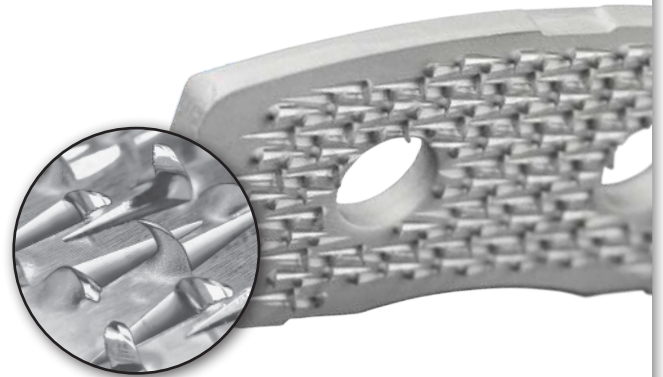


## NUCAP NRS® FRICTION RETENTION SYSTEM PROVIDES MORE SECURE FRICTION ATTACHMENT THAN TRADITIONAL ADHESIVE DEPENDANT INTEGRAL MOLDING (IM) PROCESSES.

At NUCAP, enhancing brake system safety is a primary goal for our product development and innovation department. The NUCAP NRS® (NUCAP Retention System) is a product innovation that allows friction manufacturing facilities to reduce hazardous materials, energy consumption and noise related warranties, but most importantly enhances brake system safety over traditional

adhesive based IM processes. Through the use of our GM and SCC certified R&D center we ran a series of shear tests to illustrate the levels of friction retention you can achieve with NRS® as opposed to IM. NUCAP would like to take this opportunity to share these findings with the industry to raise awareness of the benefits of adding the NRS® attachment system to your product line.



### Friction to Plate Attachment Test

NUCAP employs a Link calibrated shear test station where we measure the load required to shear the friction from the backing plate. Once a shear event has occurred we can then evaluate the type of failure where the friction material separates from itself (Lining Failure) or the type where the bond of the plate and friction material fails (Bond Failure). **When we see a Bond Failure on a brand new pad, as shown below, there are potential noise and safety issues as this bond will deteriorate as the pad experiences real world heat cycles and corrosion.**





## NRS WITHOUT ADHESIVE

Lining Failure  
94.1% retention



## IM BOND WITH ADHESIVE

Bond Failure  
25.5% retention



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Learn more at  
[www.nucap.com](http://www.nucap.com)

