

BMW CO-OP HIGHLIGHTS



ROLLER TOOL DESIGN

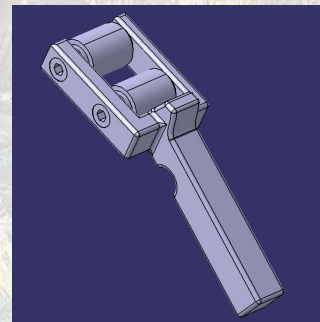
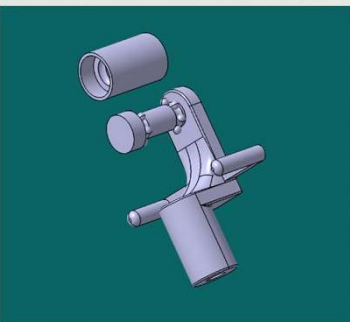
Tasked with creating a tool for installing the door edge protector seal.

Built prototype from available materials to prove concept.

Designed tool in Catia V5 and drew technical sketches to have tool 3D printed.

Produced final design from CNC machine.

Tool is projected to save \$100,000/year in production time and improve the installation process's ergonomics greatly.

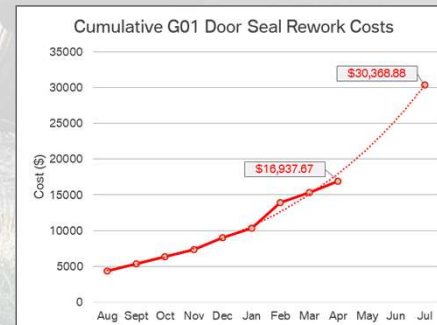
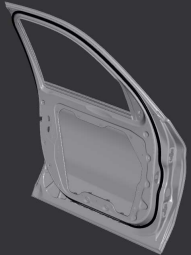


DOOR SEAL AUTOMATED OPTIMIZATION

Tasked with performing a feasibility study for the creation of an automated system that optimizes door dust-seal placement to prevent door closing speed issues, wind noise, and water leaks.

Performed experiments to verify relationships between poor seal placement and defects, evaluated current rework costs due to the problems identified, and developed a plan to monitor/react to these problems.

Concluded that adjusting door seal placement based on door closing speed, wind noise, and water leak data trends would not be an effective way to address the root cause behind door closing speed issues. Proposed improving the accuracy and precision of the seal robot instead of implementing an automated system.



ANALYSIS PROJECTS & HANDS-ON WORK

Analysis Projects

Diagnosed cause of:

- Trunk floor squeaking
- Gap above rear bumper
- Reading Light Gap
- Headliner to seatbelt cover gap

Assembly Line

Installed Partition walls, connected wire harnesses

Part Modification

- Added material to headlight bracket to shift Y position of headlight.
- Added and removed material from hatch badge to rotate its position.
- Filed down plastic support from kidney grill camera clips to make camera easier to install.
- Filed down sides of roof trim-strip clips to shift Z position of the roof rails down.