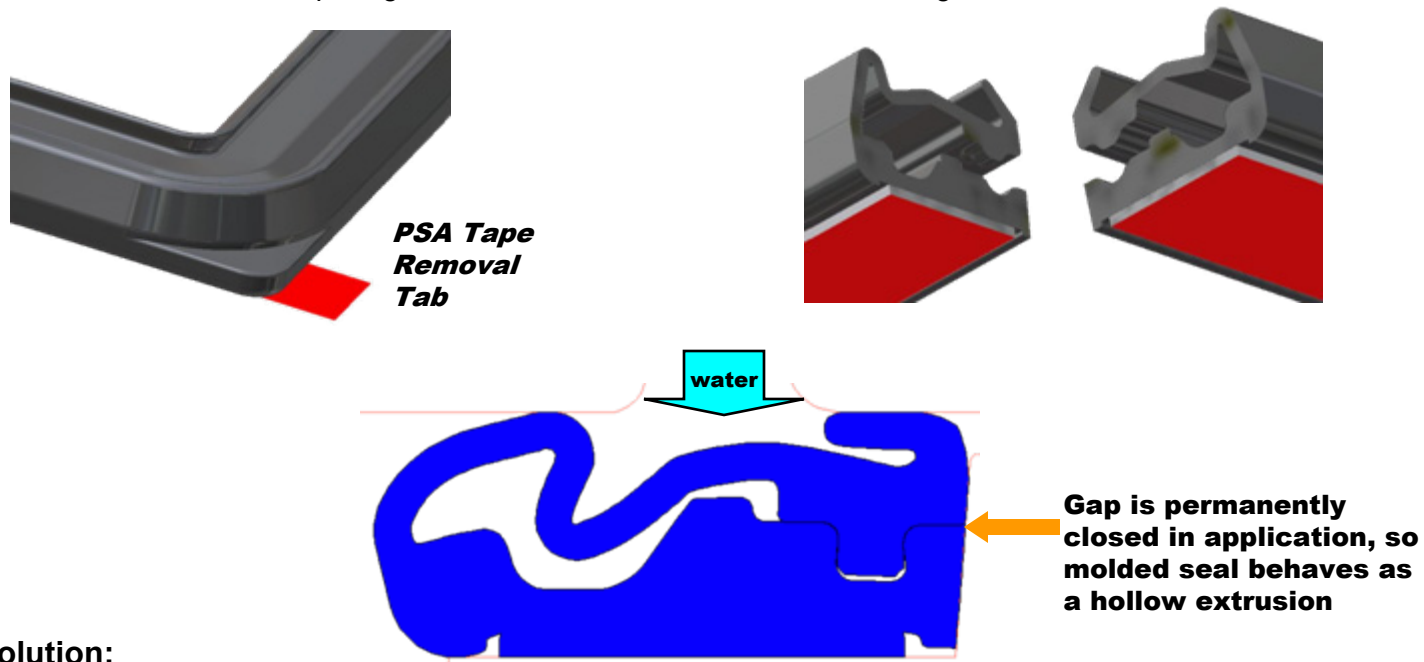


## Application:

Light truck sliding rear window seal

## Problem:

Seals for light truck sliding rear windows permit leakage at spliced corners, requiring water management in vehicle sheet metal and interior designs. One window manufacturer decided to break this paradigm and design a leak-free window. Requirements for low closure forces and large gap tolerances dictated the use of a hollow seal, but corner splicing was too inconsistent to meet a zero leak goal.



## Solution:

Parker Engineered Seals Division designed a hollow molded seal without the need for corner splices. A small opening is closed during assembly, allowing the hollow profile to be manufactured in a traditional rubber molding operation. Finite element analysis (FEA) was used extensively to ensure that the seal would work under each of twenty-eight different tolerance stackup situations. Low closure load and high water intrusion standards were met including direct water hose and pressure washer tests. Internal seal geometry was configured to support the sealing function under wash conditions. Finally, seal shape was optimized to reduce the effects of snow or ice on window operation.

Parker ESD offered additional value by supplying the seal with a permanent low-friction coating on sliding contact surfaces and pressure sensitive adhesive (PSA) backed tape for customer assembly to the window frame.

## Similar Applications:

Hollow seals are used in diverse applications including industrial enclosures, automobiles, aircraft & mass transit, food & beverage handling, missile casings, windows and doors. They offer low load, low pressure sealing and accommodate large variations in seal gap but require joints or splices at corners. Parker Engineered Seals Division can offer custom designed, one piece seals when a spliced joint isn't good enough. For help with your application, call the number below and ask to speak with a Product Engineer.