



# USING OPERATOR BASIC CARE TO IMPROVE PREVENTIVE MAINTENANCE

By Preston Ingalls

**P**lanned maintenance is about four times less expensive than unplanned maintenance. Preventive maintenance is a form of planned maintenance that allows equipment owners to perform certain proactive tasks, such as inspection, to detect problems early enough to take corrective action. After all, a well-trained operator can detect three-fourths of all potential failures. Therefore, it makes perfect sense to engage equipment operators in early detection.

## WHAT CAUSES BREAKDOWNS?

Most breakdowns are a result of deterioration, which can be detected as a change in condition. Prevention means acting before a noticeable change occurs, in order to minimize its occurrence. Detection means inspecting and identifying potential problems in an early enough stage to take corrective action. Correction is done when a noticeable change occurs, before failure happens as a result of the noticeable change.

Restoration means returning equipment back to optimal conditions or “as designed.” It is important to note that although “as designed” is often used, in some cases “as designed” is not the same as optimal. In other words, there may have been design errors inherent in the equipment when it was new. Optimal means best condition.

Most breakdowns are preventable. They are usually due to deterioration, which can be detected as a change in condition if inspection occurs well enough and frequently

enough. As the P-F chart (Figure 1) illustrates, there is a point where the potential for failure (P point) occurring can be noticed. Without corrective actions, it will continue until the failure (F point) occurs. At this point, it becomes expensive, unplanned, and disruptive to the operation.

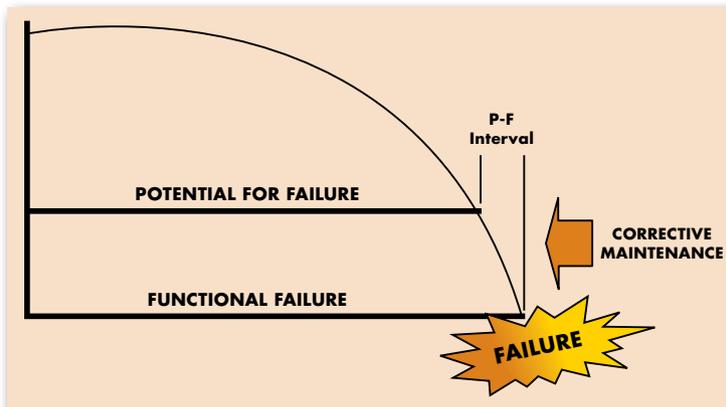
Equipment problems are often hidden behind a mask of contamination, dirt, and grime. Even in environments where cleanliness is mandated, operators often find contamination inside equipment and behind covers. One of the reasons is that most equipment was not designed for ease of cleaning, lubrication, or inspection. Therefore, these tasks become difficult to perform and are not done consistently. Other issues are lack of properly trained personnel, reliance on memory rather than clearly stated standards, and the criteria by which equipment is inspected.

## FIRST LINE OF DEFENSE

Operators are closest to the equipment. They often know when the equipment is not functioning well, even if they don’t understand why. With the proper training, operators can become “frontline inspectors.” Another advantage is having the operators take more pride and ownership in their equipment.

One of the ways to make this happen is to educate operators in the how’s and why’s of basic care, and to provide simple but descriptive checklists showing them where, what, when, and how. The key to success is training, follow-up, auditing, rewards, and recognition. With a good system of audits and follow-up inspections, tasks will be accomplished successfully. ◆

Figure 1: P-F Interval



ABOUT the AUTHOR



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