

Equipment Repair Evolution Revolution: Part 1

How Proxy Tech programs can help close the widening skilled mechanic gap

By E. Victor Brown



While the skilled technician gap continues to widen, the downtime and repair cost rates for equipment operators continues to climb. This is a constant threat to project deadlines, profitability, and overall business competitiveness in the marketplace. To meet these challenges, construction and other heavy equipment/machine operators are increasingly turning to the solution of a Proxy Tech program.

WHAT IS A PROXY TECH

A Proxy Tech is an operations person that is assigned the responsibilities of providing service on equipment to fill the gap between mechanic crews that handle major repairs and operators that handle daily preventive maintenance. According to TBR Strategies president/CEO Preston Ingalls, the Proxy Tech's primary role is part of a strategy to overcome the shortfall of mechanics and help to eliminate equipment downtime.

The maintenance and reliability consulting firm has worked with numerous companies across industries to implement Total Process Reliability (TPR) and preventive maintenance programs that reduce downtime. Ingalls explained how an operator technician program takes preventive maintenance programs and its components like CLAIRE (cleaning lubricating, adjusting, inspection, repair, eliminate) to the next level:

"Nearly half of all companies are using some form of training development of their existing personnel to overcome this shortfall, since approximately 75 percent of failures can be detected by

well-trained operators," explains Ingalls, as a creative way to foster an alternative to the shortage.

As an advocate of Proxy Tech programs, Ingalls has worked with many companies to implement TPR and Proxy Tech programs. Together, these have shown benefits of very significant reductions in downtime as well as significantly reduced repair costs. Although the risks are low in terms of Proxy Tech program implementation, program development takes a companywide commitment that starts with leadership and permeates through the crews and equipment operators.

DEVELOPING A PROXY TECH PROGRAM

Like all worthwhile pursuits in construction and other industries where equipment maintenance is vital to operation, the adherence to a clear process of execution is vital to success. When it comes to developing a successful Proxy Tech program, it includes seven steps: 1) identifying the tasks for proxy techs, 2) developing the program framework, 3) choosing and vetting proxy tech candidates, 4) developing skill sets and training, 5) developing tools sets and parts kits, 6) putting oversight components and personnel in place, and 7) developing an evaluation framework to ensure program success.

1: IDENTIFYING TASKS

This first stage is all about developing the tasks that will fall under the Proxy Tech's purview, which normally would include diagnosing then replacing/repairing on

a variety of equipment in areas such as electrical (fuses, breakers, beacon light bulbs, switches, horns batteries, etc.), hydraulic and air leaks (quick connects, O-rings, hoses, checking fuel water separators, changing filters when necessary), equipment body integrity and appearance (installing missing and tightening loose bolts and fasteners; replacement of wear parts like blades on skid steers, brooms, prop blades on back hoes; adjusting paver tracks, end-gate wear plates and chains, track pads, conveyor belts, scrapers spray nozzles, spray bar leaks, nozzles mud flaps, etc.).

These and other similar tasks constitute what Proxy Techs can be trained to do and given the parts to fulfill in terms of repairs and replacements. It is critical that companies understand the tasks and their parameters so that they can choose only those tasks that make sense financially and otherwise.

"There are certain repairs that would fall beyond the skillset of a Proxy Tech, so it's imperative to agree on what repair replacement tasks make sense and which ones don't," explains Ingalls.

This process requires the ability to analyze those tasks based on set criteria in four areas. This is derived from a transfer process developed by the Japanese where they looked at these four things to determine the feasibility of transferring tasks from operations to maintenance. Each aspect is rated on a scale of one to ten based on difficulty, includes the required skill level needed to perform the task, the complexity of the task, the level of risk in performing this task to the person, and the consequence of incorrect task performance (what

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would happen if I did this thing incorrectly).

Ingalls explains that there were additional factors that can come into play, such as availability of tools, where a lift may be required, or tasks that require two skilled techs. "The goal is to develop a task list so that the Proxy Techs can be trained and capable of doing those repairs in the field and be supplied with the parts and tools to accomplish them," says Ingalls.

2: DEVELOPING THE PROGRAM FRAMEWORK

Just like a complete operator care program overall, a Proxy Tech program requires buy-in from leadership and senior management to ensure successful program development. At the heart of this is understanding the benefit of operator care, since this is the next level of that program.

Ingalls recommends that there be a steering group or council to support the program and its development. That group should be made up of representatives of the equipment division and operations to provide oversight and make sure the program works.

3: CHOOSING AND VETTING CANDIDATES

After making the decision on repair tasks, the committee must develop a candidate screening and selection process, as well as title development for their own brand of internal Proxy Techs.

Personnel selection hinges on mechanical aptitude, so companies can use one of many available mechanical comprehension aptitude tests. Another key way to vet potential candidates is to look at backgrounds in working on mechanical things, such as personal auto repair or farm equipment repair.

Project and crew coordination is important for ensuring that Techs aren't needed as operators on key equipment. "The goal is to find Tech candidates, like service truck operators or similar non-critical operators, that can perform repairs without disrupting normal operations," explains Ingalls.

He went on to explain that determining the structure of the program for each crew is crucial. This process may reveal a lack of feasibility for a Proxy Tech for some crews based on their job demands and workload of the crew. ■

Look for part two of this article in the next issue of MCS as the remaining aspects of Proxy Tech program development are discussed and some real-world success stories are shared.



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