International Newsroom

Designing Trucks that Drivers Want to Drive

By Chris Ito, Director, Industrial Design

While Navistar is committed to customer Uptime, it's not enough to build trucks that stay on the road. Instead, we're determined to build trucks that drivers want to drive. That's the philosophy we call "DriverFirst"; and one important way we put it into action is the discipline of industrial design.

Customers may not realize Navistar designers choose virtually every visual and tactile element of the truck, both exterior and interior. Whenever a driver gets a first look at the vehicle, or steps into the cab, we want everything to look natural and right. People may not notice when everything is in harmony, but they absolutely will notice when things are not in harmony, such as part-to-part color or grain discontinuity on interior components. That's why we put so much emphasis on every detail.

Color Choice Impact to Our Products

With trucks, the most identifying element of our products, besides the shape of the cab, is the interior and exterior color selection. Colors can affect the emotional response and perception of the product by our customers. Colors can visually communicate customers' visual identity and technology leadership, as demonstrated by the "Electric Blue" applied to the International® eMV, which recently debuted at the 2019 North American Commercial Vehicle (NACV) show in Atlanta. While white dominates the on-highway customer preference, Navistar offers customers thousands of color options.

One of the most exciting and memorable colors we've created is "Sunrise Orange," which we unveiled at the first NACV exhibition in 2017. The impact was greater than we anticipated: one of our major customers liked the color so much, they changed their corporate truck colors to match it.

Interior Colors Aid Driver Productivity

Inside the cab, strategically selected colors and their positions have a big impact on our customers' "user experience." Lighter colors create a perception of larger space, while darker colors tend to hide scuff marks and soiling. When the top of the instrument panel is darker, it reduces reflections into the windshield. This is an important safety consideration for our customers, many of whom drive their trucks 100,000 miles a year.

Contrasting colors make instruments easier to read. All the colors on the instrument panel need to be considered together,

using a concept we refer to as “illumination harmony.” This includes factors like the luminosity scale or the color of the light, the use of white lettering, and even the use of a consistent font on different switches.

Designing from the Driver’s Point of View

We also work with a multitude of suppliers to achieve visual harmony across all the components – everything from door handles to color display screens, switches on the instrument panels and steering wheel, and HVAC registers, just to name a few.

We design all the visual graphic elements on our displays used in the instrument panel cluster. All the elements shown on the displays, including primary and secondary pressures, temperature, options for cruise control and other safety systems, are developed to provide visually appealing displays that capture ergonomic and HMI requirements. Even when adjacent components are manufactured by multiple suppliers, we want everything to look as though it came from the same company, and was designed with the driver’s point of view in mind.

The positioning of knobs, switches and other features the driver needs to reach should also feel intuitive, or in other words, positioned comfortably for the driver’s position. That’s why we use “driver clinics” to identify the most favored locations for radio, HVAC and other switches. We have had participating drivers move components to their preferred spot on a simulated instrument panel. Our ergonomics and engineering teams validate these positions. That’s probably one reason our Product Marketing team has received positive feedback on the instrument panel, telling us not to change anything.

Creating a Personalized Workspace

We also seek to offer drivers more opportunities to personalize their workspace. This reflects drivers’ increasing role as logistics professionals who are responsible for managing the use of trucking assets.

Here I personally take inspiration from my brother, who took over our Dad’s farm. On his tractor, he has a flat place where he keeps steno pads, a pen, a two-way, a cell phone and five coffee cups. Real-life examples like this inspired us to add a flat, horizontal trough on the instrument panel where drivers can place their items of choice, including pens, sunglasses, or personal devices such as their phone, creating an easy-to-reach useable storage space.

The console between the two front seats has also been shaped by driver clinic input. Instead of the previous console, which incorporated three cupholders, long-haul drivers actually prefer a pared-down version that offers two cupholders, permitting easier access to the sleeper portion of the cab. This console design also includes a storage bin in front of the cupholders where drivers can place their smartphones or other similarly sized items.

Helping drivers with all the facets of their jobs will continue to be a major focus for truck designers. Advanced technologies such as automation, connectivity and eMobility will make drivers’ work safer, more comfortable and more productive. Navistar Industrial Design will work to take full advantage of those advances, using visual harmony, functional integration and the driver’s point of view.

Photo caption: The interior of the International® LT® Series of on-highway vehicles illustrates the concept of “illumination harmony” that makes the instrument panel easier to read.

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