



# Problem Solving or Waiting for Rescue?

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Are your operators competent problem solvers? Are they able to recognize, diagnose, respond and repair nonfunctioning or incorrectly functioning processes? Or are they great only when everything is operating as expected, but limited to waiting to be rescued by your elite problem solvers? Why aren't all our experienced operators elite problem solvers? What is the process of becoming an elite problem solver? How do we implement it? Where do we go to get this kind of training?

I was pleased to share the stage with John Detterbeck of Lester Detterbeck Enterprises at our National Technical Conference, where we both presented our approaches to problem solving/process troubleshooting. I was especially inspired by John's introduction, "It was a dark and stormy night." That was how he introduced his segment. Imagine you are on an unknown road. It is dark, and you don't have a smartphone or GPS to tell you what to do. His reframing of our process of problem solving to a more easily understood situation helped me change my view of problem solving, because in my experience, some people never become problem solvers. They become stranded and wait to be rescued.

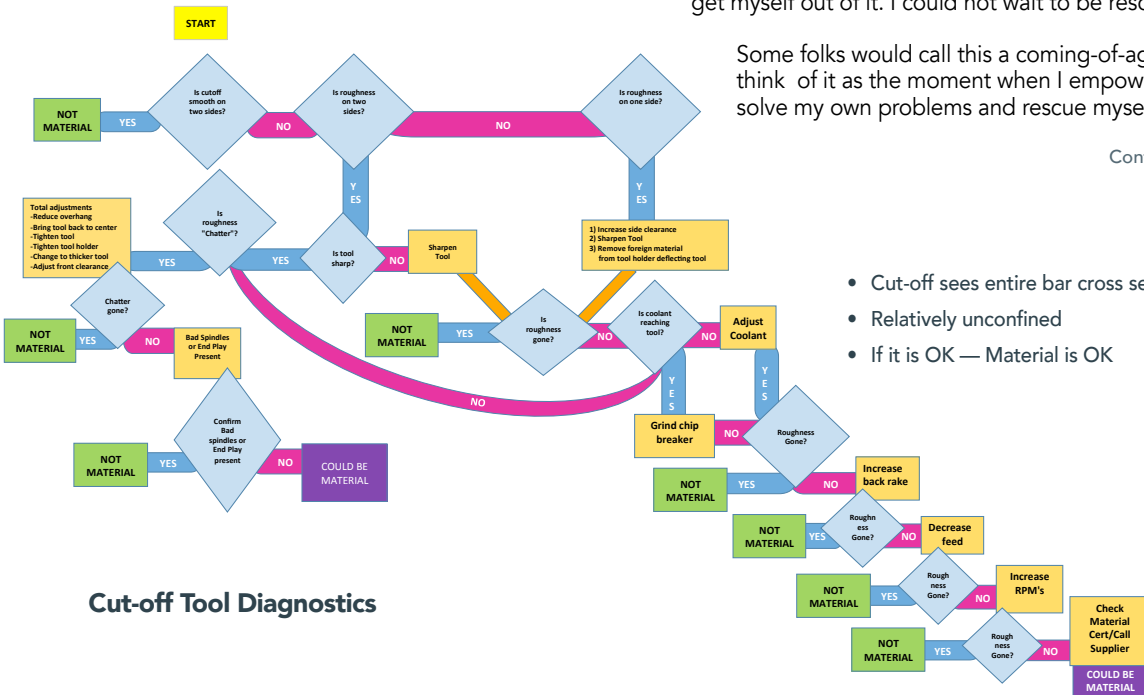


John's "dark and stormy night" metaphor reminded me of a solo winter backpacking trip I made as a college student on spring break. Instead of heading to sunnier climes, I broke out the cold weather gear and headed out into the Allegheny Mountains on my trek. The trip consisted of a couple of feet of snow, no maps, darkness and winter storms.

It was about 2 a.m. on the second night when I realized that it would be at least a week before anyone would come looking for me. I put myself in this situation, so I would have to get myself out of it. I could not wait to be rescued.

Some folks would call this a coming-of-age story, but I think of it as the moment when I empowered myself to solve my own problems and rescue myself.

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At our National Technical Conference, John provided information to help attendees recognize signs of various tool failure modes and how to use available evidence to change machining parameters one at a time to get the process on track. In his "dark and stormy" problem world, he identified signs and signals to help the lost find their way.

In my part of our session, I provided a "roadmap" to give our operators certainty and confidence that the issues were not material-related. By demonstrating how to use the cut-off tool to verify that no material issues are involved, my "roadmap" helps operators work on the real issues in their process, rather than sit around hoping that the material supplier will be there soon to rescue them.

Lost machining time is expensive and can never be regained. With a couple of days needed to get samples to suppliers, samples examined and analyzed, lab reports prepared, reviewed, approved and reported, waiting to be rescued can cost a company thousands in lost production on a single process with the machine down. This will be especially frustrating when the report exonerates the material. Now what?

There are four likely causes of a process failure: man, machine, method and material. There is less than a one out of four chance that it is the material. Gambling that it is the material that is causing the problem ignores the three out of

four probability that it is something under your shop's control. Why waste time gambling against those odds and hoping for a rescue that may never come?

Our National Technical Conference attendees got to take home handouts from our session to use as references for problem solving back in their shops. We are making a copy available of both John Detterbeck's presentation and my own via PDF, including my "roadmap" to prove that the problem is not the material. Having confidence in the material will give your operators clarity and courage to see what is changed in the man, machine, method aspects of the job that are under their control. By giving them a place to stand, they can leverage their process knowledge to affect the fix. At the very least they can be doing something constructive while they are waiting to be "rescued."

To get your copy of "Troubleshooting for First Timers," by John Detterbeck, go to [short.productionmachining.com/FirstTimer](http://short.productionmachining.com/FirstTimer).

For "Effective Troubleshooting," by Miles Free, go to [short.productionmachining.com/EffTroub](http://short.productionmachining.com/EffTroub).

How do you create elite problem solving? PMPA member companies send their talent to our National Conferences and local programs to master the nuances of our craft. What do you do?

## HOT TOPICS

PMPA members support one another through email Listserves, where they can solve problems, share advice, sell excess material and equipment, and learn about new developments and opportunities. Here is a list of topics that were recently discussed:

- 4130 CD HT barstock
- Work zone dimensions Traub A20
- Steel equivalents for European grades
- Diehead blocks to hold chasers
- Scope of ISO 10012-1
- 1050 A-H16 aluminum sheet
- Temporary employee uniform rentals policy
- House passes permanent R&D credit
- Question regarding yield strength
- Eliminating guide bushing drag marks
- Thread rolling 4140
- Steam oxide finish
- Part-marking with ink

## 2 GREAT BLOGS!

[YOURCAREERFACTS.COM](http://YOURCAREERFACTS.COM)  
[PMPASPEAKINGOFPRECISION.COM](http://PMPASPEAKINGOFPRECISION.COM)

## PMPA CALENDAR

Below is the calendar of upcoming conferences and events scheduled for the 2015 program year. For the latest district/chapter meeting information, please view the Calendar of Events at [pmpa.org/events/calendar](http://pmpa.org/events/calendar). If you have questions about PMPA conferences or regional meetings, please contact Monte Guitar, director of technical programs, at 440-526-0300 or [mguitar@pmpa.org](mailto:mguitar@pmpa.org).

**2015 Annual Meeting**  
 October 23-27, 2015  
 Hyatt Regency Maui Resort & Spa  
 Lahaina, Hawaii



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