LIN LLC

Mobility Legal Updates

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LIN's Mobility Team continuously monitors the latest news, legislative updates, and regulatory trends in the automotive industry to regularly issue news letters to our clients.

As the autonomous driving industry enters the commercialization phase centered on driverless operations, regulatory frameworks are being established to ensure safety. The United Nations Economic Commission for Europe (UNECE) has adopted the world's first international safety standards for fully automated driving systems, and the South Korean government has also established guidelines for safe operation of driverless autonomous vehicles ahead of their domestic legalization. This newsletter introduces: △ UNECE's Adoption of World's First International Safety Standards for Fully Automated Driving Systems (ADS), and △ Ministry of Land, Infrastructure and Transport (MOLIT) Guidelines for Safe Operation of Driverless Autonomous Vehicles.

UNECE Adopts World's First International Safety Standards for Automated Driving Systems (ADS)

Harmonization of International Safety Requirements and Verification Methods for Level 4 Autonomous Driving

On June 24, 2026, the UNECE adopted the world's first international safety standards

for automated driving systems (ADS) at the World Forum for Harmonization of Vehicle Regulations (WP.29) held in Geneva, Switzerland. Developed with the participation of major jurisdictions including the United States, China, the European Union, Japan, and the United Kingdom, these standards are the first international regulations to unify the safety requirements and verification methods for driverless autonomous vehicles operating without human intervention. Rather than establishing a new treaty, the UNECE incorporated identical provisions into a UN Regulation (UNR)[1] and a Global Technical Regulation (GTR)[2]. These standards are expected to enter into force as early as the beginning of 2027.

Previously, international standards for autonomous driving had not progressed beyond those governing Level 3 Automated Lane Keeping Systems (ALKS, UN Regulation No. 157), which operate under limited conditions (e.g., on highways) and presuppose driver supervision. Because Level 3 is predicated on the driver's readiness to intervene at any time, reaching an international agreement was relatively easy; however, Level 4 driverless operations—where no driver is on board and the system must independently secure a safe state during emergencies—involve high verification complexity, preventing the establishment of unified standards. As a result, driverless operations have been regulated by individual countries through temporary operation permits or special regulatory exemption for demonstration, burdening companies with redundantly verifying differing requirements across various markets. These new standards mark an international turning point for the commercialization of autonomous driving, as they alleviate such regulatory fragmentation and provide a common methodology for verifying the safety of driverless autonomous vehicles.

The most notable feature of these standards is the adoption of a process-oriented regulatory approach. Rather than prescribing individual technical specifications, the

[1] An international standard adopted under the 1958 Agreement concerning the mutual recognition of type approvals. Upon adoption and application of these standards by Contracting Parties (e.g., the EU, South Korea, Japan), type approvals are mutually recognized among them.
[2] An international standard established under the 1998 Agreement, which aims to globally harmonize technical regulations without mutual recognition procedures. This regulation does not provide for the mutual recognition and is implemented by individual jurisdictions (including the U.S. and China) through their respective domestic legislation.

framework requires manufacturers to independently prove the safety of their autonomous driving systems and continuously manage that process. Manufacturers are subject to the following requirements:

Category	Key Content
Safety Management System (SMS)	Establishment of an SMS encompassing the entire ADS lifecycle, subject to audits
Safety Case	Provision of structured documentary evidence demonstrating that the ADS is free from unreasonable risks to safety
Testing and Validation	Validation of ADS performance within test environments that meet credibility criteria
Post-Deployment Safety Management	Continuous monitoring of system performance post-deployment and reporting of operational outcomes (In-Service Monitoring and Reporting, ISMR)
Data Recording	Equipping the vehicle with Event Data Recorder (EDR) and Data Storage System (DSS)

In addition, this standard establishes a performance principle for automated driving systems (ADS), requiring a level of safety at least equal to or greater than that of a "competent and careful human driver." By presenting the first international baseline for assessing the safety of driverless vehicles, it is likely to serve as a key reference not only for future type-approval reviews across jurisdictions, but also in proceedings concerning system defects in the event of an accident.

This process-oriented regulatory approach is also significant from a vehicle design perspective. While traditional safety standards were designed around human-operated controls such as steering wheels and pedals—leaving driverless-dedicated vehicles subject to individual exemptions across various jurisdictions—this standard requires the demonstration of safety regardless of the presence of human-operated controls, thereby opening an international pathway for driverless-dedicated vehicles to achieve formal certification.

For domestic companies with high export volumes of autonomous vehicles and related parts and software, these standards present an opportunity to realign their market-specific regulatory compliance strategies around international standards, while also acting as a new evidentiary burden. While establishing an SMS and documenting a safety case requires considerable preparation time, the resulting system and documentation are likely to serve as a critical evidentiary basis in future foreign type-approval, accident investigations, and liability disputes. Complete vehicle manufacturers must reflect the verification frameworks and documentation requirements mandated by international standards into their designs from the early development stages. Similarly, software and component suppliers need to proactively revise their contracts with automakers regarding the scope of safety evidence provision and risk allocation, as regulatory obligations on manufacturers cascade down the supply chain.

Ministry of Land, Infrastructure and Transport Establishes Guidelines for Temporary Operation Permits of Autonomous Vehicles

Establishing Specific Requirements for Driverless Operations through Temporary Operation Permit Guidelines

On July 7, 2026, the Ministry of Land, Infrastructure and Transport (MOLIT) established the "Guidelines for Temporary Operation Permits of Autonomous Vehicles," outlining the requirements driverless autonomous vehicles must meet to operate safely on roads.

These guidelines preemptively specify the requirements for companies to safely develop and demonstrate Level 4 driverless autonomous technology even before the UNECE's ADS international standards are institutionalized into domestic law. Under

the proviso of Article 27, paragraph 1 of the current Motor Vehicle Management Act[3], autonomous vehicles may only operate on roads with a temporary operation permit restricted to testing and research purposes. However, because the existing system was designed on the premise of a test driver on board, requirements for Level 4 driverless operations without any onboard drivers had not been established.

The guidelines require a minimum test mileage of 15,000 km for temporary operation of driverless autonomous vehicles, along with a standard limiting control transition requests by the test driver to no more than once per 160 km. To alleviate industry burdens, vehicles sharing the same autonomous driving system and specifications that have accumulated at least 3,000 km of driving may aggregate mileage across up to five vehicles, enabling system-level rather than individual-vehicle validation. Furthermore, the guidelines mandate the integration of redundant autonomous driving systems, emergency stop mechanisms for passengers, and emergency braking functions that operate independently from the main system. Considering the absence of a driver, the guidelines also require real-time monitoring via remote control, two-way communication devices between the control center and the vehicle, and a response system that safely brings the vehicle to a Minimum Risk Condition (MRC)—stopping securely upon system failure or Operational Design Domain (ODD) exit—before relocating to a safety zone. Because these guidelines partially reflect the terminology and safety concepts of the UNECE international standards, they represent an effort to secure preliminary consistency between international norms and domestic testing regimes.

MOLIT also plans to draft amendments to the Motor Vehicle Management Act within

[3] Motor Vehicle Management Act Article 27 (Permission for temporary operation) (1) A person who intends to operate a motor vehicle temporarily without filing for registration of it shall obtain permission to temporarily operate the motor vehicle from the Minister of Land, Infrastructure and Transport or the Mayor/Do Governor, as prescribed by Presidential Decree; provided, a person who intends to operate an autonomous vehicle for the purposes of testing or research shall satisfy the requirements for safe operation as prescribed by Decree of the Minister of Land, Infrastructure and Transport, in connection with the objects to be permitted, the devices for detecting and warning malfunction, devices for disabling various functions, areas for operating in and other matters the driver is to comply with; and shall obtain temporary operation permission from the Minister of Land, Infrastructure and Transport.

the year to reflect the detailed provisions of the ADS international standards. The requirements in these guidelines will apply as prerequisites for companies applying for temporary operation permits for driverless autonomous vehicles and are expected to serve as the foundation for formal safety standards upon future revisions of the same Act. Accordingly, autonomous driving enterprises preparing for driverless testing must proactively align their driving data accumulation and management systems, remote monitoring infrastructure, and emergency response protocols with the requirements of the guidelines. Demonstration records secured during the early stages of regulatory settlement are expected to become valuable assets in future official certification and commercialization phases.

LIN LLC boasts extensive advisory and litigation experience within the mobility sector, ranging from administrative regulatory compliance to high-stakes patent and trade secret disputes. Our Mobility Team is comprised of dedicated attorneys and industry experts driven by a unique passion for the automotive sector.

Should you require further details regarding this newsletter or have any other inquiries, please do not hesitate to contact the **LIN Mobility team**:

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