

Case Study

Ventura Manufacturing Slashes 20% Tie Mount Failure & Cuts Rework Using HellermannTyton Special Materials Tie Mount

Ventura Manufacturing is a global, West Michigan-based manufacturer of automotive, furniture and moldable silicone components. A Tier 2 automotive supplier of wiring harnesses,



Ventura Manufacturing prides itself on delivering the highest quality components and achieving total customer satisfaction with all of its clients.

Challenge

Michigan is about 1,500 miles north of Mexico, so when it comes to climates, you wouldn't think there is much to compare. Until winter, when the relative humidity in both places is low enough to undermine the performance of cable tie mounts that are sensitive to environmental conditions.

Ventura Manufacturing, located in Zeeland, Michigan, provides a Tier 1 supplier with wiring harnesses used in transmission shifting mechanisms. The harnesses are assembled in the company's Arteaga, Mexico facility and shipped by truck to Zeeland, then on to their customer for installation.

"The ties became very brittle between when the package they were shipped in was opened to when the ties were installed by our customer," explained Paul Dobosz, who is a Product Development Engineer at Ventura. During the dry winter months, the cable ties became fragile. The "branches" of the fir tree section of the mount would break when the ties were pushed into the mounting bracket. "Approximately fifteen to twenty percent of the ties were breaking. This became the number one quality defect in that plant, and I'd estimate that the rework could easily result in at least twenty percent increase in labor costs."

Dobosz contacted the tie mount supplier to discuss the problem and then sent both broken and unbroken ties for failure analysis.



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After three months, the company confirmed that the material (Nylon 66) was unable to tolerate the changing conditions and suggested that Ventura adjust their process by shipping the harnesses in sealed containers or adding something to the shipment that would increase the humidity. Furthermore, the supplier was unable to offer a solution that would tolerate the changing environmental conditions.

Solution

Nylon 66 is suitable for many wire management products and in fact had been specified by Ventura's customer. Although the plant quality engineer wasn't blaming Ventura for the issue, Dobrosz "knew that if I was in that person's shoes, being the number one problem every day would be very uncomfortable, especially in a situation with no obvious solution being offered."

He began researching all the vendors in wire management, a process that included visiting the HellermannTyton booth at the Wire Processing Technology Expo in Milwaukee. He explained the situation and was later contacted by the area sales manager, who then visited the Zeeland facilities.



In that meeting, they went over a variety of special materials tie mounts. In addition, they discussed alternative ways of fastening, to further improve the reliability of the solution, and followed up with samples that Ventura could test. "He gave me a lot of options to discuss with my customer, got me the samples I needed very quickly and responded to any questions that I had," Dobrosz said.

The solution? A HellermannTyton T50RSF 8" Push Mount Tie with materials added to the PA 66 base that enhance its performance to better tolerate impact and, of course, low-humidity environments.

Result

Dobrosz put the proposed tie mount to the test under real-world conditions. "We sent them to our OEM to try out and they verified that the new ties performed much, much better than the pure Nylon 66 part."

Dobrosz sums up his experience: "People took a genuine interest. And with my previous supplier, I had to keep beating on them for a response. I got the feeling that I was really bothering them.

I'd recommend HellermannTyton to others in my industry. I have a lot of experience. You get to know who can do it and who can't."

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More

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