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COLLISION REPAIR NEWS

Using the Scientific Method to Create Continuous Improvement

Seeing the same abnormalities at the same repair step numerous times a day makes a compelling argument for using the scientific method of problem solving.

by Aaron Marshall

Prior articles have stressed the importance of replacing the discover-as-you-go reality of the conventional estimate/supplement work process with an engineering-premised approach, where we triage, dismantle, and analyze all damage in order to eliminate, up front, as much variability from the repair as possible. So, the fix, paint and build steps proceed uninterrupted, especially on structurally or mechanically damaged, complex repairs.

While continuous progression of each car through the repair process (without starts and stops), is obviously better for the customer (car owner and insurer), the business (in terms of revenue), and the staff (less frustrating, more satisfying), it's absolutely essential for "real" continuous improvement (CI). CI is not the same as continuous change, which is what most workshops end up with. This is why the basic metrics for cycle time, quality (percentage of comebacks), and cost (severity) have not improved for 20-plus years.

CI is the methodical, scientifically (not intuitively) driven process of changing outcomes to reflect "better," as defined by the customer paying the bill. There are many variations for organizing the ideas and activities that comprise meaningful "improvement," but most are organized around the scientific method:

1. Identify a need for "better" from the viewpoint of the customer (internal or external) receiving the work.

2. Study exhaustively all conditions that surround the current outcome, and the work leading up to it. (How well the actual "change" mirrors the intended outcome is determined by the thoroughness of the work at this step.)

3. Create a hypothesis that if we make "such and such change" ... the desired outcome will result.

4. Make the change. Create an experiment immediately, with whatever is on hand, to test the hypothesis. Collect measurable data (not opinion) about how the provisional step affects the outcome, compared to before.

5. If Step 2 was thorough, and the change registers as "measurable" improvement from the customer's point of view, implement the change permanently. If it does not affect the outcome in the manner predicted, start over at Step 2.

This is using the scientific method to create CI. Many confuse "improvement" with just doing something "differently," or buying some new "thing." The process driving those activities usually starts at Step 4. Without Step 2, the improvement is typically localized at best, and does not appreciably affect the entire value delivery system in terms of "better and faster."

So, activities like supplement-free, pre-repair planning—while they obviously shorten cycle time and improve quality (you don't have to glue as many missed parts back on at the end)—what they really afford is the ability to process repairs through interdependent, connected, standardized steps, without stopping.

This gives you an uninterrupted continuum of work, which delivers a measurable, clear result about the effectiveness of the current standards that define the process, all of the time.

With a more consistent flow of uninterrupted information about the work itself in front of you in real time, the quality of CI work is clearer.

Clearly seeing the same abnormalities at the same repair step numerous times per day makes a much more compelling argument for learning and operating the scientific method of problem solving versus the haphazard (and quite typical) trial-and-error approach of "ready, fire, aim."

From this problem-surfacing work system (that must flow largely uninterrupted to be of any use at all, hence the need for supplement-free repair planning and pre-dispatch parts verification), we are awarded with a very powerful, real-time feedback mechanism to see how well our rules, procedures, steps and tasks are actually doing at delivering a repaired car, fixed correctly on the first try, for a target price, at a profit, on time.

This then becomes the tool, when coupled with our own profound knowledge of collision repair, that makes it possible for us to move continuously toward perfection, while others are relegated to keeping up, and copy those who work this way.

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