

Act amending the Road Traffic Act and the Compulsory Insurance Act – Act on Autonomous Driving¹

of 12 July 2021

The German Bundestag, with the consent of the Bundesrat, has passed the following Act:

Article 1

The Road Traffic Act, in the version promulgated on 5 March 2003 (Federal Law Gazette I pp. 310, 919), as amended by Article 2 of the Act of 12 July 2021 (Federal Law Gazette I, p. 3091), is amended as follows:

1. After section 1c, the following sections 1d to 1l are inserted:

“Section 1d Motor vehicles with autonomous driving functions in determined operational areas

- (1) For the purposes of this Act, “motor vehicle with autonomous driving functions” means a motor vehicle that
1. is able to autonomously perform the driving task in a determined operational area without the involvement of a driver; and
 2. is fitted with the technical equipment referred to in section 1e(2).
- (2) For the purposes of this Act, “determined operational area” means the geographically and spatially delimited public road environment in which a motor vehicle with autonomous driving functions is permitted to operate if the requirements set out in section 1e(1) are met.
- (3) For the purposes of this Act, “technical oversight of a motor vehicle with autonomous driving functions” means the natural person who can deactivate the motor vehicle during

¹ Notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (OJ L 241, 17 September 2015, p. 1).

operation as described in section 1e(2)(8) and decide whether to permit driving manoeuvres as described in section 1e(2)(4) and section 1e(3).

- (4) For the purposes of this Act, “minimal risk condition” means the condition in which the motor vehicle with autonomous driving functions, on its own initiative or on the initiative of the technical oversight, brings itself to a standstill at the safest position possible and activates the hazard warning lights, in order to guarantee maximum safety for vehicle occupants, other road users and third parties, while taking account of the traffic situation in an appropriate manner.

Section 1e Operation of motor vehicles with autonomous driving functions; objections and actions for rescission

- (1) The operation of a motor vehicle using autonomous driving functions shall be permitted if
1. the motor vehicle meets the technical requirements set out in subsection 2;
 2. an operating permit has been granted for the motor vehicle in accordance with subsection 4;
 3. the motor vehicle is operated in a determined operational area approved by the authority responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, by the company under private law within the meaning of the Infrastructure Company Establishment Act; and
 4. the motor vehicle is approved for use on public roads as referred to in section 1(1).
- This shall be without prejudice to the operation of a motor vehicle referred to in section 1h and the registration in all other respects referred to in section 1(1).
- (2) Motor vehicles with autonomous driving functions shall be fitted with technical equipment that is able to
1. autonomously perform the driving task within the respective determined operational area without the involvement of a driver in the vehicle control and without the permanent supervision of the operation of the motor vehicle by the technical oversight;
 2. autonomously comply with the traffic rules and regulations concerning the control of the vehicle, and that includes an accident prevention system that
 - a) is designed to prevent and reduce damage;

- b) in the case of unavoidable alternative damage to different objects of legal protection takes account of the importance of the objects of legal protection, with the protection of human life enjoying top priority; and
 - c) in the case of unavoidable alternative endangerment of human life does not provide for further differentiation based on personal features;
3. autonomously place the motor vehicle in a minimal risk condition if the journey can only be continued by infringing road traffic law;
 4. in the case of paragraph 3 autonomously
 - a) suggest possible driving manoeuvres to the technical oversight for continuation of the journey; and
 - b) provide data for an assessment of the situation to enable the technical oversight to decide whether to permit the suggested driving manoeuvre;
 5. review a driving manoeuvre ordered by the technical oversight and decide not to execute it but autonomously place the motor vehicle in a minimal risk condition if the driving manoeuvre would endanger road users or third parties;
 6. immediately report an impairment of its functions to the technical oversight;
 7. recognize its system limits and autonomously place the motor vehicle in a minimal risk condition when a system limit is reached, a technical error occurs that affects the performance of the autonomous driving functions or the limits of the determined operational areas are reached;
 8. be deactivated at any time by the technical oversight or by vehicle occupants and, in the case of a deactivation, autonomously place the motor vehicle in the minimal risk condition;
 9. indicate the necessity to permit an alternative driving manoeuvre or to deactivate the autonomous driving functions with a sufficient time buffer as well as signals on the status of its functions by visible, audible or otherwise perceivable signals to the technical oversight; and
 10. ensure sufficiently stable radiocommunications protected from unlawful interference, in particular to the technical oversight, and autonomously place the motor vehicle in a minimal risk condition in the case of an interruption of or illegal access to these radiocommunications.
- (3) To meet the requirements set out in subsection 2(1) to (4), it shall also suffice, in the case of other impairments resulting in an inability of the technical equipment to autonomously perform the driving task, if

1. the technical equipment is able to ensure that alternative driving manoeuvres can be specified by the technical oversight;
 2. the alternative driving manoeuvres referred to in paragraph 1 are autonomously performed by the technical equipment; and
 3. the technical equipment is able to request the technical oversight with a sufficient time buffer by visible, audible or otherwise perceivable signals to specify a driving manoeuvre.
- (4) If the technical requirements set out in subsection 2 are met and the declaration by the manufacturer referred to in section 1f(3)(4) is submitted, the Federal Motor Transport Authority shall, upon request by the manufacturer, grant an operating permit for a motor vehicle with autonomous driving functions. Ongoing approval procedures, the contents of which are covered by section 1(d) to (g) and for which an application for issuance of an operating permit including an exemption has already been filed, shall remain unaffected.
- (5) Objections to and action to rescind the revocation or withdrawal of an operating permit for a motor vehicle with autonomous driving functions shall have no suspensory effect.
- (6) Objections to and action to rescind the revocation or withdrawal of an approval of a determined operational area shall have no suspensory effect.

**Section 1f Obligations of the persons involved during the operation of motor vehicles
with autonomous driving functions**

- (1) The keeper of a motor vehicle with autonomous driving functions shall be obliged to ensure the road safety and environmental sustainability of the motor vehicle and make the necessary arrangements in this respect. He/she has to
1. ensure the periodic maintenance of the systems required for the autonomous driving functions;
 2. make arrangements to ensure that the other relevant traffic rules and regulations that do not concern the control of the vehicle are complied with; and
 3. ensure that the tasks of the technical oversight are performed.
- (2) The technical oversight of a motor vehicle with autonomous driving functions shall be obliged to
1. assess an alternative driving manoeuvre as described in section 1e(2)(4) and 1e(3) and activate the motor vehicle accordingly as soon as the vehicle system suggests such a manoeuvre by visible, audible or otherwise perceivable signals, the data pro-

- vided by the vehicle system enable an assessment of the situation and the performance of the alternative driving manoeuvre does not jeopardize road safety;
2. immediately deactivate the autonomous driving functions as soon as the vehicle system indicates this by visible, audible or otherwise perceivable signals;
 3. assess signals from the technical equipment on the status of its functions and, if appropriate, initiate measures necessary to ensure road safety; and
 4. immediately establish contact with the occupants of the motor vehicle and initiate the measures necessary to ensure road safety when the motor vehicle is placed in the minimal risk condition.
- (3) The manufacturer of a motor vehicle with autonomous driving functions shall
1. demonstrate to the Federal Motor Transport Authority and the competent authority over the entire period of development and operation of the motor vehicle that the electronic and electrical architecture of the motor vehicle and the electronic and electrical architecture associated with the motor vehicle is secured against attacks;
 2. carry out a risk assessment for the motor vehicle and demonstrate to the Federal Motor Transport Authority and the competent authority how the risk assessment has been carried out and that critical elements of the motor vehicle are protected against the risks identified during the risk assessment;
 3. demonstrate that the radiocommunications used are sufficiently secure for autonomous driving;
 4. for every motor vehicle, complete a system description, prepare an operating manual and state in a binding manner to the Federal Motor Transport Authority and in the operating manual that the motor vehicle meets the requirements set out in section 1e(2), including in conjunction with subsection 3;
 5. offer to the persons involved in the operation of the motor vehicle a training course on the technical method of operation, in particular of the driving functions and the performance of the tasks of the technical oversight; and
 6. immediately notify the Federal Motor Transport Authority and the authority responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act, and initiate the necessary steps as soon as the manufacturer identifies manipulations of the motor vehicle or its electronic or electric architecture or of the electronic and electric architec-

ture associated with the motor vehicle, in particular in the case of illegal access to the motor vehicle's radiocommunications.

Section 1g Data processing

- (1) The keeper of a motor vehicle with autonomous driving functions shall be obliged to store the following data during the operation of the motor vehicle:
1. vehicle identification number;
 2. position data;
 3. number of times the autonomous driving functions were used, activated and deactivated as well as the corresponding times;
 4. number and times of permitted alternative driving manoeuvres;
 5. system monitoring data including data on the software status;
 6. environmental and weather conditions;
 7. connectivity parameters such as latency and available bandwidth;
 8. name of the activated and deactivated passive and active safety systems, data on the status of these safety systems as well as the entity that triggered the safety system;
 9. vehicle acceleration in the longitudinal and transverse direction;
 10. speed;
 11. status of the lighting equipment;
 12. voltage supply of the motor vehicles with autonomous driving functions;
 13. external commands and information sent to the motor vehicle.

The keeper shall be obliged to transmit, upon request, to the Federal Motor Transport Authority and the authority responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act, the data referred to in the first sentence, to the extent that this is necessary

1. for the discharge of functions by the Federal Motor Transport Authority as referred to in subsections 4 and 5; and
 2. for the discharge of functions referred to in subsection 6 by the authority responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act.
- (2) The data referred to in subsection 1 shall be stored in the case of:
1. interventions by the technical oversight;

2. conflict scenarios, in particular accidents and near-miss scenarios;
 3. unexpected change of lane or swerve-to-avoid manoeuvre;
 4. operational disruptions.
- (3) The manufacturer of a motor vehicle with autonomous driving functions shall equip the vehicle in such a way that the keeper is actually able to store the data referred to in subsections 1 and 2. The manufacturer must inform the keeper in a precise and clear way using easy-to-understand language about privacy and data processing settings for data processed during the operation of the motor vehicle using autonomous driving functions. The motor vehicle's software used to that effect must provide several options for how to store and transmit the data processed during the operation of the autonomous driving functions and enable the keeper to make the corresponding settings.
- (4) The Federal Motor Transport Authority shall be authorized to collect, store and use the following data, to the extent that this is necessary for the purpose of monitoring the safe operation of the motor vehicle using autonomous driving functions:
1. data referred to in subsection 1; and
 2. first name and surname of the person exercising technical oversight as well as proof of his/her professional qualifications.

If the keeper employs staff to perform the technical oversight task in accordance with section 26 of the Federal Data Protection Act, section 26 of the Federal Data Protection Act shall apply. The Federal Motor Transport Authority shall immediately erase these data as soon as they are no longer required for the purposes stated in the first sentence, at the latest three years after the end of operation of the motor vehicle concerned.

- (5) Unless the motor vehicle concerned is covered by section 1k, the Federal Motor Transport Authority shall be entitled to make accessible the data collected from the keeper in accordance with subsection 4(1) in conjunction with subsection 1, with the exception of personal data, for traffic-related common good objectives, in particular for the purpose of scientific research in the field of digitalization, automatization and connectivity as well as for the purpose of road traffic accident research, to the following bodies:
1. institutions of higher education and universities;
 2. non-university research institutions;
 3. Federal Government, federal state and local government authorities performing research, developmental, transport planning or urban planning tasks.

The bodies referred to in the first sentence must not use the data for purposes other than those referred to in the first sentence. The second sentence of subsection 4 shall apply accordingly. General transmission requirements shall remain unaffected.

- (6) The authorities responsible under federal or federal state law for the approval of determined operational areas, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act, shall be entitled to collect from the keeper, store and use the following data, to the extent that this is necessary to verify and monitor whether the determined operational area is suitable for the operation of the motor vehicle with autonomous driving functions, in particular to verify and monitor whether the conditions for the respective approval are met and the obligations linked with it are complied with:
1. data referred to in subsection 1; and
 2. first name and surname of the person exercising technical oversight as well as proof of his/her professional qualifications.

The authorities responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act, for the approval of determined operational areas shall immediately erase these data as soon as they are no longer required for the purposes stated in the first sentence, at the latest three years after the end of operation of the motor vehicle concerned.

- (7) Without prejudice to subsections 1 to 6, third parties shall be entitled to obtain information from the keeper of the data stored in accordance with subsections 1 and 2, if these data are required to assert, satisfy or reject legal claims in conjunction with an incident that is regulated by section 7(1) and the corresponding motor vehicle with autonomous driving functions was involved in this incident. The third parties shall immediately erase the data as soon as they are no longer required to assert legal claims, at the latest upon limitation of the claims for which the data were collected in order to assert, satisfy or reject them. Use of these data by third parties shall only be permitted for the purposes referred to in the first sentence.

Section 1h Subsequent activation of automated and autonomous driving functions

- (1) If automated or autonomous driving functions that are not described in international provisions applicable within the scope of this Act are installed in a motor vehicle, the issuance of an approval for the operation of this motor vehicle in accordance with the relevant approval rules, disregarding its automated or autonomous driving functions, shall only be permitted if it can be ruled out that the deactivated automated or autonomous driving functions will interfere with the approved systems.
- (2) The activation of an automated or autonomous driving function within the meaning of subsection 1 in a motor vehicle approved for the operation of these functions on public roads within the scope of this Act shall only be permitted on the basis of a special approval issued by the Federal Motor Transport Authority. This approval shall only be granted if the driving function is eligible for approval within the meaning of section 1a(3), section 1e(2) or other relevant approval rules. The Federal Motor Transport Authority shall publish the technical requirements that have to be complied with in this respect.

Section 1i Trialling of automated and autonomous driving functions

- (1) Motor vehicles serving the purpose of trialling developmental levels for the development of automated or autonomous driving functions may only be operated on public roads if
 1. an approval for trialling purposes has been issued for the motor vehicle by the Federal Motor Transport Authority in accordance with subsection 2;
 2. the motor vehicle has been registered in accordance with section 1(1);
 3. the motor vehicle is used solely for trialling; and
 4. the motor vehicle is permanently monitored during operation:
 - a) in the case of automated driving functions, by a driver competent in the field of technological developments for motor vehicle traffic;
 - b) in the case of autonomous driving functions, by a physically present technical oversight who is competent in the field of technological developments for motor vehicle traffic.
- (2) An approval for trialling purposes as referred to in subsection 1(1) shall be issued by the Federal Motor Transport Authority upon request by the keeper. The Federal Motor Transport Authority may at any time impose incidental provisions on the approval for trialling purposes in order to guarantee the safe operation of the vehicle. With regard to

incidental provisions limiting the operation to a certain operational area, the authority responsible under federal state law of the locally affected federal state shall be consulted. The company under private law within the meaning of the Infrastructure Company Establishment Act shall be consulted, if the operational area comprises or is to comprise federal motorways or federal highways under the administration of the Federal Government.

- (3) The Federal Motor Transport Authority shall involve the Federal Office for Information Security in questions of information security regarding the creation, implementation, evolution and appraisal of technical requirements.
- (4) The current road traffic law provisions shall continue to apply without changes up to six months after the entry into force of the rules of the statutory instrument adopted on the basis of section 1j(1)(7) to trialling, also for developmental levels of automated or autonomous driving functions, unless use is already made of the rules of the statutory instrument adopted on the basis of section 1j(1)(7).

Section 1j Authority to make statutory instruments

- (1) The Federal Ministry of Transport and Digital Infrastructure shall be authorized to regulate, by a statutory instrument requiring the consent of the Bundesrat, details on the approval for the entry into service and the operation of motor vehicles with autonomous driving functions on public roads as referred to in sections 1d to 1i, concerning:
 1. technical requirements and the procedure for the issuance of an operating permit as referred to in section 1e(2) to (4) by the Federal Motor Transport Authority, including
 - a) the technical requirements to be met by the manufacturer in terms of the construction, characteristics and technical equipment of the motor vehicle, the requirements to be met by the manufacturer in terms of data storage, the security of the information technology used and the functional safety of the motor vehicle, the requirements to be met by the manufacturer in terms of the declaration referred to in section 1f(3)(4) as well as the documentation obligations of the manufacturer;
 - b) the requirements in terms of the approval and validation of the motor vehicle by the Federal Motor Transport Authority;
 - c) the requirements in terms of the operation of the motor vehicle;
 - d) the requirements in terms of the assessment of the motor vehicle by the Federal Motor Transport Authority;

- e) the market surveillance including requirements in terms of the involvement of further authorities in the appraisal of the information security of motor vehicles and components as well as the regulation of cooperation obligations for manufacturers and keepers of motor vehicles with autonomous driving functions and
 - f) the recognition and appraisal of the equivalent effect of permits for and approvals of automated and autonomous motor vehicles issued in another Member State of the European Union on the basis of the national provisions applying in any given case;
2. the suitability of operational areas and the procedure for the appraisal and approval of determined operational areas by the authorities responsible under federal or federal state law, or on federal trunk roads, if they are under the administration of the Federal Government, the company under private law within the meaning of the Infrastructure Company Establishment Act,
 3. special features of the approval procedure, including the marking of the motor vehicles and vehicle components to make their modes of operation identifiable and guarantee road safety;
 4. requirements to be met by and obligations of the manufacturer, the keeper and the technical oversight to guarantee road safety and safe operation, including
 - a) the requirements in terms of the permission of driving manoeuvres and the deactivation of a motor vehicle by the technical oversight as referred to in section 1f(2)(1) and (2);
 - b) the technical and organizational requirements to be met by the keeper; and
 - c) the requirements in terms of the professional qualification and reliability of the persons involved in the operation of a motor vehicle with autonomous driving functions, including the certificates required for this;
 5. the technical details of the storage of the data generated during the operation of the motor vehicle using autonomous driving functions as referred to in section 1g(1), in particular on the exact point in time of the data storage processes, the parameters of the data categories and the data formats;
 6. the procedure for the issuance of an approval in the case of the subsequent activation of automated and autonomous driving functions referred to in section 1h, including technical requirements for the issuance of an operating permit;
 7. the requirements and the procedure for the issuance of an approval for trialling purposes as referred to in section 1i(2) by the Federal Motor Transport Authority, in-

cluding further obligations of the keeper, exemptions from the requirements of this Act for trialling purposes as well as the power of the Federal Motor Transport Authority to collect, store and use, in a depersonalized form, data necessary for the creation of a data base for the evaluation of road safety and the technological progress as well as for the evidence-based development of the regulation of developmental levels of automated or autonomous driving functions;

8. deviations from sections 1d to 1i with regard to motor vehicles belonging to the Federal Armed Forces, the Federal Police, the Federal Criminal Police Office, the Federal Intelligence Service, the Customs Criminological Office, the Federal Office for the Protection of the Constitution, the company under private law within the meaning of the Infrastructure Company Establishment Act, the federal state police, the federal state criminal police offices, the state offices for the protection of the constitution, the disaster control forces, the fire brigades, the emergency services and the highway authorities.
- (2) The Federal Ministry of Transport and Digital Infrastructure shall be authorized, by a statutory instrument not requiring the consent of the Bundesrat, to regulate exemptions from the statutory instrument for the trialling of new vehicle control systems laid down on the basis of subsection 1. It shall be authorized, by a statutory instrument not requiring the consent of the Bundesrat, to delegate the power to make statutory instruments to the Federal Motor Transport Authority.

Section 1k Exemptions

- (1) For motor vehicles with autonomous driving functions referred to in section 1d(1) that are intended for use by military forces, intelligence services or police forces, customs investigation services, disaster control forces, fire brigades, highway authorities or emergency services, the Federal Ministry of Finance, the Federal Ministry of the Interior, Building and Community, the Federal Ministry of Defence, the Federal Ministry of Transport and Digital Infrastructure, the Federal Chancellery and the authorities responsible under federal state law may designate their own executive agencies to perform the functions of the Federal Motor Transport Authority for the relevant government department; the Federal Ministry of Defence may designate agencies of the Federal Armed Forces to assume such functions.
- (2) Motor vehicles with autonomous driving functions that are used by the Federal Armed Forces, the Federal Police, the Federal Criminal Police Office, the Federal Intelligence

Service, the Federal Office for the Protection of the Constitution, the Customs Criminological Office, the company under private law within the meaning of the Infrastructure Company Establishment Act, the federal state police, the federal state criminal police offices, the state offices for the protection of the constitution, disaster control forces, fire brigades, emergency services or the highway authorities may deviate from the technical requirements, the rules for the determination of operational areas and the operational provisions as well as from the statutory instruments adopted in accordance with section 1j(1), provided that the motor vehicles are intended to be used for the performance of statutory functions, are constructed or fitted for these purposes and it is ensured that the motor vehicles are operated with due regard to public safety. Technical requirements, rules for the determination of operational areas and operational provisions shall apply accordingly to the extent that the respective purpose as referred to in subsection 1 so permits; deviations shall be limited to the scope that is absolutely necessary.

Section 11 Evaluation

The Federal Ministry of Transport and Digital Infrastructure shall evaluate, on a scientific basis and in a depersonalized form, the application of the provisions of the Act of 12 July 2021 (Federal Law Gazette I p. 3108) after the end of 2023, with a focus on the effects on the development of autonomous driving, the compatibility with data protection provisions as well as the lessons learned from trialling approvals within the meaning of section 1i(2) and inform the German Bundestag of the outcome of this evaluation. If required, the Federal Ministry of Transport and Digital Infrastructure shall repeat the evaluation at a date to be specified by it, at the latest in 2030.”

2. In section 8(1), the words “unless it is a motor vehicle with autonomous driving functions within the meaning of section 1d(1) and (2) that is operating in autonomous mode” shall be inserted after the words “if the accident was caused by a motor vehicle that can operate on level ground at a maximum speed of 20 kilometres per hour”.
3. In paragraphs 1 and 2 of the first sentence of section 12(1), the words “or from the operation of an autonomous driving function as described in section 1e” shall be inserted after the words “results from the use of a highly or fully automated driving function as described in section 1a”.

4. In the third sentence of section 19(1), the words “unless it is a motor vehicle with autonomous driving functions within the meaning of section 1d(1) and (2) that is operating in autonomous mode” shall be inserted after the words “The first and second sentence do not apply if the accident was caused by a trailer that, at the time of the accident, was connected to a motor vehicle that can operate on level ground with a maximum speed of 20 kilometres per hour”.

5. In section 24(1), the words “paragraphs 1, 2, 5 or 6 of section 1j(1)” shall be inserted after the words “of a statutory instrument in accordance with”.

Article 2

Amendment to the Compulsory Insurance Act

The following sentence shall be added to section 1 of the Compulsory Insurance Act of 5 April 1965 (Federal Law Gazette I, p. 213), last amended by Article 1 of the Regulations of 6 February 2017 (Federal Law Gazette. I p. 147):

“The keeper of a motor vehicle with autonomous driving functions within the meaning of section 1d of the Road Traffic Act shall be obliged to also take out and maintain third-party insurance pursuant to the first sentence for a person exercising technical oversight.”

Article 3

Entry into force

The Act shall enter into force on the day following its promulgation.

The above Act is hereby signed into law. It shall be promulgated in the Federal Law Gazette.

Berlin, 12 July 2021

The President of the Federal Republic of Germany

The Chancellor of the Federal Republic of Germany

Dr Angela Merkel

The Federal Minister of Transport and Digital Infrastructure

Andreas Scheuer