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COLLISION REPAIR NEWS

Variability and the Pareto Rule

Without stopping for supplements, leveling work throughout the repair process becomes much easier.

by Aaron Marshall

It's often said about projects that 80 percent of the work happens in the last 20 percent of the timeline (the Pareto Rule). If you have ever been involved with a construction project,you can relate.

Complex repairs (34 percent of the average collision shop's work) often end up mirroring this Pareto Rule. It's usually not true that literally 80 percent of the necessary work happens very close to the end, but it feels like that, because as deadlines approach, and work is accelerated, the more rapid abnormalities rear their ugly heads, one after another. Technicians and the expeditor/manager do everything they can to conquer each as quickly as possible, whether it be missing parts, re-work, unforeseen resets, etc. However, it only takes one unresolved abnormality to compromise quality or miss the target delivery date.

There are two tools available to greatly reduce the end-of-job rush, and the resulting effects (poor quality, stressed staff, uncertainty about completion date/time). The first tool is smoothing or leveling. Intuitively, we already recognize the value of smooth and predictable, so it's often verbalized as "scheduling." The other tool is variability reduction. While both are highly effective, they have little or no chance when prescribed on top of a loosely connected system of independent producers. If technicians are largely responsible for the bulk of the repair (dismantle, create supplement, fix, reassemble), and "handling" the issues that arise with each of their repairs, it is unlikely we will have much control over changing "how" they do that (especially if their pay is tied to how well they keep all those balls in the air).

In a connected process, where the value delivery system is comprised of clearly defined [standards driven] steps that serve to build upon each other as work progresses, where tasks are arranged such that each one is done as early in the process as possible so it can be done completely and correctly, and the manpower is specialized to perform just the tasks within the step they are assigned, it is quite simple to create a repeatable, dependable, variability reduction step.

In our company, we call it "Pre-repair Planning" (RP). It includes pre-ordering of specific parts (not all), it includes taking the car apart completely, such that no one downstream should be the first to remove anything (nut bolt, fastener, molding, emblem, sticker, cradle, knuckle, anything). This prevents the worst form of discovery downstream—finding something broken when you take it further apart, or breaking something when you further take it apart. It includes dimensionally correcting all structural control points (even if the structure will later be replaced), eliminating any repair vs. replace variability.

It includes all scuffing for paint (yes, 3-plus days prior to painting the car, we get the scuffing/cleaning step done so the car is dry when we go to mask, and body repairs start with a "clean" repair area). The scuffing of the blend and repair panels can be done 100 percent correctly at the initial dismantle step, so it meets the aforementioned requirement for task placement. RP includes sourcing sectioning procedures (so we know exactly how to section later and what to charge—no variability), scanning codes up front, roughing out any repair panels or bumper covers that are in excess of four hours (to remove the "variability" that it might not fix or might take longer than guesstimated).

It includes opening all new parts packaging to inspect and ensure there is no variability discovered by the tech between the part we needed and the part we received. It takes more time up front, but remarkably less near the end, and little or no variability remains to rear its ugly head as we approach delivery time. It's the same amount of work (maybe less because a lot of rework and revisiting steps is eliminated), much of it just being done at a different stage.

Creating this variability reduction step (purposed with making the remaining work easier and free of surprises) along with other standardized steps for repair, prime, prep, refinish, reassembly and cleanup, affords the ability to smooth each of these steps out evenly, so cars can move at a continuous pace from start to finish without stops.

Without stopping for supplements, it's not difficult, mathematically, to level work (even as variable as collision repair) so it can flow smoothly at a pace built upon averages. Then instead of feeling like 80 percent of the work has to get done in the last 20 percent of the repair cycle, it looks more like 80 percent of the work (and its potential variability) was completed in the first 20 percent of the repair's life cycle.

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