JOHN DEERE LIGHTENING SERIES GARDEN TRACTORS PROJECT

Entered by: Bemis Manufacturing. Co.

Molder	**Designer**
Bemis Manufacturing. Co. 300 Mill Street, Sheboygan Falls, WI 53085	Brooks Stevens Design Grafton, WI
Moldmaker	**Original Equipment Manufacturer (OEM)**
Delta Tooling Co/Delta Mold Inc. 9415 Stockport Place, Charlotte, NC 28273	N/A

Entry Description

Borrowing somewhat from the automotive industry's platform approach the JD consumer Group has taken thirty-five molded components to produce 20+ distinct models in 4 series for 2 separate brand names on two chassis. These thirty-five parts make up the primary visual differences while adding structural features as well.

Why is this Part Innovative?

As with other projects of this scope, it is not surprising to know that many of the parts are found on multiple models. Consequently, most parts have to fit either aesthetically or functionally with a number of mating parts despite material and color differences (and the associated shrink/expansion differentials). Given the form, fit and functional requirements and targeted costs, the ASA/SAN/PC alloy developed for the hood would not have been cost effective nor would it have met impact criteria. The use of ABS as the core material solved the impact problem. Early on during material evaluations it was discovered that the alloy could not fill out the part without the aid of the ABS core material providing a much-needed boost. Consequently, the alloy used in the hood is believed to only be moldable as a co-injection material. The alloy itself was custom developed for the application because it imparted the necessary requirements for the product that no single existing cost appropriate resin could meet. Those requirements include color stability, gloss retention, low hazing, thermal deflection and impact resistance mentioned earlier.