Series 2

Month: May / June

CFI Details	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5
Date CFI Done	8/05/2014	15/05/2014	22/05/2014	29/05/2014	3/06/2014
1 Initials Team Leader : Bill Diab	BD	BD	BD	BD	BD
2 Initials Fitter : James Hoyt	JH	JH	JH	JH	JH
3 Initials Electrician : Simon Kayess	S.K	S.K	S.K	S.K	S.K
Confirm Equipment Isolated (Y/N) - If NO, do not Commence	Y	Y	Y	Y	Y
Trained in all Activities (Y/N) - If NO, contact Charge Hand	Y	Y	Y	Y	Y
Required PPE Available (Y/N)	Y	Y	Y	Y	Y
Cleaning Supplies & Equipment at Hand (Y/N)	Y	Y	Y	Y	Y
Time Taken to Complete (H:MM)	1.5hrs	1.5hrs	1.5hrs	1.5hrs	1.5hrs

Item	Clean (C) Inspect (I)	Method	OPL	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5
1 De-coller	C,I	☞☞☞	#10	✓	✓	✓	✓	✓
2 Sheet Delivery Line	C,I	☞☞☞	#09	✓	✓	✓	✓	✓
3 Press	C,I	☞☞☞	#11	✓	✓	✓	✓	✓
4 Stitcher	C,I	☞☞☞	#05	✓	✓	✓	✓	✓
5 Roll Up	C,I	☞☞☞	#12	✓	✓	✓	✓	✓
6								
7								
8								
9								
10								
11								

Inspection Method

☞ Touch

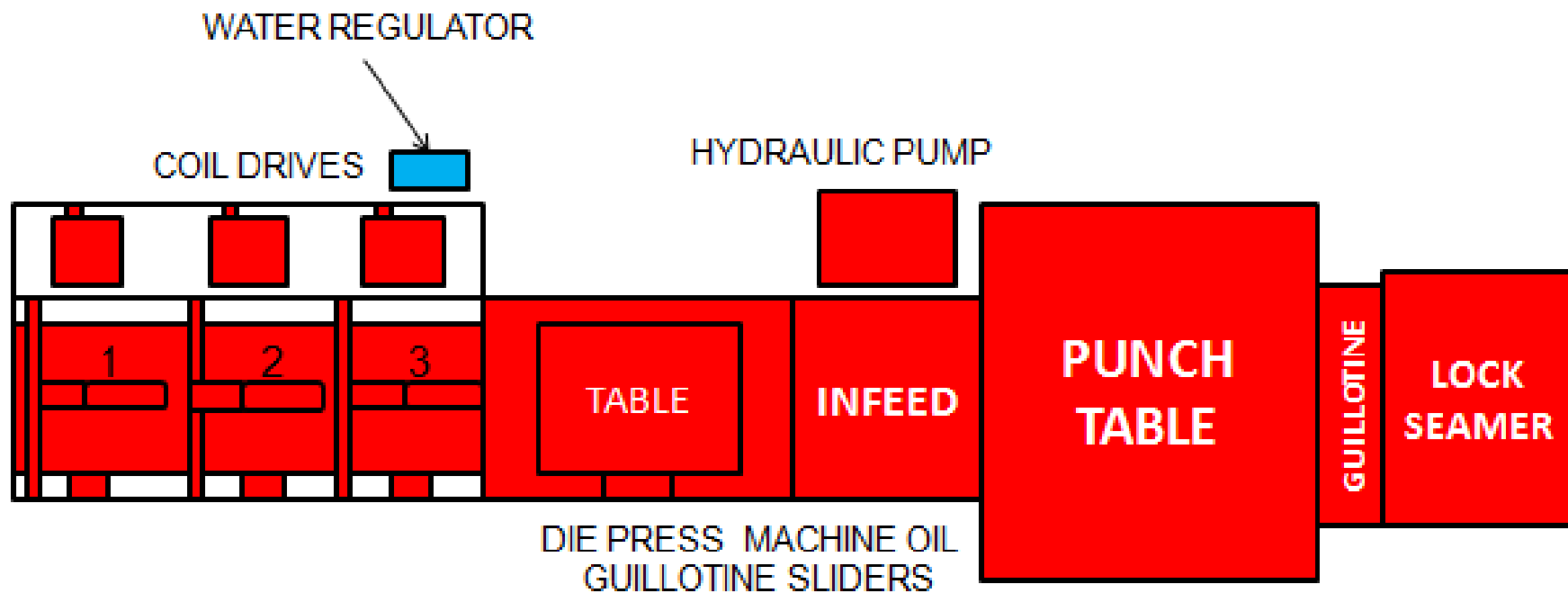
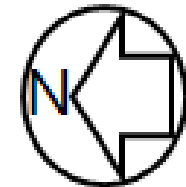
☞ Visual

☞ Listen

☞ Measure

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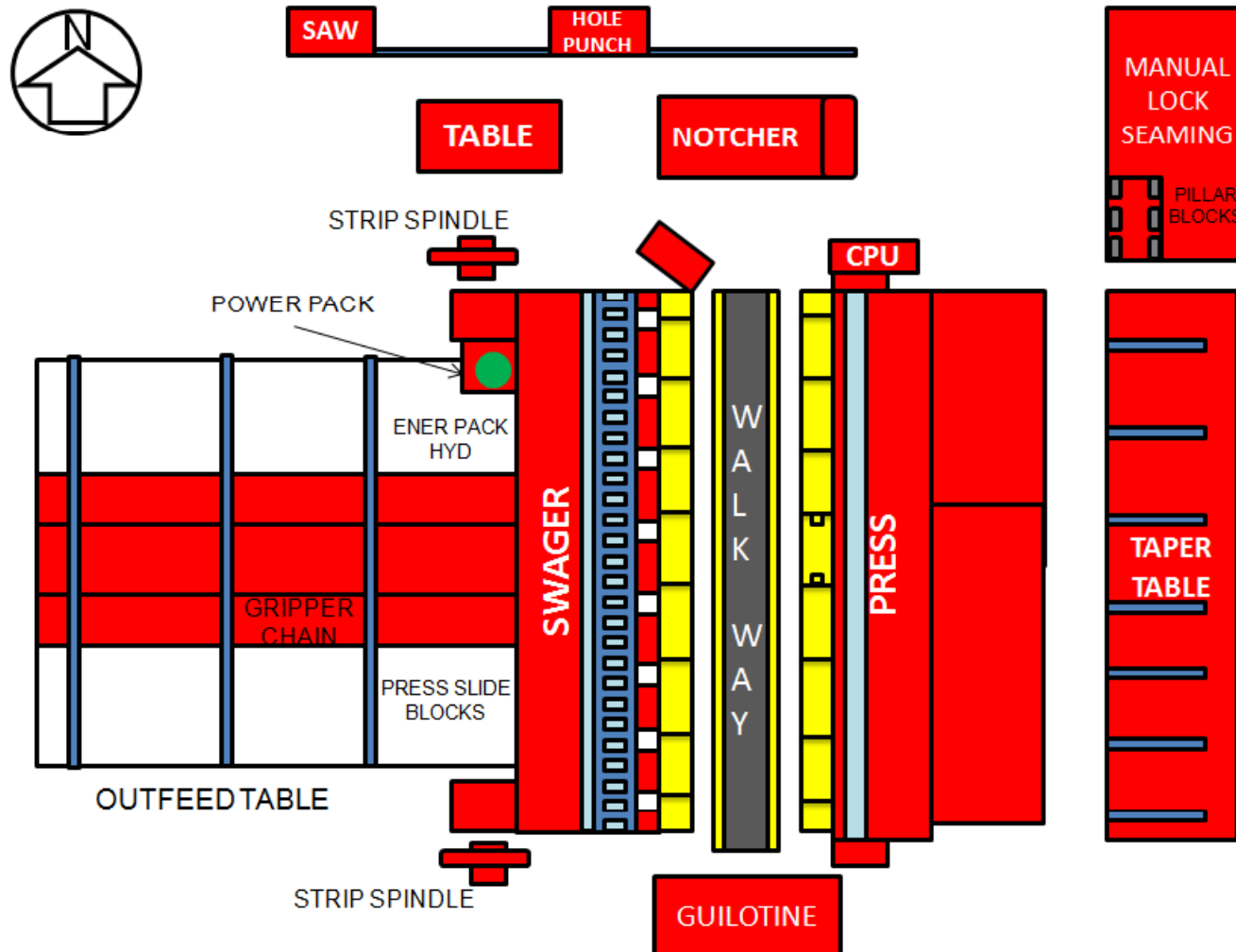
De-coiler & SDL Layout/Defect Tagging Board



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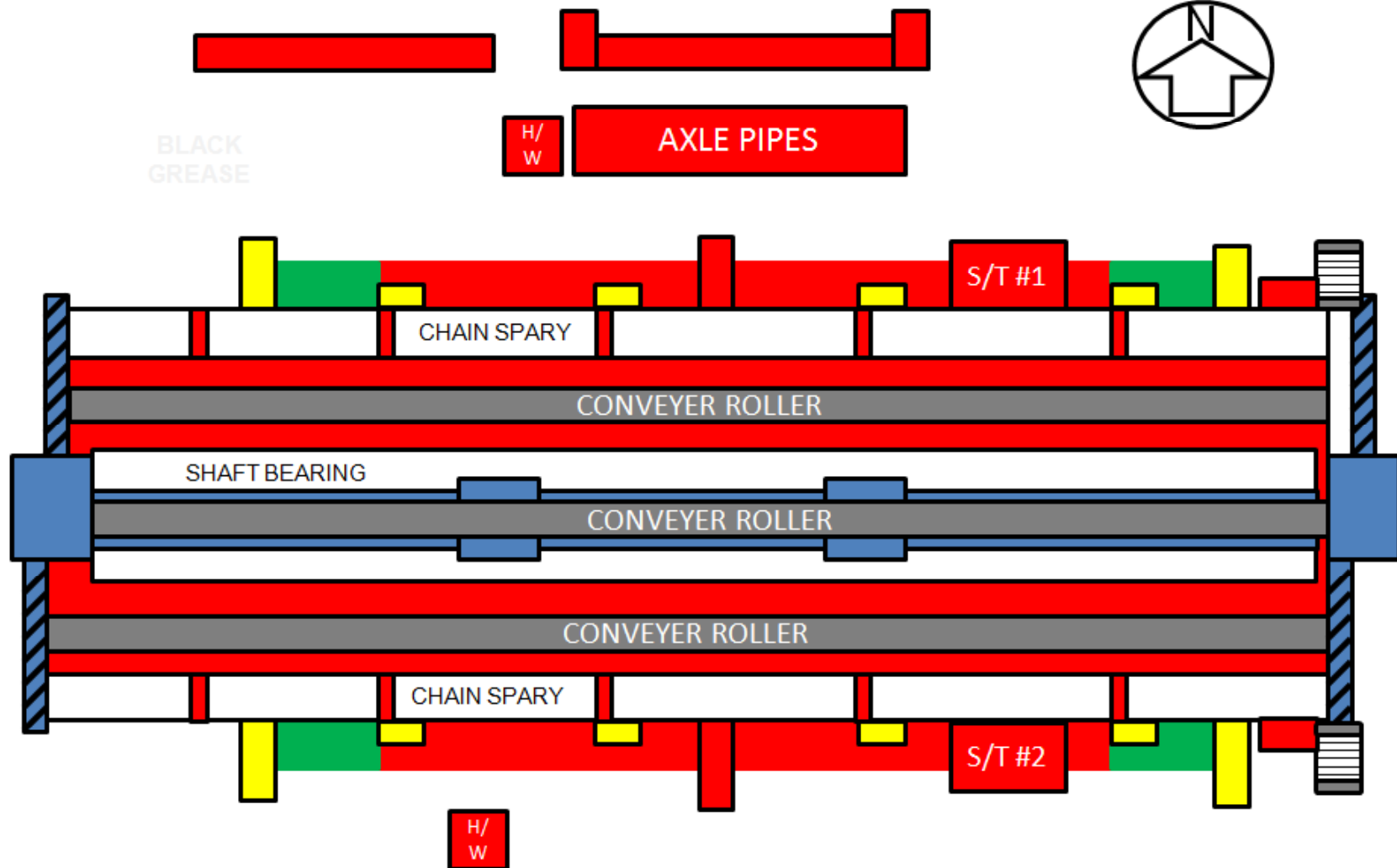


Press & Swagger Layout/Defect Tagging Board



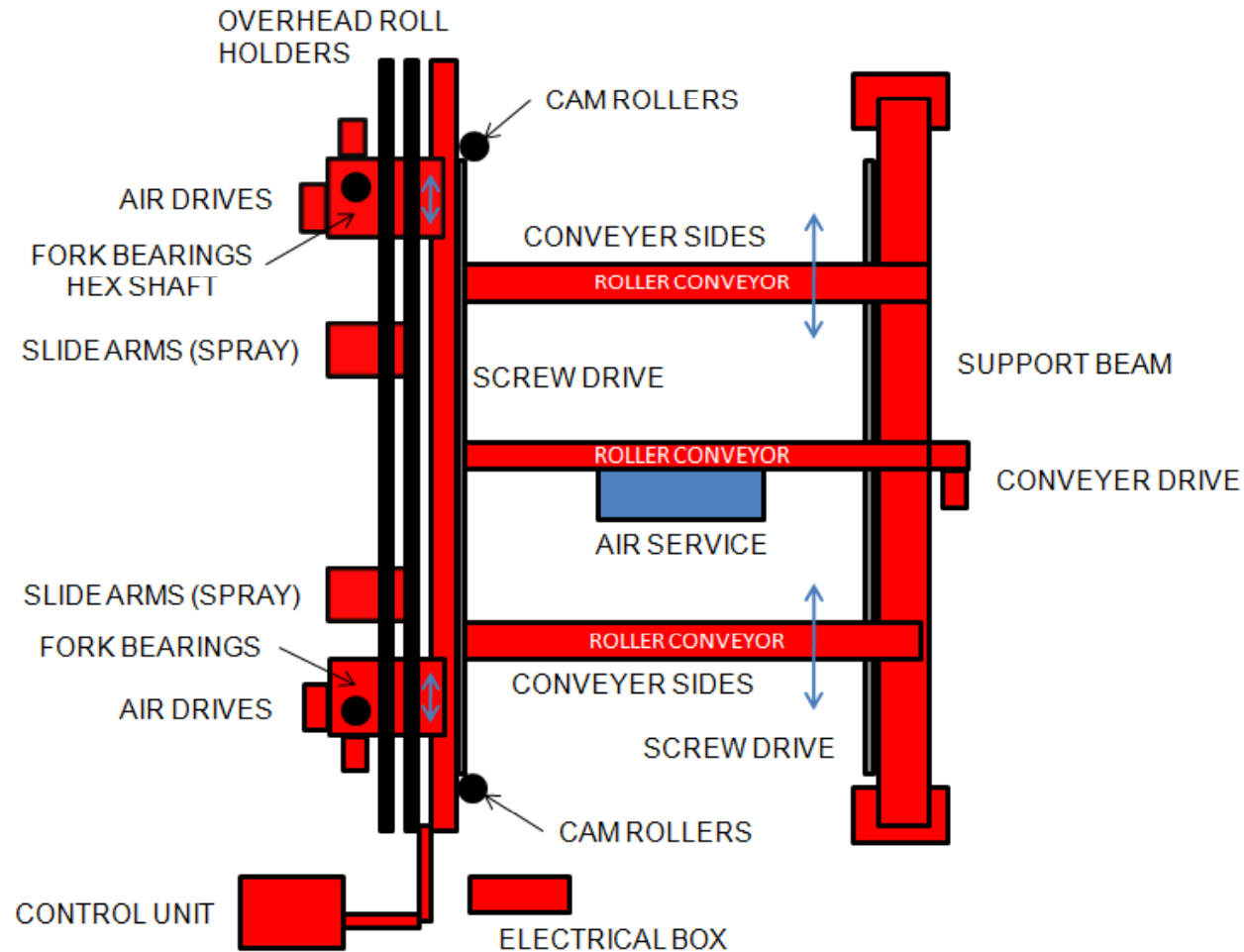
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Stitcher Layout/Defect Tagging Board



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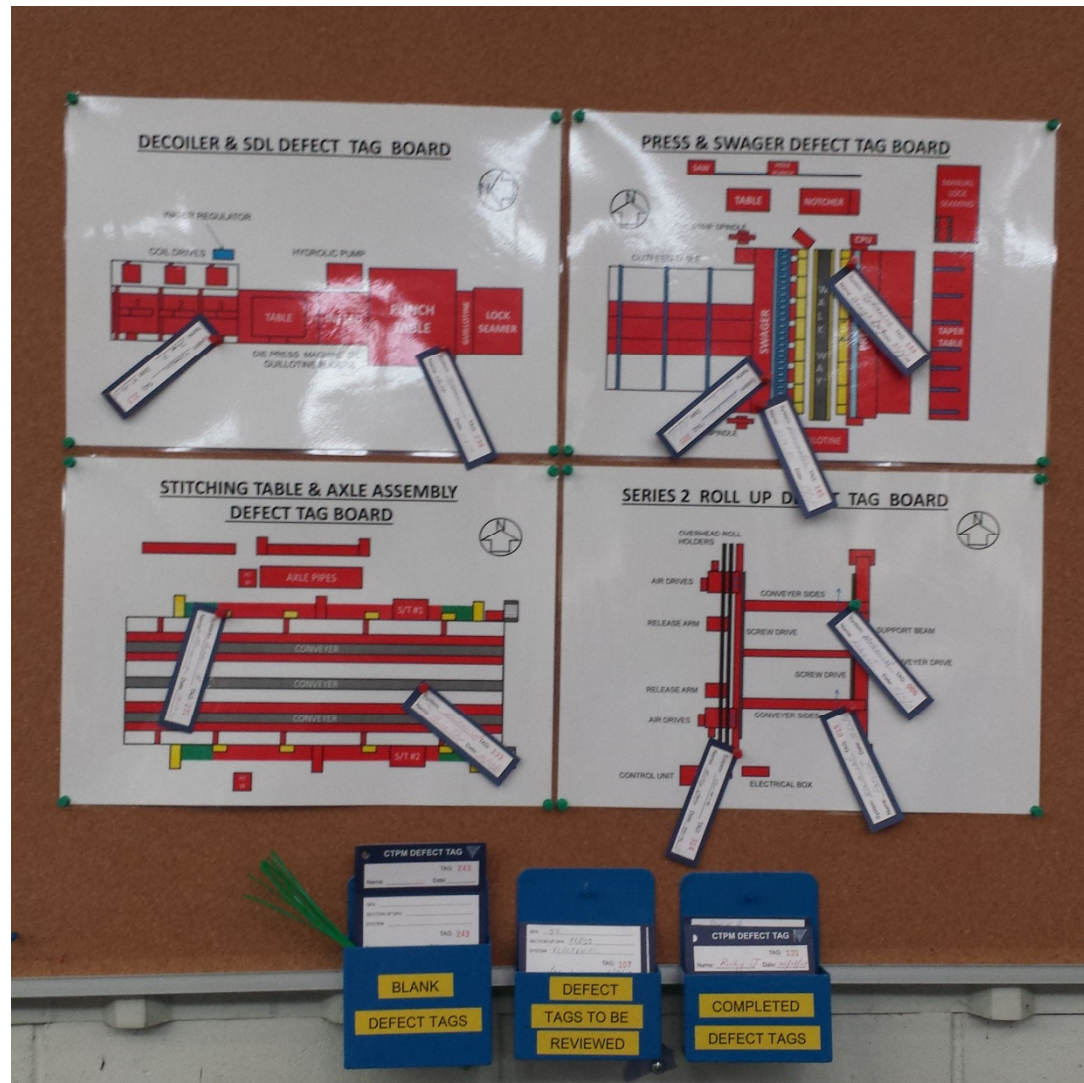
Roll Up Layout/Defect Tagging Board



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













Defect Tagging Board



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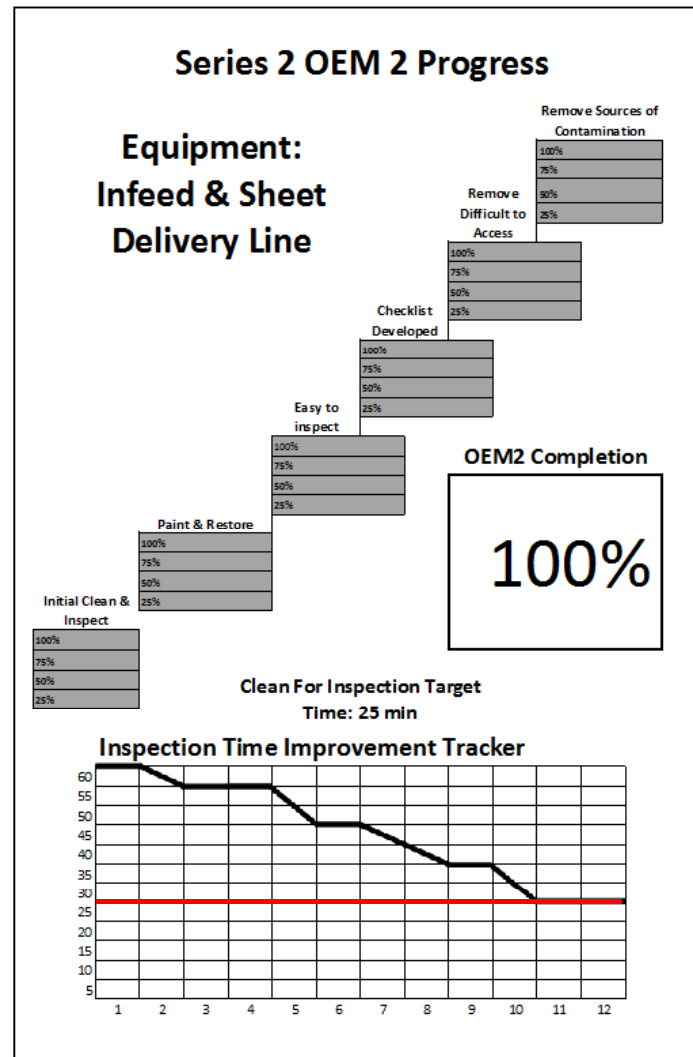


OEM-2 Checklists (De-coiler)

 TOWARDS ZERO HARM		DE-COILER CLEAN FOR INSPECT CHECKLIST				
CORRECT ISOLATING PROCEDURES MUST BE FOLLOWED						Touch
						Visual
Date: _____ Operators: _____ Time: _____						Listen
						Measure
Item	Standard	Target Time	Method	Action	Completed	
1. De-coiler Motors 1, 2, & 3	Clean, secure, no damage	5 min	 		Yes	No
2. Sensors - PE & Proxy	Clean, secure, no build up of dust	5 min	 		Yes	No
3. De-coiler arms	Clean, no damage, working freely	5 min	 		Yes	No
4. Delivery Belts	Clean, no damage, working freely	5 min	 		Yes	No
5. Air Lines	No leaks / damage	5 min	  		Yes	No
6. Vacuum under De-coiler	Clean, no build up of dust	10 min	 		Yes	No
7. Guarding	Clean, no damage	10 min	 		Yes	No
8. Vacuum hoses & bin	Clean, secure, no blockages, empty bin after use	10 min	  		Yes	No

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Regular Clean For Inspection / Equipment Care



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ONE POINT LESSONS



One Point Lessons



TPM ³ One Point Lesson										Dept.	Series 2	No. 010												
Subject: How to conduct clean for inspect on De-coiler Arms										Preparer	Ricardo Jara													
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Isolation	Cleaning Standards	Measurement	Cost/ok	Hygiene Inspection	Domestic Inspection	Tools & Equipment	Safe & Safe	Wear & Steam	Lubrication	Permitting	Hydraulic	Transmission	Electrical	Electronics

1 RUBBER WHEEL

- Clean wheel with damp rag
- Secure (check for looseness)
- Check for any damage or wear & tear

2 STEEL WHEEL

- Clean wheel with damp rag
- Secure (check for looseness)
- Check for any damage or wear & tear

3 AIR CYLINDERS

- Clean air cylinders with **DRY** rag
- Secure (check match marking)
- Check for any damage or air leaks

4 AIR LINES

- Clean air line with a damp rag
- Insure cables are secure
- Check for any damage or air leaks

5 DE-COILER ARMFRAME

- Clean arm frame with damp rag
- Secure (check match marking)
- Check for any damage or wear & tear

Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14	/	/	/	/
Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2					
Number of Attendees	5	5	5	6	5	4	2	3	2					

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TPM ³ One Point Lesson										Dept.	Series 2	No. 009												
Subject: How to conduct clean for inspect on De-coiler Motors										Preparer	Jacbo													
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Isolation	Cleaning Standards	Measurement	Cost/ok	Hygiene Inspection	Domestic Inspection	Tools & Equipment	Safe & Safe	Wear & Steam	Lubrication	Permitting	Hydraulic	Transmission	Electrical	Electronics

1 FAN COVER

- Clean motor cover with damp rag
- Secure (check match marking)
- Check for any damage

2 MOTOR CHAIN

- Check the chains lubrication
- Check chain linkages for damage
- Check for any damage

3 PROXY SENSORS

- Clean Proxy sensor lens with **DRY** rag
- Secure (check match marking)
- Check for any damage

4 POWER BOX / CABLE

- Clean with **DRY** rag
- Insure cables are secure
- Check for any damage


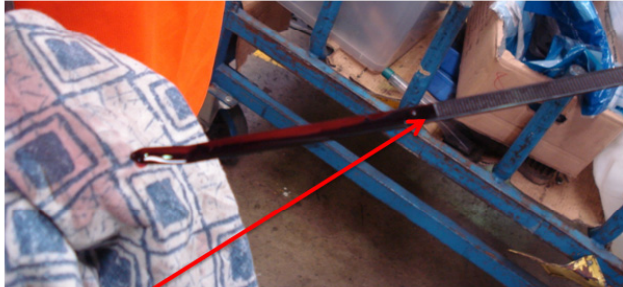
Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14				
Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2					
Number of Attendees	5	5	5	6	5	4	2	3	2					

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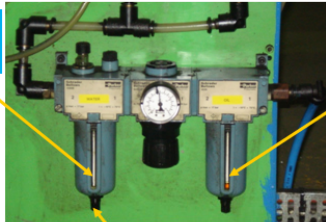
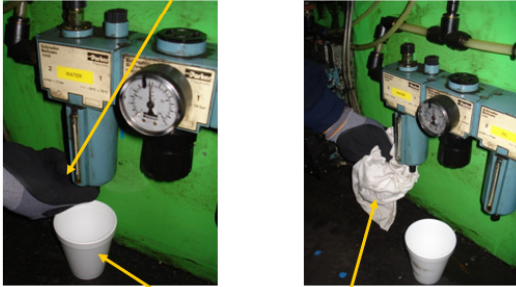
One Point Lessons



TPM ³ One Point Lesson										Dept.	Series 2	No. 011														
										Preparer	Meng															
Subject: How to check oil level in notcher machine																										
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Lockdown	Clamping	Standard	Measurement	Control	Uptime	Injection	Inspection	Adjustment	Wipe & Bld	Water & Steam	Lubrication	Parameters	Hydraulics	Transmission	Electrical	Electronics
 <p>1. Open lid and insert cable tie in reservoir till it touches the bottom</p>													 <p>2. Pull cable tie out of reservoir and visually inspect the oil level.</p>													
<p>Note: If oil level is low contact maintenance to refill</p>																										
Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14																
Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2	S2																
Number of Attendees	5	5	5	6	5	4	2	3	2																	

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TPM ³ One Point Lesson										Dept.	Series 2	No. 005														
										Preparer	Bill Diab															
Subject: How to release water from air regulators																										
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Lockdown	Clamping	Standard	Measurement	Control	Uptime	Injection	Inspection	Adjustment	Wipe & Bld	Water & Steam	Lubrication	Parameters	Hydraulics	Transmission	Electrical	Electronics
<p>1. Check the level of water in reservoir</p>  <p>Note: Do not touch oil reservoir</p>													<p>2. To empty water from air regulator turn BLACK knob ANTI-CLOCKWISE</p> 													
<p>Note: Use polystyrene cup to drain water & wipe any excess water from air regulator by using a clean rag</p>																										
Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14																
Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2	S2																
Number of Attendees	5	5	5	6	5	4	2	3	2																	




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One Point Lessons

TPM ³ One Point Lesson																																																								
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Dept.	Series 2	No. 008																																																						
Preparer	Jacob																																																							
Subject: How to & how often does the bottom rail notcher machine get lubricated																																																								
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Lockdown	Cleaning Standards																																													
 <p>1. To lubricate the notcher machine simply pump the handle located on the top right hand side of machine</p> <p>2. Ensure the lubrication is done with TWO pumps THREE times a week Monday, Wednesday & Friday.</p> <p>Note : Do not over pump the machine with lubricant as it will over flow</p>   <p>Note : Up and Down = 1 pump</p>																																																								
<table border="1"> <tr> <td>Tracking of Education</td> <td>D/M/Y</td> <td>7/5/11</td> <td>25/6/11</td> <td>10/10/11</td> <td>25/5/12</td> <td>20/8/12</td> <td>15/4/13</td> <td>18/8/13</td> <td>5/9/13</td> <td>18/2/14</td> <td>/</td> <td>/</td> <td>/</td> <td>/</td> </tr> <tr> <td>Team</td> <td>EOTT</td> <td>HR</td> <td>S2</td> <td>EOTT</td> <td>HR</td> <td>S2</td> <td>S2</td> <td>S2</td> <td>S2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Number of Attendees</td> <td></td> <td>5</td> <td>5</td> <td>5</td> <td>6</td> <td>5</td> <td>4</td> <td>2</td> <td>3</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14	/	/	/	/	Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2						Number of Attendees		5	5	5	6	5	4	2	3	2				
Tracking of Education	D/M/Y	7/5/11	25/6/11	10/10/11	25/5/12	20/8/12	15/4/13	18/8/13	5/9/13	18/2/14	/	/	/	/																																										
Team	EOTT	HR	S2	EOTT	HR	S2	S2	S2	S2																																															
Number of Attendees		5	5	5	6	5	4	2	3	2																																														

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TPM ³ One Point Lesson																																																		
<table border="1"> <tr> <td>Dept.</td> <td>Series 2</td> <td>No. 003</td> </tr> <tr> <td>Preparer</td> <td>Steve.S</td> <td></td> </tr> </table>												Dept.	Series 2	No. 003	Preparer	Steve.S																																		
Dept.	Series 2	No. 003																																																
Preparer	Steve.S																																																	
Subject: How to refill oil lubrication in bottom rail punch																																																		
STEP	Operator Equip Management	1	2	3	4	5	6	7	Safety	Lockdown	Cleaning Standards																																							
 <p>1. Bottom rail Punch hydraulic fluid reservoir</p> <p>2. Lift lid on reservoir & use funnel to fill hydraulic fluid</p>  <p>3. Only fill hydraulic fluid to the MAX fill line</p>  <p>4. Ensure hydraulic fluid does not fall below MIN line</p> <p>Note: USE Hydraulic Oil (HV146)</p> <p>Note: Do not overfill hydraulic fluid as it may cause overflowing</p>																																																		
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THERE'S SO MUCH MORE BEHIND A  DOOR


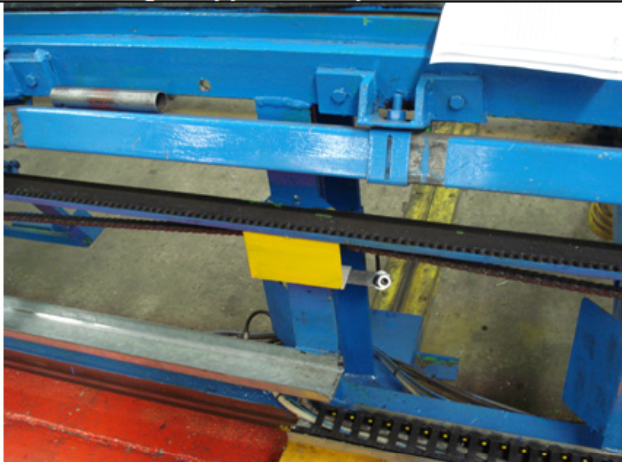
THERE'S SO MUCH MORE BEHIND A  DOOR

IMPROVEMENT SHEETS





Improvement Sheets

Team Name:	Series 2	Location:	Series 2 (Stitching Table)	Initiated Date:	18/03/14
Initiator:	Ricardo Jara	Item:	Air Line	Completed Date:	25/03/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
Air line on L/H side of the stitching table in obstructing the High punch when making a high wind door.					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
Improvement Target:	To re-locate air line so it does not obstruct the high punch	Expected Cost:	Nil	Expected Completion Date:	25/03/14
		Expected Saving:			\$500 p.a
4. Results: (Check)			5. Future Actions: (Act)		
High wind punch is now not obstructed by air line		Actual Cost:	Nil	Place on teams noticeboard to share our learning's	
		Actual Savings:	\$500 p.a		
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		<i>BD</i>	<i>RJ</i>	<i>PK</i>	<i>BA</i>
CTPM Australasia					<i>MC</i>

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Improvement Sheets

Team Name:	Series 2	Location:	Series 2	Initiated Date:	22/04/14
Initiator:	Jacob Foster	Item:	Swagger	Completed Date:	13/05/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
WHS issue due to the repetitive arm strain which may potentially can cause RSI or more severe injuries					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
Improvement Target:	Automated switch which is used to raise & lower the sheet leveler		Expected Cost:	\$200	Expected Completion Date: 06/05/14
			Expected Saving:	\$25,000 est	
4. Results: (Check)			5. Future Actions: (Act)		
Automated switch has now removed WHS issue in terms of RSI for this job		Actual Cost:	\$200		
		Actual Savings:	\$25,000 est		
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		BD	RJ	PK	BA
CTPM Australasia					MC

THERE'S SO MUCH MORE BEHIND A DOOR



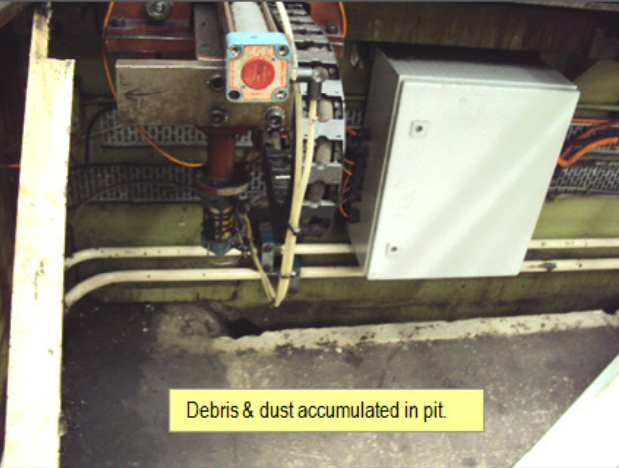

Improvement Sheets

Team Name:	Series 2	Location:	Sheet Delivery Line	Initiated Date:	11/03/14
Initiator:	Meng	Item:	Catch Tray	Completed Date:	22/04/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
Scrap off cuts and general dust/dirt/grease fall to the bottom of the lock seamer making it difficult to clean every week.					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
Improvement Target:	To catch all scrap off cuts before it gets to the bottom of the lock seamer, reducing our cleaning time on this part of the equipment by 60%.		Expected Cost:	\$190	Expected Completion Date: 19/04/14
			Expected Saving:	\$750 p.a	
4. Results: (Check)			5. Future Actions: (Act)		
Catch tray works as planned.		Actual Cost:	\$100		
Original CFI time: 60mins (2ppl)		Actual Savings:	\$750 p.a		
New CFI Time: 25mins (1ppl)					
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		<i>BD</i>	<i>RJ</i>	<i>PK</i>	<i>BA</i>
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THERE'S SO MUCH MORE BEHIND A  DOOR





Improvement Sheets

Team Name:	Series 2	Location:	Press	Initiated Date:	25/02/14
Initiator:	Steve .S	Item:	Flashing	Completed Date:	04/03/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
Debris & dust accumulated in pit making it harder to clean during clean for inspection time.					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
Photo:  <p>Debris & dust accumulated in pit.</p>			 <p>Colourbond flashing allows for easy cleaning access.</p>		
Improvement Target:	To cover the gap between pit and the press which will make cleaning easier		Expected Cost:	Nil	Expected Completion Date: 04/03/14
			Expected Saving:	\$860	
4. Results: (Check)			5. Future Actions: (Act)		
Catch tray works as planned.		Actual Cost:	Place on teams Noticeboard to share our learning's		
Original CFI time: 60mins (2ppl)		Nil			
New CFI Time: 20mins (1ppl)		Actual Savings:			
		\$860			
Approved by:		Team Leader	Back Up TL	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		<i>BD</i>	<i>RJ</i>	<i>PK</i>	<i>BA</i>
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Improvement Sheets

Team Name:	Series 2	Location:	Series 2	Initiated Date:	25/02/14	
Initiator:	Bill Diab	Item:	Motor Cover	Completed Date:	04/03/14	
Team Leader:	Bill Diab					
1. Problem (Plan)						
Motor is exposed to dust/dirt which could curtail the motors operating life.						
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)			
						
Improvement Target:	To enclose motor so it is not exposed to sources of contamination		Expected Cost:	\$80	Expected Completion Date:	04/03/14
			Expected Saving:	\$5,000		
4. Results: (Check)			5. Future Actions: (Act)			
Motor is now fully enclosed which will in turn avoid any exposure to sources of contamination		Actual Cost:	\$80	Place on teams noticeboard to share our learning's		
		Actual Savings:	\$5,000			
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor	LT Member
Discuss with team then sign off acceptance of Proposed Change		BD	RJ	PK	BA	MC
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THERE'S SO MUCH MORE BEHIND A  DOOR





Improvement Sheets

Team Name:	Series 2	Location:	Series 2	Initiated Date:	08/04/14
Initiator:	Ricardo Jara	Item:	Motor Cover	Completed Date:	29/04/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
Drive train motors on the stitcher table are exposed and susceptible to sources of contamination.					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
Improvement Target:	Enclose motor to keep clear of contamination		Expected Cost:	\$50	Expected Completion Date: 29/04/14
			Expected Saving:	\$2,000	
4. Results: (Check)			5. Future Actions: (Act)		
Motor is now fully enclosed which will in turn avoid any exposure to sources of contamination		Actual Cost:	\$50	Place on teams noticeboard to share our learning's	
		Actual Savings:	\$2,000		
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		<i>BD</i>	<i>RJ</i>	<i>PK</i>	<i>BA</i>
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THERE'S SO MUCH MORE BEHIND A  DOOR



Improvement Sheets

Team Name:	Series 2	Location:	Series 2	Initiated Date:	18/03/14
Initiator:	Ricardo Jara	Item:	Extended ledge on catch tray	Completed Date:	08/04/14
Team Leader:	Bill Diab				
1. Problem (Plan)					
Steel off cuts falling under Sheet Delivery Line making it hard to clean					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
Improvement Target:	Cover the gap to stop steel off cuts going under SDL machine	Expected Cost:	\$50	Expected Completion Date:	08/04/14
		Expected Saving:	\$1200p.a		
4. Results: (Check)			5. Future Actions: (Act)		
Steels off cuts are now easier to collect because we don't have to go under the SDL machine		Actual Cost:	\$50	Look at creating catch trays in SDL so that is also easy to clean	
		Actual Savings:	\$1200p.a		
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor
Discuss with team then sign off acceptance of Proposed Change		<i>BD</i>	<i>RJ</i>	<i>PK</i>	<i>BA</i>
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ROOT CAUSE ANALYSIS





Root Cause Analysis (A3 Worksheet)

Improvement Theme / Key Success Factor(s): Operator Equipment Management - 2		Title: Series 2 Roll Up Pin		Site: Revesby	
Department: Series 2	Equipment / Process: Roll Up	Prepared By: Bill Diab	Date Initiated: 25/02/14	Date Completed: 04/04/14	Latest Update Date: 20/03/14 Latest Version: V1

1. Define Problem (Plan)

Problem Statement: Access to roll up pin		
Problem Description		
	Is	Is Not
What	Roll Up Pin	N/A
Where	Roll Up	N/A
When	Big doors >5100 wide & >2000 high	Small doors <5100 wide & <2000 high
Size	N/A	
Point of Occurrence	After roll up operation	
Is there any history of this problem? N/A		

Access to roll up pin can be difficult to pull out if covered by R/H side roll up plate

4. Develop Root Cause Solutions – Summary Result of Root Cause Analysis (Plan)

Cause Statement 1: Big doors >5100 wide

```

graph LR
    A[Width of door >5100 wide] --> B[4 or more springs]
    B --> C[High tension]
    C --> D[Pin becomes stuck in roll up]
    E[Height of door >4000] --> F[More revolutions on roll up]
    F --> G[Roll up out of sequence]
    G --> H[Possible Solutions: Cut access hole in roll up plate]
          
```

Cause Statement 2: Big doors >4000 high

```

graph LR
    I[Different door sizes] --> J[More revolutions on roll up]
    J --> K[Roll up out of sequence]
    K --> L[Pin hard to access]
          
```

Possible Solutions:

- Cut access hole in roll up plate

2. Contain Problem – Detail the containment action required and completed (Plan)

Detail the containment action that has been taken:
Use slide hammer when pin becomes too hard to remove when in awkward position

Date Implemented: 04/02/14	Place Implemented: Series 2 Roll Up	Implemented by: Bill Diab	Verification of action by: Brian Allen/Paul Kelly
----------------------------	-------------------------------------	---------------------------	---

5. Implement Solutions – Summary of Action Plan (Do)

Proposed Actions / Approved Actions	Who	Proposed Date	Completed Date
Cost benefit / Expected Savings	Ricky	04/03/14	07/03/14
Take before photo for improvement sheet	Jacob	11/03/14	11/03/14
Create improvement sheet	Mang	18/03/14	21/03/14
Create Personal Engineering Request (P.E.R.) for Maintenance	Bill	25/03/14	27/03/14
Maintenance to completed during next activity time	James	04/04/14	04/04/14

3. Analyse Problem – Summary of the Cause & Effect Diagram (Plan)

```

graph LR
    subgraph Materials
        A([Different door sizes])
        B([Big doors >5100])
    end
    subgraph Methods
        C[Roll up out of sequence]
        D[High Tension]
    end
    E[People]
    F[Machine: R/H Side roll up plate covers pin]
    G[Effect Statement: Access to roll up pin]
    A --> G
    B --> G
    C --> G
    D --> G
    E --> G
    F --> G
          
```

6. Evaluate Results – Measure and evaluate the results of the improvements made (Check)

Roll Up pin now can be removed from any position

Cost/Benefit / Savings

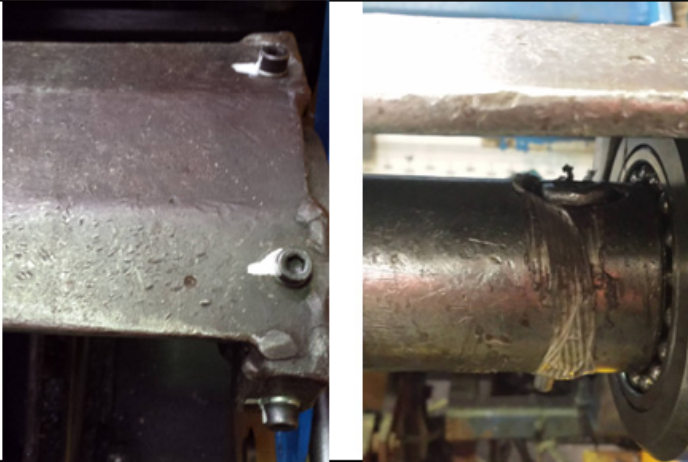
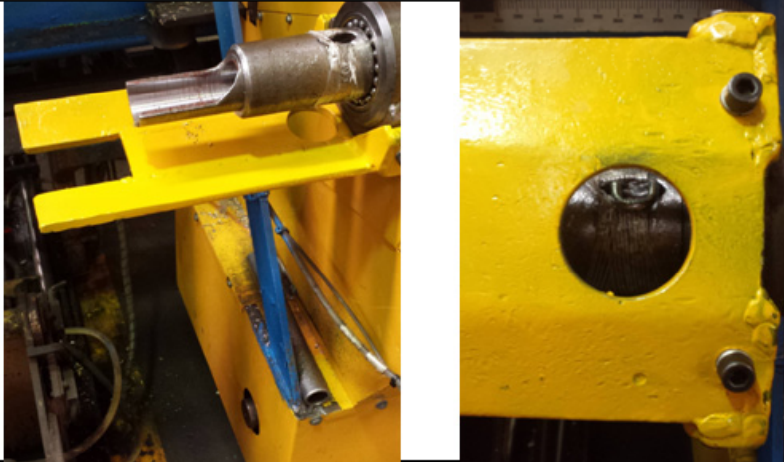
Total loss time: 30mins
 Total Doors Scraped: 5 Doors p.a
 Occurrences: 4 times per week
 No. of operators: 2
 Cost of improvement: \$80
 Savings: \$8,000 p.a

7. List Future Actions (Act)

L/H side roll up fork is starting to deteriorate which may create problems in the future. Have raised improvement sheet along with P.E.R. to replace fork but may need to Frontline Problem Solving exercise on this to discover root cause.



Improvement Sheets

Team Name:	Series 2	Location:	Series 2	Initiated Date:	18/04/14	
Initiator:	Bill Diab	Item:	Roll Up Pin	Completed Date:	04/04/14	
Team Leader:	Bill Diab					
1. Problem					(Plan)	
Roll up pin can be difficult to pull out if covered by right hand side roll up						
2. Current Situation			(Plan)	3. Proposed Change / Approved Improvement		
						
Improvement Target:	Cut hole to make access to pin easier		Expected Cost:	\$80	Expected Completion Date:	04/04/14
			Expected Saving:	\$8000p.a		
4. Results:			(Check)	5. Future Actions:		
Roll up pin now can be removed from any position			Actual Cost:	\$80	L/H side roll up fork is starting to deteriorate which may create problems in the future. Have raised improvement sheet along with P.E.R to replace fork but may need to Fronline Problem Solving exercise on this to discover root cause.	
			Actual Savings:	\$8000p.a		
Approved by:		Team Leader	Back Up Team Leader	Production Supervisor	Maintenance Supervisor	LT Member
Discuss with team then sign off acceptance of Proposed Change		BD	RJ	PK	BA	MC

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BEFORE & AFTER PHOTOS



Before & After Photos



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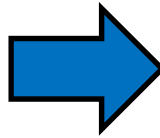
Before & After Photos



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Before & After Photos



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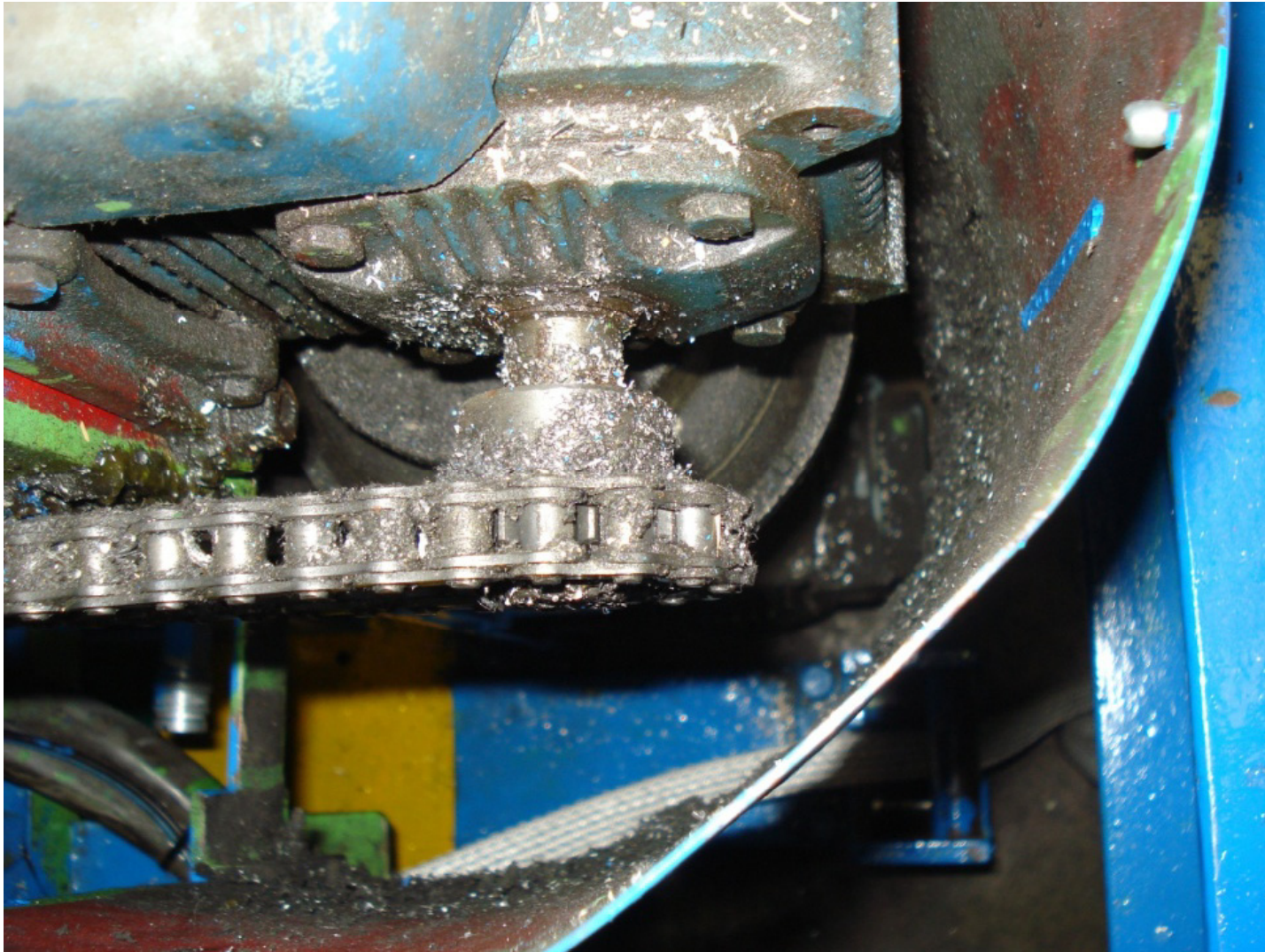
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Before & After Photos



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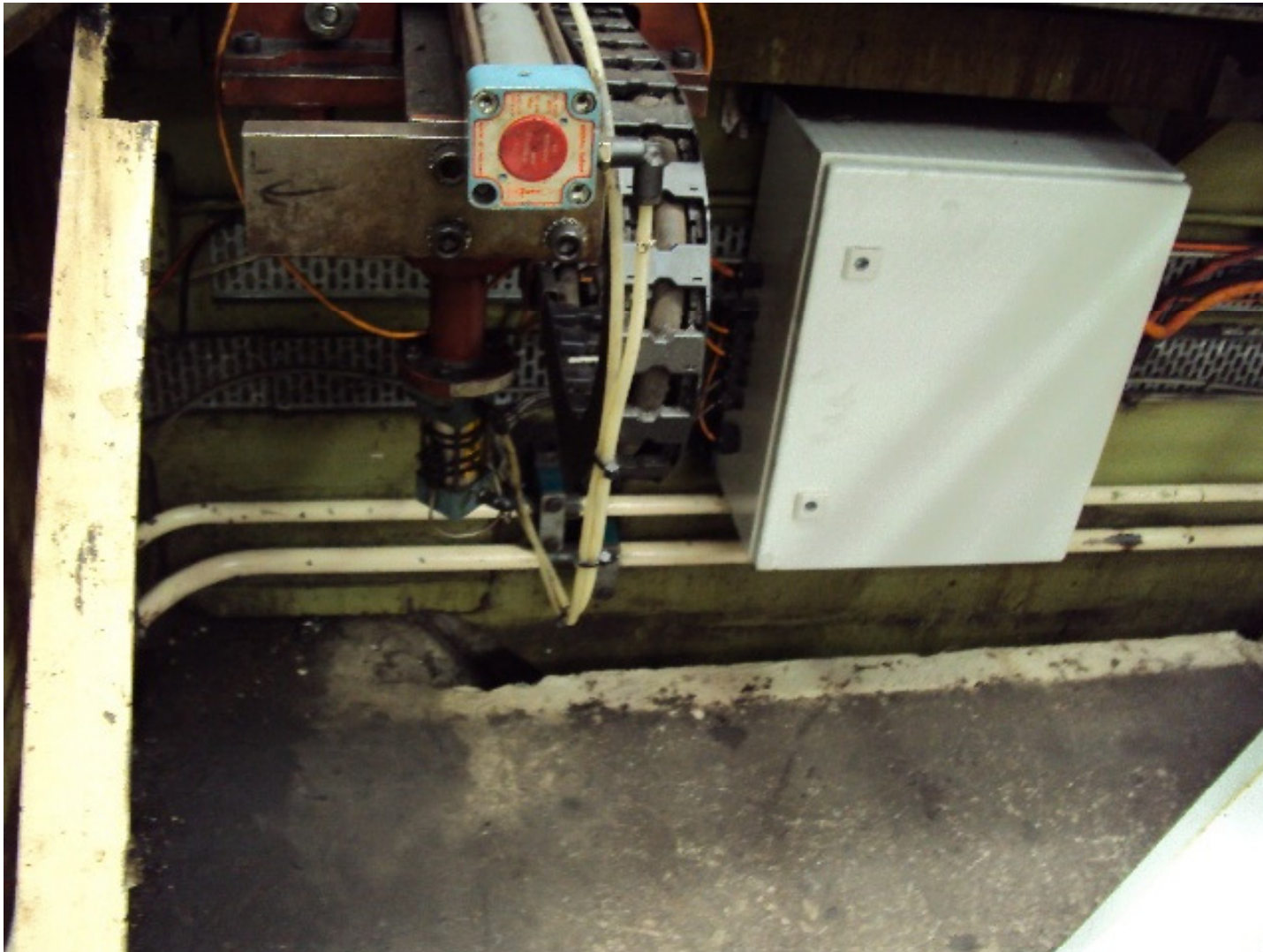
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Before & After Photos



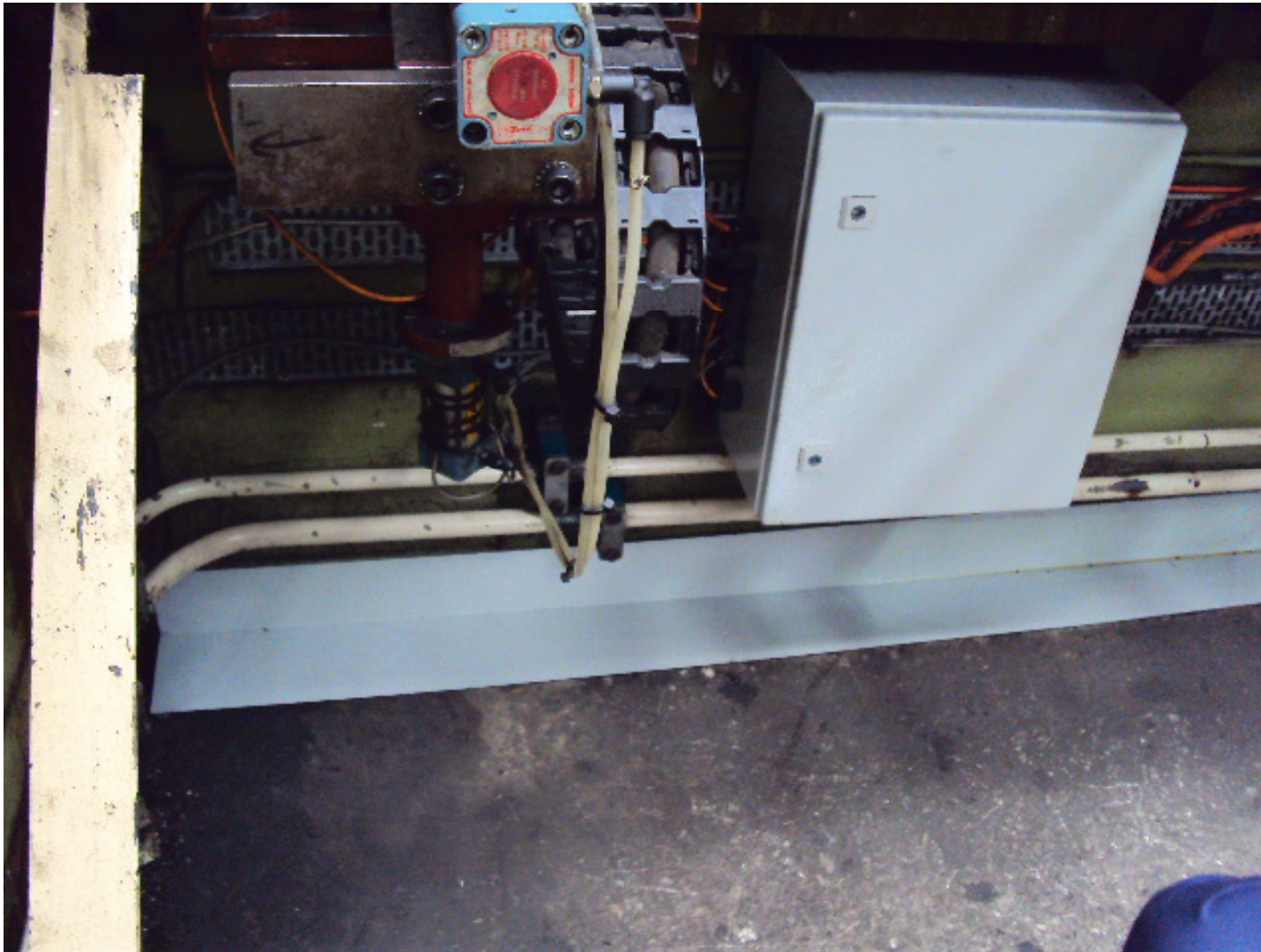
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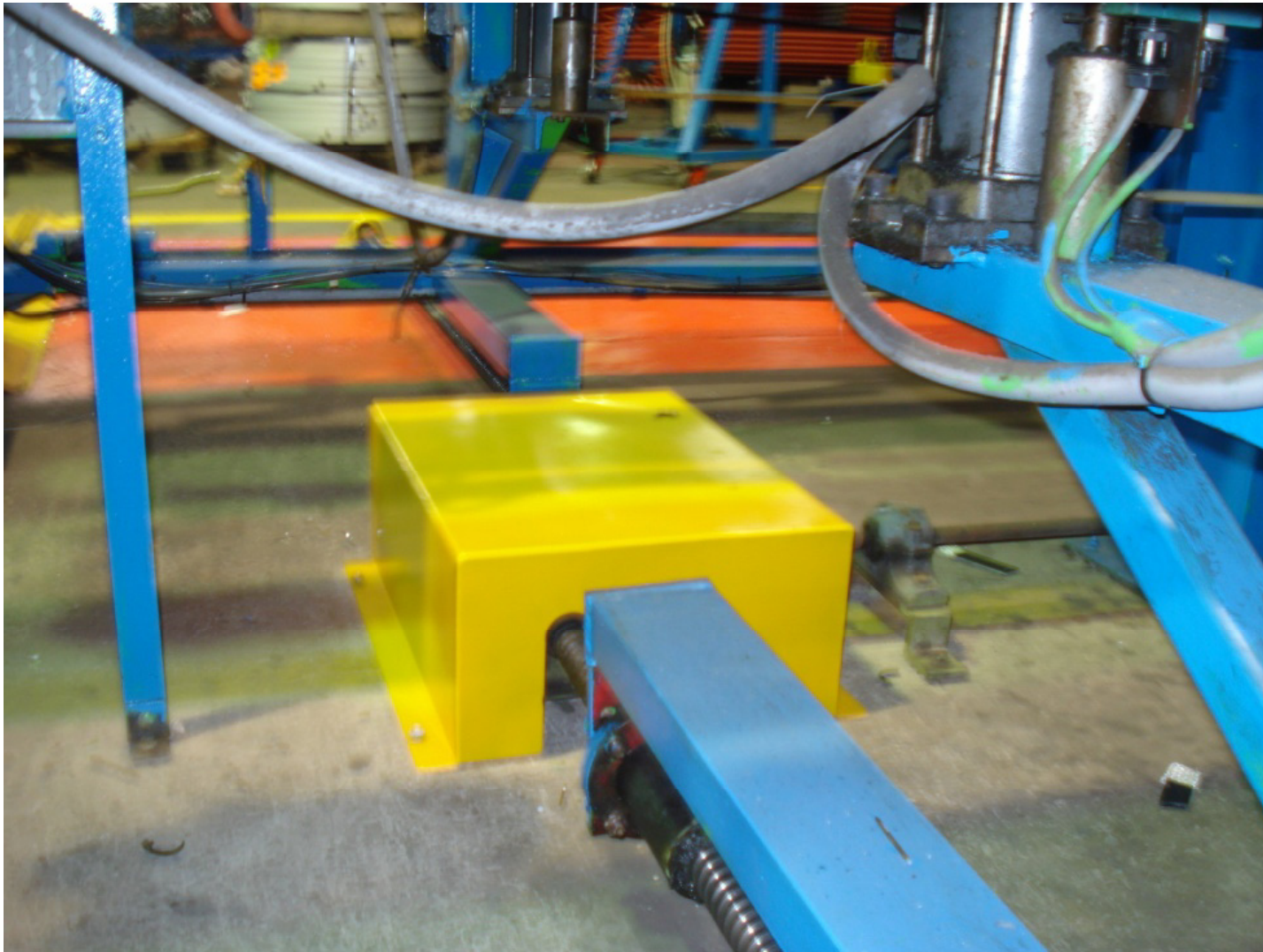
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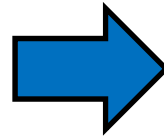
Before & After Photos



THERE'S SO MUCH MORE BEHIND A  DOOR



WAM still continues in the background!!!



THERE'S SO MUCH MORE BEHIND A  DOOR

THERE'S SO MUCH MORE BEHIND A  DOOR

HOW ARE WE PROGRESSING?





OEM-2 Team Assessment (Mid-Point)

Area Based Team Assessment Sheets Operator Equipment Management Step 2			
Defined Production Area: <u>Series 2</u>			
Improvement Area: <u>De-coiler, SDL, Press, Swagger, Stitcher & Roll Up</u>			
Team: <u>Series 2</u>			
Team Leader / Assessor: <u>Bill Diab / Adrian Thomas</u>			
Date: <u>17/03/14</u>			
SUMMARY			
Assessment	Area Based Team Area of Focus	Score	Comments <small>A minimum of 16 (80%) for each part is recommended before starting the next cycle</small>
OEM-2 Part A	Team Effectiveness Is the Team established and working effectively?	14/20	
OEM-2 Part B	Work Area Management Are all the Work Area Management Standards, Procedures and Improvements being sustained in your Improvement Area?	14/20	
OEM-2 Part C	Cleaning for Inspection Does the area have regular Cleaning for Inspection activities that are effective?	14/20	
OEM-2 Part D	Are Sources of Contamination and Difficult to Clean Areas properly addressed?	12/20	
Total Score:		54/80	An overall score of at least 64 (80%) is recommended before proceeding to Operator Equipment Management Step 3

Mid Point
Total Score
54 / 80
67%

THERE'S SO MUCH MORE BEHIND A DOOR

OEM-2 Team Assessment (Final)



Area Based Team Assessment Sheets Operator Equipment Management Step 2			
Defined Production Area: <u>Series 2</u>			
Improvement Area: <u>De-coiler, SDL, Press, Swagger, Stitcher & Roll Up</u>			
Team: <u>Series 2</u>			
Team Leader / Assessor: <u>Bill Diab / Adrian Thomas</u>			
Date: <u>06/05/14</u>			
SUMMARY			
Assessment	Area Based Team Area of Focus	Score	Comments <small>A minimum of 16 (80%) for each part is recommended before starting the next cycle</small>
OEM-2 Part A	Team Effectiveness Is the Team established and working effectively?	19/20	
OEM-2 Part B	Work Area Management Are all the Work Area Management Standards, Procedures and Improvements being sustained in your Improvement Area?	17/20	
OEM-2 Part C	Cleaning for Inspection Does the area have regular Cleaning for Inspection activities that are effective?	17/20	
OEM-2 Part D	Are Sources of Contamination and Difficult to Clean Areas properly addressed?	18/20	
	Total Score:	71/80	<small>An overall score of at least 64 (80%) is recommended before proceeding to Operator Equipment Management Step 3</small>

Final
Total Score
71 / 80
88%

THERE'S SO MUCH MORE BEHIND A DOOR



WAM/OEM Audit (Mid-Point)

WAM/OEM Monthly Audit					
Work Area: Series 2		Date: 30/04/14		Assessed by: Bill / Adrian	
	0	1	2	3	4
	None	Poor	OK	Y Good	Perfect
Safety					
1			X		
2					X
3					X
4					X
5					X
General Area					
6			X		
7				X	
8				X	
9				X	
10				X	
11				X	
12				X	
Information					
13				X	
14			X		
15				X	
16				X	
17				X	
18				X	
Consumables & Cleaning Products					
19				X	
20				X	
Energy					
21				X	
22			X		
23			X		
24				X	
Total: 71 / 96					

**Mid Point
Total Score
71 / 96**

THERE'S SO MUCH MORE BEHIND A  DOOR



WAM/OEM Audit (Final)

WAM/OEM Monthly Audit							
Work Area: Series 2		Date: 26/05/14				Assessed by: Bill / Adrian	
		0	1	2	3	4	
		None	Poor	OK	V Good	Perfect	Comments
Safety							
1	Faulty electrical equipment tagged out or removed from area					X	
2	Illumination is working & with appropriate shielding					X	
3	Fire extinguishers in correct position, within date and surrounding clear					X	
4	No trip hazards identified					X	
5	Members use high vis, eye & hearing protection					X	
General Area							
6	Unneeded items are removed from area					X	
7	Floor areas & walls clear, swept & tidy					X	
8	Materials, work in progress, & trolleys located within appropriate marking					X	
9	Line markings clearly indicate work zones, walkways and storage areas & according to colour coding for easy identification					X	
10	Visual controls exist for all work aspects to show normal vs abnormal (even by outsider)				X		
11	Benches organised, clean & tidy (items for current job acceptable)					X	
12	Scrap & rubbish being sorted & disposed of correctly					X	
Information							
13	Team boards are up to date and reflecting current status of team progress					X	
14	Section performance boards & checksheets up to date and completed by appropriate				X		
15	SOP's & OPL's are current and correctly located together with up to date staff training					X	
16	MSDS's are current, in accordance to the company standard format and correctly				X		
17	All posters, notices and safety signs are up to date and as required in accordance to					X	
18	Issues & Improvement sheets being used to address problems & make changes within the area					X	
Consumables & Cleaning Products							
19	Location exists for all items indicating item, min / max quantity & safety requirements					X	
20	Items correctly stored in designated positions, marked with MSDS ref. & to					X	
Energy							
21	Lighting & power sources to area shut down at end of shift					X	
22	Infrequently used equipment in "off" position rather than left "on" just in case					X	
23	Any air leaks are tagged as defects for rectification					X	
24	Staff are energy conscious and raising ideas to reduce our waste & impact					X	
					15	76	Total: 91 / 96

**Final
Total Score
91 / 96**

THERE'S SO MUCH MORE BEHIND A  DOOR

History Sheet



What slowed us down???

- Production priorities
- Team members / support people not available

Key Achievements

- Excellent Team Work
- Utilising individual abilities
- Respect from management to workers
- Pride in the new work area

Lessons Learnt

- Be persistent
- Don't underestimate the power of communication

THERE'S SO MUCH MORE BEHIND A  DOOR

