Case Study: DaimlerChrysler
Leica T-Probe Saves Time, Improves Accuracies

It keeps going and going and going—even if the immediate association with this slogan brings us to a different product, it applies to the Mercedes Sprinter just as well, it now in its eleventh year of production at the DaimlerChrysler AG Dusseldorf plant. The Sprinter success story is phenomenal: while most vehicles become obsolete toward the end of their production run and the number of produced vehicles slowly dwindles, the king of vans on the European market proves the opposite, writing its own success story. Now in its last production year, the current model delivers an exceptionally good showing. Never before did the numbers of sold vehicles in the last year of production top all the figures from previous years. In 1995, Sprinter’s first production year, 80,000 units left the assembly line. In 2005, the number had gone up to 150,000, amounting to more than 600 Sprinters each day. Over the past 11 years, a total of 1.3 million Sprinters have hit the streets. And now, the next-model Sprinter is about to start production.

Race for the next Sprinter: Spotlight on the LTD700 Leica Laser Tracker and Leica T-Probe tandem at DaimlerChrysler

- when it has to be right
A Tailor-Made Job

The only fact even more impressive than the sheer number of vehicles produced is the unbelievable variety of available individual models. This will apply to the next generation Sprinter as well: soon due to roll off the assembly line: unlike with “ordinary” cars that usually come in four or five varieties, the Sprinter has 30 different versions just in respect to wheelbase, load capacity and the height of the platform. And this does not include different limited-production models, which bring the number of different Sprinter variants to over a thousand. These versions may differ in door height, cargo area size and shape, the roofline may be differently formed, and so on. If one keeps in mind that these “minor differences” apply to both passenger and cargo versions of the van, one can easily imagine how the number of vehicles produced is the same time achieving better quality, precision... Money and precision...

According to him, the greatest benefit of relying on the “Walk-Around” Leica T-Probe is that it substantially increases the application field of a Leica Laser Tracker. Out-of-sight or hidden points with depth of up to 500mm (1ft 7in) can be inspected. Without the Leica T-Probe, the tracker would have to be repeatedly repositioned in order to account for all undercuts, which is extremely time-intensive. “In comparison to previous measurement techniques, we are cutting the time required for interior measurements roughly in half while at the same time achieving better accuracy. In this case, time is not only money, it also has a direct correlation to precision,” continues Gueney, adding: “Mercedes customers are extremely demanding.”

Simon Moser, a Sales Manager for the Metrology Division of Leica Geosystems from Munich, shows typical Bavarian pride in hearing so much praise: “It’s to be expected,” explains the manager frankly, “that Mercedes would place such a high value on measurement machines.” And wonders jokingly if the car maker is as perfectly happy as they claim. “Basically, yes,” laughs Gueney away, “However, a pocket-sized Leica Laser Tracker would be nice.”

The Leica T-Probe allows for a comparison of hidden points to the CAD data in the Holos NT software

The compatibility issue was a very important factor in the selection process for DaimlerChrysler because a direct, non-sense connection to the Holos NT measurement software used throughout the company was easy to implement. When it comes to flexibility, the LTD700 Leica Laser Tracker, with its measurement volume of 14 meters (45ft), was the measurement system of choice thanks to its ability to inspect the 10-meter (32ft) long Sprinter in one go. If the tracker is used with a corner cube reflector (CCR), the measurement volume increases to full 25m (82ft). In addition, the system can be expanded using the Leica T-Scan, a hand-held contactless scanner that enables laminar collection of data. “This is definitely a technology that we would like to use in the future when checking vehicle surface quality,” proclaims Gueney with enthusiasm.

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