Team 2, Non-Drip Valve System
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BACKGROUND
Berry Plastics is a closure producing company. Berry desires to produce competitive non-drip closures for condiments and other fluid products.

PROJECT GOAL
To re-design and improve the performance of the non-drip valve system currently used in the prototyped plastic caps manufactured by Berry Plastics.

TOP WANTS
Leak proof – no drip when the bottle is inverted
Ease of use – minimize required dispensing force
Cleanliness – minimize residue on cap
Combine these wants to make system as good as or better than the competitor’s cap system.

FLUID FLOW THROUGH VALVE
Present Berry Plastics with all data and modified cap drawings. Suggest further examination with changing the valve/retainer if cap does not meet marketing wants.

CONSTRUCTION
Not able to modify valve. Aim to change the cap, then the retainer if necessary. Berry Plastics only specializes in making the cap. The valve and retainer system is outsourced.

HANDOFF

TESTING / VERIFICATION

• All benchmarks, concepts, and the final concept went through quantitative force testing with this apparatus.
• The drip test was qualitative. The bottle was held upside down and shook. If it dripped, it failed.
• The cleanliness test was qualitative. Ketchup was dispensed from the cap with normal usage, if dispensing left ketchup outside the system then the result was; cap failed.