



GENERAL MOTORS AVOIDS THE DELAY OF 30,000 VEHICLES WITH HELP FROM BASF FORWARD AM, HP, AMT POSTPRO, AND GKN ADDITIVE'S PROVEN END-TO-END SOLUTION FOR BRIDGE PRODUCTION

SUMMARY

In September 2021 General Motors decided to add a spoiler closeout seal to some of its 2022 full-size SUV passenger vehicles to improve aerodynamics and increase fuel efficiency. However, this design change came late in the development process creating challenges. GM would need 60,000 parts manufactured quickly or risk delaying delivery of 30,000 vehicles to dealerships.

GM began evaluating options that would allow them to meet the delivery deadline while also replicating the design as closely as possible. The company's additive manufacturing team recommended HP's Multi Jet Fusion (MJF) technology, which yielded a 3D-printed sample comparable to its injection-molded counterpart in both function and appearance. After receiving multiple quotes, GM selected GKN Additive (Forecast 3D), which provided GM with 3D-printed parts in the past — either directly or through a tier one supplier. GM then sought out two additional

key suppliers: BASF Forward AM providing the thermoplastic polyurethane powder, Ultrasint® TPU01, and AMT PostPro vapor smoothing providing the necessary pristine finish. The GKN Additive (Forecast 3D) team was prepared to dedicate significant resources to print 60,000 parts and thereby meet GM's deadline.

BENEFITS OF AMT POSTPRO

For this application, maintaining the ability to repeat the process and achieve a cohesive result each time was of utmost importance. General Motors produces mass amounts of vehicles and the standard for this mass production is for all parts to look, feel, and perform the same. Not only does AMT Post Vapor Smoothing allow process repeatability, but it also delivers parts that are durable, resist liquid absorption, and are aesthetically accurate. AMT is proud to have collaborated on this innovational project for General Motors with GKN Additive Forecast 3D, BASF Forward AM and HP.

