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ARTICLE

New Guidelines From Transport Canada On Automated Vehicle Testing

In June of 2018, Transport Canada released a report on automated vehicle testing, Testing Highly Automated Vehicles in Canada: Guidelines for Trial Organizations (the “Report”). The Report establishes a set of national “minimum safety requirements” to manage the conduct of trials of Highly Automated Vehicles ("HAVs"),1 also known as Automated Driving Systems ("ADS"), on public roads in Canada. The Report comes on the heels of the halting and resumption of automated vehicle testing following the March 2018 pedestrian fatality in Tempe, Arizona, by some trial organizations.

Highlights of the Report

The Report sets out pre-testing, testing, and post-testing guidelines. The pre-testing guidelines relate to regulatory compliance and safety requirements. The testing and post-testing guidelines relate to driver training, incident reporting, and information sharing on best practices, trial outcomes, and emerging technologies to government authorities. Highlights of these new guidelines are set out below.

Pre-Testing Guidelines: Regulatory compliance and safety requirements

The pre-testing guidelines detail federal and provincial/territorial compliance obligations with respect to vehicle importation, registration, driver licensing, insurance, road safety rules, and certification and licensing requirements of incorporated wireless technologies. These guidelines also include general and specific “safety requirements.”

The “general safety requirements” focus on trial organizations ensuring that “all trial vehicles have undergone sufficient testing in a closed course (e.g. closed roads, parking lots, or test tracks), on-road in another jurisdiction, and/or through other validation mechanisms (i.e. computer simulations) prior to commencing a trial on public roads.” The Report also outlines that tests should consider the “various environmental, road, and traffic conditions that can reasonably be expected to be encountered” during testing on public roads.

The specific safety requirements are centered on the ADS and recommend that all trial vehicles have a data recording device recording technical information about the status and operation of the ADS. The data collected by such a device may be producible, on request, to government authorities for the purpose of conducting incident/collision investigations and other road safety issues. The presence of warnings and seamless transitions between automated and non-automated modes of driving are central to the ADS safety guidelines in relation to trials conducted with or without a driver present (level four or five automation).

Notably, the pre-testing guidelines indicate that organizations may be called to “declare that they have given due consideration, and where necessary, incorporated appropriated measures, protocols, and equipment redundancies” to address safety requirements related to the ADS, software/hardware updates, weather related testing considerations, driver training, and cybersecurity risks.

Absent specific directions or communication plans by the provincial/territorial jurisdictions to notify the public of trials on public roads, trial organizations may be requested to label and/or develop a communication plan to inform the public and road users of trials. Trial organizations may also be asked to notify other relevant public authorities, such as federal, provincial, and municipal officials, as to the dates and locations of any tests to ensure that they can respond in case of an emergency.

Testing Guidelines: Driver Training and Incident Reporting

Trial organizations must ensure that trial and remote drivers have the appropriate training to safely operate trial vehicles at all times. The testing guidelines also require that all drivers carry the appropriate driver's license even if the vehicle is operated without ADS or is remotely operated. The Report specifically highlights that trial and remote drivers understand the ADS's limitations and capabilities so to be able to intervene and resume operation of the vehicle, if necessary. Trial organizations are encouraged to keep records of driving training and background checks as these records may be producible, on request, to provincial and territorial transport agencies.

The testing guidelines also deal with reporting and responding to "serious incidents" involving trial vehicles. The Report defines "serious incidents" as "any reportable collision involving a trial vehicle", "a contravention of a traffic law that compromises safety, such as unsafely exceeding the speed limit or a red light violation or, a scenario where safety is otherwise compromised". Under these guidelines, trial organizations may be called to provide a preliminary report to government authorities within 24 hours of a collision causing bodily injury or death. As well, trial organizations may be called to provide reports on unplanned disengagements of the ADS to the relevant government authorities.

Post-Testing Guidelines: Sharing of Best Practices and Policy Development

The post-testing guidelines call for information sharing of best practices around trial outcomes. Transport Canada encourages trial organizations to share lessons observed in the conduct of trials and provide feedback to government authorities regarding regulatory and permit requirements. The Report hints that trial organizations may be required by provincial/territorial transport agencies to provide an end-of-trial report. In turn, provincial/territorial transport agencies are encouraged to share these reports with Transport Canada to assist with informing future policies related to ADS testing and deployment.

Comment

While voluntary, trial organizations are "expected" to follow these guidelines when conducting trials in Canada. These guidelines, however, neither displace nor should be prioritized over the provincial and territorial laws and regulations with respect to automated vehicle testing and related approval requests.

That said, this Report may signal that some or all of the guidelines may be enforced in the long term through legislative changes or be supplemented by additional guidance from provincial/territorial transport authorities who have jurisdiction to do so. In the interim, the federal regulator has stepped in to fill a gap and create a national approach to testing automated vehicles in public roads in Canada.

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