

“Change Up!” Team, Make it Easy to Changeover



The end of August brought about the completion of **Sugar Australia – Yarraville’s** thirteenth cycle of improvement with 13 teams successfully completing their Improvement Activities. A cycle being a 12 – 14 week program where teams come together for ½ hour meetings and 1½ hour activity each week to help improve the current state of their workplace, equipment and processes.

One of these successful teams was the **“Change Up”** (as seen in Figure 1 below) a Special Micro FE&PI (Focused Equipment & Process Improvement): Set-Up Time Reduction Team on the Syrup Retail Line. Their mandate was to reduce the time to changeover the Syrup Line to different packaging types by at least 50% and eliminate the adjustment or “tweaking” time.

Figure 1: The “Change Up” Team



L to R: Oscar Ochoa, Matais Suarez, Matthew Murray, Darren Humphries, Ray Fisher and Peter Whitmore




The team commenced by identifying all the changeover elements of the Un-scrambler, Filler and Capping machines for the Syrup Line. A typical changeover would take an average of 3 hours, going from a jar to a squeeze bottle for example. There was also additional

adjustment or “tweaking” time required at start up to achieve the production line rates.

At the Mid-point presentation, the team had identified 27 improvements or varying complexities (8 Un-scrambler, 8 Filler and 11 Capper). The team recommended that they focus on implementing the Filler and Capper improvements and leave the Un-scrambler improvements for the next cycle, which was agreed to by the Site Leadership Team.

A key learning by the team was to not only to focus on reducing changeover time, but how to eliminate the need for minor adjustments. The team mantra soon became **“No Tools, Set Once”**. A good example of this is the setting up of the Capper Wheel, which sorts and feeds caps in the correct orientation to the Capper Machine. The team came up with a simple colour coded gauge to correctly set the position for three different cap sizes. Refer to the Set Up Procedure in Figure 2 below.

Figure 2: Set Up Procedure of Capper Wheel

Date: 25/7/2012 Author: Darren H	Set Up Of Capper Wheel	X Basic Skill 0 Countermeasure 0 Accessibility 0 Safety 0 Poka Yoke 0 Productivity
Step 1	Unlock outside lock nut by holding the Red handle with one hand the Blue handle with the other hand.	
Step 2	Screw wheel in or out Use colour coded product gauge set correct measurement of wheel (Red for jars, Green for 400, Black for 500)	
Step 3	Lock in position using Red handled lock nut	

Another good example of saving time and eliminating the need for adjustment is the positioning of the filling heads. Once again using a simple template allows for quick one touch setting, as seen in Figure 3 and 4 below.

Figure 3: Procedure to replace Filling Press Plate




Date: 25/7/2012		Replace bottle holder filling press plate	<ul style="list-style-type: none">X Basic Skill0 Countermeasure0 Accessibility0 Safety0 Poka Yoke0 Productivity
Step 1	<p>**Note Jars does not require a press plate.</p> <p>Locate press plate on west wall for product being run.</p> <p>Green 400 Black 500</p>		
Step 2	<p>↓</p> <p>Line up press plate to locating pin on filling station.</p> <p>Secure in position using wing nuts provided.</p> 		

Figure 4: Replacing the Bottle Holder Press Plate



From the preceding two examples you can see the benefit of using colour coding to identify changeover parts. In this case, red, green and black have been used, thus a quick visual check can be conducted to ensure all the changeover parts have been completed.

The team has managed to implement all Filler and Capper improvements, nineteen in total, hence reducing all changeovers to 1 hour. ***This has reduced changeover times by up to 67%.***

To highlight the team's success and gain feedback from the team itself, I asked some of the team members, ***"What did you personally get out of being in the team?"*** Their responses speak for themselves:

"Learnt more about the equipment"

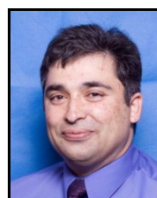
"Improvements have really made the changeover easier and simpler"

"I walk less during a changeover"

"The results are outstanding"

CTPM congratulates the **"Change Up"** team on their great results and excellent efforts.

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