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The Rulemaking Topics of the Russian Federation  
for Automated (Level 3 & 4) and Autonomous (Level 5) Vehicles

Note: The table below contains the list of regulatory topics for automated and autonomous vehicles proposed by the Russian Federation in alphabetic order. The right column of the table reflects the status of activities at the UNECE level.

| **Regulatory Topic** | **Comments** | **Status at UNECE** |
| --- | --- | --- |
| Adaptive Cruise-Control | Should cover: (i) at high speed; (ii) at traffic jams; (iii) speed limit road sign recognition; (iv) motion on steep climbs and descents | IWG ACSF current activity |
| Automatic Emergency Braking | Should cover: (i) moving vehicles; (ii) stationary vehicles; (iii) pedestrians; (iv) two-wheelers; (v) large animals(?) | Already regulated - UN R 131  (M2, M3, N2, N3).  IWG AEBS current activity  (M1, N1) |
| Autonomous vehicles operating in specific conditions (out of the scope R.E.3 and S.R.1) | Off-road mining dump trucks, vehicles for extreme Arctic and Antarctic conditions, extreme hot desert conditions, vehicles for radioactive contamination zones, rescue operations in severe fire conditions, etc. | New topic |
| Axle load monitoring system | Providing information to a diver regarding axle overloading. This information also may be communicated to the transportation inspection. | New topic  (N, О3, О4) |
| Blind spot monitoring at high speed | Providing information to a diver (on the rear-view mirror) in case of detection of objects in the blind-spot areas | New topic |
| Blind spot monitoring at maneuvering at low speed | Providing information to a diver in case of detection of objects (vulnerable road users) in the blind-spot areas | IWG VRU-Proxi current activity |
| Cyber security | Protection of vehicles against unauthorized interference in the operation of the software | IWG CS-OTA current activity |
| Drawback alerting system | Providing information to a diver in case of detection of objects at intersections in case of crossing traffic (when a vehicle goes straight, also applicable in case of reversing) and counter traffic (when a vehicle makes left turn). May involve V2V communication technology | New topic |
| Driver availability recognition | Should cover monitoring of driver's fatigue on the basis of the driver's psycho-emotional state (fatigue, drowsiness, irritability, drug or alcohol intoxication) and its control actions (frequency and amplitude of steering inputs, accelerator and brake pedal effects) | IWG ACSF current activity |
| Event Data Recorder (EDR) | The recorded parameters should allow to restore the picture of a road accident as accurate as possible | GRSG planned activity |
| General safety requirements for vehicles with a high level of automation | Ensuring the safety of design and performance of vehicles with a high level of automation | IWG Auto Veh current activity |
| Night vision | Providing recognition of traffic participants and road infrastructure at night time and warning the driver | New topic |
| Platooning | Automatic movement of commercial vehicles following the lead vehicle driven by a human driver. May involve V2V communication technology | New topic |
| Recognition of alcohol vapors in driver's exhaled air | Preventing engine start and vehicle control by a drunk driver | New topic |
| Requirements for testing prototypes of vehicles with a high level of automation on public roads | Ensuring the safety of testing prototypes of vehicles with a high level of automation on public roads | IWG Auto Veh current activity |
| Roadworthiness of vehicles with a high level of automation | Ensuring the safety of vehicles with a high level of automation at operation | Should be covered by IWG Auto Veh current activity |
| Traffic signal and road sign (including wrong way) recognition | Providing information to a diver regarding upcoming traffic signals and road signs. May include the gestures of the traffic controller and recognition of alerting signals of special vehicles (police, ambulance). May involve V2I communication technology | Partly covered by IWG ACSF activity |
| Tyre pressure monitoring system | Providing information to a diver regarding low tyre pressure. | Already regulated - UN R 141 (M1)  New topic  (M2, M3, N1,N2, N3, О3, О4) |
| Vehicle automatic identification | Remote monitoring of vehicle motion and operation parameters | New topic |
| Vehicle dangerous condition alerting system | Detection of excessive concentration of harmful substances in the air of vehicle cabin, dangerous misaligned wheels and hubs, dangerous wear of the tyre cord, dangerous wear of the suspension and steering, dangerous road surface irregularities | New topic |
| Vehicle parking assistance system | Alerting a driver in case of emergency rapprochement with objects when parking a vehicle | Partly covered by IWG ACSF activity |
| Vehicle to vehicle (V2V) and vehicle to infrastructure (V2I) communications | Providing for communications between vehicles and between vehicles and infrastructure | New topic |
| Vulnerable road user safety messages | Transmission of personal safety messages from devices carried by pedestrians, bicycle riders and public safety personnel, to provide driver and vehicle system awareness and potentially safety alerts to vulnerable road users | New topic |