A brand new look for Ontario's snow plows and salters

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This fall and winter, drivers will notice some MTO plows and salt trucks (on King's Highways) have new warning lights and signs designed to increase visibility and make them more consistent in appearance. The new standard was developed after in-house testing and industry consultation. Back before winter maintenance was out-sourced in the mid-80's, MTO's yellow and black snow removal equipment had its own "brand identity". Today, on the King's Highway system, 100% of winter maintenance in Ontario is done by contractors. As a result, snow plows have taken on many different appearances and it was sometimes difficult for motorists to identify and appropriately respond to snow removal equipment. MTO's winter maintenance contractors also raised concerns about visibility and requested the ability to use new and brighter LED lighting systems.

Research determined that LED lights are most effective because they produce the greatest visibility. While a strobe can get a driver's attention quickly, they were found to be less effective than LED lights because they don't enable motorists to identify the source of the light effectively. The tests also demonstrated that the best conspicuity (checkerboard) panel on the rear of the truck is a pattern using fluorescent yellow-green and black.

MTO's research determined that the checkerboard conspicuity panel should be augmented with blue and amber LED lights in an "H" pattern to convey the height and width of the vehicle, with the upper arms including stop/turn signals, and culminating in blue and amber beacons. Research showed that blue is the most conspicuous colour both day and night, and needs the least intensity, thereby reducing glare for motorists. Research also showed a combination of colours is more effective than a single colour warning light.

The study also recommended that the existing roof lighting on snow removal vehicles be replaced with an amber and blue LED light bar. Rear lighting effectiveness was determined to be best when the amber lights remain continuously illuminated, while the blue lights flash at a rate of one flash per second). This slower rate of flashing subconsciously indicates to motorists that the vehicle is moving slowly and avoids any potential issues associated with higher flash rates or strobes.

At night, an ambient light sensor on the trucks will reduce the light output by 35% to reduce glare while still alerting motorists. In addition, MTO's research found that an air foil on the rear of the truck can help prevent snow, slush, and salt from building up on the rear lights and checkerboard panel. These air foils are used in Alberta and are now included as part of the new standards.

It will take some time (up to two years in some areas of the province) before all the trucks are converted to the new standard.

Ontario's "new look" plow trucks and salters feature a fluorescent yellow/green & black checkerboard panel, outlined with blue & amber LED lighting

An air foil above the checkerboard panel is designed to divert air flow downwards across the panel and LED lights to reduce snow and salt accumulation.