

SHOP PERFORMANCE TIPS

Simple Formulas for Measuring Shop Performance

If there is one buzzword that's sure to be uttered increasingly in collision shops across the nation, it has to be "cycle time." It's no wonder, given the fact that the majority of insurers increasingly prefer shops that deliver favorable cycle time performance.

We all know what cycle time is—a measure of how long it takes to move a repair job through the shop. However, there's some uncertainty concerning how to measure it. Fortunately, there is a simple formula for measuring cycle time accurately. It's called Little's Law— To understand this law, picture an hour glass filled with sand. The last grains of sand pass through the narrow opening one hour after the first grains have passed. Now, what would happen if you doubled the amount of sand in the hour glass? Right. It would become a two hour glass because the sand would now take two hours to filter to the bottom. Now let's bring that analogy to your collision repair business. If your shop is delivering five vehicles per day and you have 50 cars in process, how many days will it take on average to deliver vehicles? If you answered ten, you're right! And you just used "Little's Law" to calculate the answer. Translated into collision repair cycle time terms, the equation for this mathematical formula is simple:

$$\text{Cycle Time Performance} = \frac{\text{\# of cars in process (keys in hand, authorization to repair)}}{\text{Average \# of cars delivered per day (Keys back in customers hands)}}$$

There you have it! A sure fire way to calculate your cycle time performance. Use this simple division formula at the end of each day and you'll obtain a

quick, accurate snapshot of your daily performance. Perform this calculation every work day for an entire month and you'll have an even more accurate picture of your average performance. As you can see, a complex spreadsheet or a management system isn't required to measure cycle time. Using Little's Law, all you need to know is how many cars you deliver each day on average and how many cars you have in the system (on average).

TPI—Taking Cycle Time One Step Further

Our PPG MVP performance solutions team has developed the Throughput Performance Index (TPI) as a more meaningful and accurate measure of cycle time performance. TPI uses billed hours per day per repair order to calculate cycle time since cycle time days will vary depending on average job size (hours).

To calculate TPI, simply divide average repair order hours by average cycle time (using Little's Law). For example: if the average repair hours per job is 18 and the average cycle time is 10, then division would result in a TPI of 1.8, thus 1.8 billed hours per repair order per day. Armed with these two very simple mathematical formulas, let's explore the overall science of reducing cycle time. It is really quite easy—reduce the number of cars in process or increase the ability to produce more cars per day, which ultimately would reduce the amount of cars in process (unless your market continues to increase the number of available repairs).

Throughput Performance Index

Average repair hours per job

Average cycle time in days (using Little's Law)

In summary, measuring your shop's performance is always an important component of process improvement. By applying Little's Law and our Throughput Performance Index, you can gain a clearer picture of how your shop is performing and lay the groundwork for gaining more access to work. If you want to learn more about improving shop performance, PPG's MVP program training includes a Cycle Time Management course that addresses many of the best practices being implemented by shops across North America.