



## **ENGINEERED MATERIALS & LEADING INDUSTRIAL DISTRIBUTOR WORK TOGETHER TO CREATE A NO-MESS GASKETING SOLUTION THAT REDUCED ASSEMBLY TIME AND COSTS**

With 3,200 in-market locations and nearly a million products available, Fastenal is one of the leading distributors of industrial and construction products. As more than a supplier, Fastenal partners with their customers, acting as consultants to help ues, helping them find better solutions for their customers.

### **THE PROBLEM**

#### ***Caulk Adhesives Create a Slow and Messy Assembly Process***

This client had a customer that was using a silicone caulk adhesive to bond fender washers to a joint on their aerial lift trucks. A strong bonding solution was needed to reinforce the joint and create a seal against moisture—which the silicone adhesive provided—but the application of the caulk was slow, uneven, labor intensive, and messy.

They reached out to Engineered Materials looking for an improved bonding and gasketing solution that would allow their customer to reduce assembly, inspection, and cleanup times and increase production output.

### **THE SOLUTION**

#### ***Finding the Right Pressure Sensitive Adhesive Tape***

After thorough analysis and testing, the Engineered Materials team designed and created a custom neoprene gasket that was pre-applied to the customer's initial washer, making the part quick and easy to apply during assembly.

Engineered Materials worked with the client to select the right type of rubber, cut it to size, and apply a pressure sensitive adhesive to it so that it could be bonded with the washer. This resulted in a customized part that the end customer could use instead of the silicone caulk that was slowing down their assembly process.



## **PSA TAPES**

### ***PSA Tapes Have Many Advantages Over Liquid and Caulk Adhesives***

- ✓ PSA tapes are ready to use and can be applied quickly (just peel and stick)
- ✓ PSA tapes can be evenly applied and accurately (no bare spots!)
- ✓ PSA tapes can be die cut and customized (into any shape and size)
- ✓ PSA tapes maintain viscoelasticity (they won't become brittle)
- ✓ PSA tapes have less odor (no off-gassing)
- ✓ PSA tapes can be bonded to a variety of different substrates (even different substrates)
- ✓ PSA tapes can act as gap fillers and insulation (thicker foam tapes can act as gaskets and seals)

## **THE RESULTS**

### ***Faster Assembly is a Win for Everyone***

Using PSA tape over the original caulk adhesive resulted in quicker assembly, less mess, and no uneven application of adhesives. The part even allowed for a tighter, more consistent seal that improved the overall quality of the product.

The client earned the loyalty of their customer and increased the per unit price and number of parts sold. The customer saved money by reducing their assembly and inspection times. It was a win for everyone.

"EMI has been phenomenal to work with. They are fast, incredibly knowledgeable, and never fail to understand our customers' needs. We trialed a single size of the part they designed and immediately expanded to seven custom sizes. We can always count on them to knock it out of the park. We'd have to turn away customers if it weren't for their deep knowledge of all things bonding, sealing, gasketing, and fabrication!"

**-Client Representative**