



# Setup Reduction— One Discipline You Must Master

By Jeff Wiltsie, President of Manufacturing, Vanamatic Company

Setup reduction is the gold standard for continuous improvement. Honing your skills in this one process will pay dividends in all facets of your operation. Setup reduction is the one discipline that you must master if your shop is to continuously improve and remain competitive.

As an example, suppose that a shop (maybe yours) has an average setup time of 8 hours per setup. The shop has 20 machines and does an average of 10 setups per machine per year for a total of 1,600 setup hours. If this company cut the average setup time in half to 4 hours, it would then have 800 hours of additional machine time that it can sell. Averaging 1 hour or less on specific machines can be routinely achieved.

## Setup Reduction Impact:

**1. Manufacturing Capacity** – Setup reduction increases manufacturing capacity without adding people or machines. Doing more with less is the essential lesson of Lean.



**2. Scheduling** – Standard (8-hour) setups are notorious for ending up at 20 hours, which puts the machine in the hole before it starts. Setup reduction programs compress the bad setup times significantly, which also helps scheduling. Setup reduction increases on-time performance and builds customer loyalty.

**3. Premium Time/Overtime** – Setups gone wrong often require overtime hours to catch up. Additional premium time is seldom required with a good setup reduction program.

**4. Setup Skills** – Good setups from scratch require the highest skilled setup personnel; interchangeable tooling setups can be performed by operators.

**5. Scrap and Defects** – Setup scrap can be limited to a few pieces and bar ends. Ideal setup reduction programs generate a good piece on the first piece.

**6. Machine Maintenance** – Machine problems after setups from scratch occur frequently. Setup reduction programs with interchangeable tooling reduce the number of machine component adjustments, thus eliminating breakage caused by improper adjustment.

**7. Tool Breakage** – How often have you heard, “The tool broke because it was set wrong”? Quick-change/interchangeable setups eliminate breakage. They use tools that drop in or are preset outside the machine, resulting in setups and normal tool changes that seldom result in breakage due to improper settings.

**8. Down and Waiting for Machine/Tool Components** – Good setup reduction systems require that all tool and machine components be ready prior to the setup beginning. The best setup

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reduction programs store all tools and components in the machine area (not a crib) so the operator/setup people can prep for the next setup while the machine is running.



Setup reduction programs pay dividends when you pick the low-hanging fruit, but the greatest dividends come when you pick the fruit at the top of the tree. To do this, you must continually hone your setup reduction skills because the tree gets taller each year. Systematically focusing on setup reduction is a discipline that delivers cost reductions, improved methods of work, better skilled employees and increased profits.

Good luck on your adventure. The low-hanging fruit from setup reduction is relatively easy to pick.

Significant investments are required to pick the fruit at the top of the tree, but the rewards are worth the effort. How many additional machine hours to sell can you find in your shop by focusing on setup reduction? You will be profitably surprised.

**Full setups on multi-spindle bar automatics can be achieved in under an hour.**

The Vanamatic Team has produced an instructional video DVD demonstrating the team's setup reduction methodology. This DVD can be obtained for a \$500.00 donation to the PMPA Educational Foundation. To order, contact Monte Guitar at [mguitar@pmpa.org](mailto:mguitar@pmpa.org) / 440-526-0300, ext. 227. Or, visit: [pmpa-foundation.org/ReducingSetUp\\_orderform.pdf/](http://pmpa-foundation.org/ReducingSetUp_orderform.pdf/).

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Recent PMPA Listserve Topics

PMPA members use email Listserves to share ideas, solve problems, sell excess material and equipment, and learn about new business opportunities. Here is a list of topics that were recently discussed:

- Salt spray testing
- Flat stock
- T6 vs. T6511
- M18 x 1.0-G6
- H04 brass
- 4130 HT
- Machinability: MP35N per AMS 5844
- Twin-spindle turret lathes
- Parts cleaner/blow-off station
- Thread pitch run-off at lengths
- Gage or measuring system
- ISO7-R 3/8 gauge #4
- For sale: Haas SL-20 CNC lathe
- For sale: aluminum bar
- For sale: 5/8" 1214
- For sale: 304L stainless steel tubing

PMPA CALENDAR

Below is the calendar of upcoming conferences and events scheduled for the 2012 program year. For the latest district/chapter meeting information, please view the Calendar of Events at [pmpa.org/calendar/](http://pmpa.org/calendar/). If you have questions about PMPA conferences or regional meetings, please contact Rob Kiener, Director of Government Affairs & Communications: 440-526-0300 or [rkiener@pmpa.org](mailto:rkiener@pmpa.org).

PMPA Management Update Conference  
February 24-26, 2012  
The Hyatt Regency La Jolla, San Diego, Calif.

PMPA National Technical Conference  
April 21-24, 2012  
The Westin North Shore, Wheeling, Ill.

Why Join  
PMPA?

**GROW!**

To grow and profit today, you have to work smarter. You have to relentlessly eliminate waste. PMPA is the way to expand your knowledge and increase your capabilities in order to grow your business. Through daily interaction with PMPA staff members, you have access to our expertise on important industry issues. You're also able to tap the collective knowledge of your peers; those who have "been there" and "done that."

Through the meetings, resources and online connections, reports and more, we give you the tools to grow. We look at emerging markets and let you know what's hot and what's not. PMPA programs help you understand your markets so you can make sense of the issues. And, we provide relevant information to help you make informed decisions.



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