Preventative Maintenance and the Life of Interior Aligning and Leveling Lasers

By S. David Kelmetz

One of the most pressing issues with interior lasers in the contracting business is their consistent production on the job site. Lasers are damaged in a variety of ways, as they are carried up ladders, loaded from truck to job, and moved around a site during the course of the day. Avoiding hazards and ensuring regular upkeep will assist in managing downtime and operating expenses over the life of the laser. From this aspect, product breakage is the primary component of a laser’s total “cost equation.”

While accidents do happen on the job site, product maintenance as a general practice is not commonly prioritized. Aligning and leveling lasers are designed to be durable. Contractors tend to become comfortable with the hazards of their construction environments. Regular upkeep and maintenance is postponed. All ignored, however, is a potential cost. While calibrating the laser generally costs $50, a trip to the manufacturer for a teardown cleaning usually runs upward of $200. And both of these one-time outlays are yet less expensive than purchasing a new laser outright, which today starts at about $1,000. It’s important to managed direct repair expenses, but to also spread every penny over the life of the laser.

So what should contractors do to maintain the life of their lasers? With this in mind, we studied a sampling of mainstream products from some prominent tool manufacturers and found a number of common, and some not so common, practices and recommendations about extending the life of interior aligning and leveling lasers. We discovered that, as a benchmark, several manufacturers reported regularly servicing 10-year-old-plus lasers that still rely on their original diodes. The methods that were recommended in the article are based on these results.

The focus of the study concerns leveling and aligning lasers (rotating and stationary models) for interior construction applications only. Excluded were general construction lasers (used to measure ditches, excavations, trenches, streets, etc.), along with pocket lasers.

Job Hazards and Awareness

There are hazards on a job site that are simply unavoidable. Working around uneven surfaces, compromised and unfinished framing, sooty and dusty conditions all require contractors to take due care—not only for their own safety but for their tools as well. Likewise, contractors who employed the same good judgment when handling their aligning and leveling tools reportedly owned the lasers with the longest life spans. It really comes as no surprise though. Being aware of the surroundings and employing common sense as a policy, not just a practice, is one of the most effective steps that contractors can take in maintaining the life of their laser.

Laser manufacturers have been receiving interior lasers delivered for repair with cracked housing, broken lighthouses, worn out gearing, damaged electronics, and even to replace the batteries. Most of these accidents occurred from basic carelessness. In many cases, parts are required to repair the laser, and sometimes laser accessories need replacing, despite their general durability. Good judgment about preventative maintenance has shown to significantly enhance product life.

As a second important step in laser maintenance, all product manufacturers we spoke with recommended proper cleaning after use. This is especially a difficult chore after a long day’s work. As a result, however, lasers tend to go uncleaned on a regular basis. But whether laser usage is heavy (such as in drywall environments, which generate dust and debris) or relatively light, at a minimum the product should be field checked regularly, and the lighthouse kept clean to ensure accurate measurements.

In addition, interior laser manufacturers recommend that the tools be sent in for calibration once or twice every year at a minimum. Technicians at the manufacturers will calibrate the product on an electro range up to about 100 feet at torpedro level.

Relative to the efficiency benefits of the product, and the downtime and resource constraints that can result, regular calibration is a justifiable expense. Besides, the turnaround time for repair at the manufacturer generally ranges about a week or two.

The primary steps to maintaining your
aligning and leveling laser are simple:
- Be careful on the site.
- Calibrate the product regularly.
- Wipe it down and clean it after use.

**well, what else can we do?**

There’s more that contractors can do to maintain leveling and aligning lasers. Some laser manufacturers occasionally provide educational seminars and workshops, some for distributors, others for contractors. Some manufacturer’s territory sales representatives also provide product training seminars and demonstrations to general contractors. Also, industry and manufacturer trade shows are also good sources of information about the products and their maintenance.

What else can be done? Perhaps the best place to begin is the manufacturer’s customer service department. Manufacturer customer service representatives, distributors and territory representatives all employ technicians that are paid to assist with service calls from the field. As a starting point, this is an excellent repository of service, but also information about maintaining your specific interior laser tool, whether rotating or stationary.

Lastly, don’t forget to check the details of your laser’s warranty. The documentation will outline what services are provided and expenses covered within the lifetime of the contract. Also keep in mind that some manufacturers offer a warranty as part of the purchase, while other manufacturers sell the warranty as an add-on service. For example, one manufacturer we spoke with includes a full-service two-year warranty for each of its interior aligning and leveling laser products. This is a critical variable affecting the tool’s total cost.

**one final measure**

Leveling and aligning lasers have been in use on the job site and have remained relatively unchanged since the early 1970s. Contractors, whether through policy or practice, have come to rely on their own cleaning and maintenance methods in managing the costs and maintaining the life of the tool.

As the lasers have remained relatively unchanged, so too have the methods of
caring for them. What about those lasers we mentioned earlier, the tools with the original diodes still being used today? It’s evident that cleaning the lighthouse every day or being careful climbing up and down ladders won’t summarily prevent accidents from happening.

The key to maintaining a laser’s life is really the conscious practice of due care and meticulousness that results from the combination of the above practices. Regardless of usage, the primary means of maintaining the life of the interior laser is the exercise of greater diligence and responsibilities. Successfully protecting the tool from the hazards of the job site suggests that it is the result of human personality rather than any particular policy or practice.

Hopefully this review of these commonly practiced methods will help to provide a renewed understanding of what steps to take to extend the life of interior aligning and leveling laser tools. The final analysis for general contractors is managing the balance between immediate and long term operating costs of maintenance against the benefits of accurate measurements, reduced downtime and other opportunity costs that impact the cost equation. In the end, it’s the focus on the big picture that will make the difference in impacting the life of the laser.

About the Author
S. David Kilmetz is a principal in Kilmetz & Company, a management consultancy providing strategic management and marketing services to Fortune 1000 companies in the technology industries. Kilmetz received his bachelor’s degree with honors, his MBA in general management and has done postgraduate work at Templeton College, Oxford.