



Load Break: Beyond Pulls, Embracing a Holistic Approach to Tool Service

Load Break tools have long been equipped with mechanical counters to track the number of operations, commonly known as "counts" or "pulls." While some utilities use the counter to assist in determining a tool's service requirements, it is crucial to recognize its limitations. Relying solely on pull counts does not provide a comprehensive understanding of a tool's overall health, and should not be the sole basis for determining service needs. The counter's readings can be deceptive, as there are a number of factors that impact the condition of a tool beyond the number of pulls. Factors such as storage conditions, temperature and humidity cycling, the amperage pulled, system voltage, and the type of switching operations performed all contribute to the condition of a tool. Furthermore, using the tool as directed per the Field Inspection Guide, the tool should be cycled and reset prior to each use—which over time, will result in over-reported counts. Neglecting these factors while relying solely on pull counts can lead to faulty servicing decisions and potential safety hazards.

Counters

Despite their limitations, counters may provide a useful indication of mechanical fatigue. Spring action is the basis of operation for all load break tools on the market, consequently, the coil pack begins to degrade over time. In general, this degradation begins when the number of pulls approaches 1500-2000. However, due to the specialized nature of these tools, it is very rare for a tool to remain in service long enough to reach those numbers.

Due to the counters inherent limitations, and in an effort to mitigate confusion regarding its use, we have discontinued equipping it on the standard models (USLR-FLEX-1, USLR-FLEX-2). However, recognizing that some utilities may still find value in pull counts for their specific requirements, we offer the option of including a counter by adding a "-C" designation to the models (USLR-FLEX-1-C, USLR-FLEX-2-C). In both models, a 2-year inspection reminder sticker is now standard.

Load Break Service

To ensure the safe and effective servicing of load break tools, a holistic approach is necessary. Simply put, utilities should consider **time** as a more reliable metric. As part of this change, we recommend a 2-year inspection cycle for all load break tools. However, there are instances in which heavy use—such as in troubleshooting work—where shorter inspection cycles may be necessary. In general, most utilities are familiar with time-based service intervals, such as with rubber blanket & glove testing, stick testing, and more.

Imagine a scenario where a tool has only been used a dozen or fewer times, but has been stored outside of its case in the back of a bucket truck for a year. Despite the low pull count, the tool may have incurred damage and be in need of repair. Relying solely on pull count, one may conclude the tool does not require service. However, by using the inspection reminder sticker and considering the passage of time as well as the other contributing factors, utilities can more effectively identify service requirements and ensure safe and functional tools are available when linemen need them.

Conclusion

Load break tool service should move beyond a singular focus on pull counts. By adopting a holistic approach that considers factors such as storage conditions, load types, amperage, and time, utilities can ensure the safety and longevity of their load break tools, reducing the risk of unforeseen events and enhancing overall operational efficiency. Utilities should always use caution and discretion when determining if and when additional inspection is required. Lastly, routine inspection and continuity testing is recommended in between all inspection cycles. Refer to the Field Inspection Guide and / or Operation Manual for more information and the proper procedures for conducting tool inspections and continuity testing.