NATIONAL TECHNICAL REGULATION OF MOTOR VEHICLE STRUCTURE WITH REGARD TO THE PREVENTION OF FIRE RISKS

1. GENERAL PROVISIONS

1.1. Scope of adjustment

1.1.1. This Regulation prescribes the technical requirements and technical safety quality inspection for of motor vehicle structure with regard to the prevention of fire risks belonging to the categories of passenger cars, cargo automobiles (trucks), trailers and semi-trailers fitted tanks with liquid fuel (hereafter referred to as fuel tanks).

1.1.2. This Regulation does not apply to vehicles used for security, defense or other special purposes.

1.2. Subject of application

This Regulation applies for facilities producing, assembling and importing vehicles, facilities producing, importing fuel tanks and agencies, organizations and individuals involved in the testing, inspecting the Quality Certification of technical safety and environmental protection.

1.3. Interpretation of terms

In this Regulation, the terms below are construed as follows:

1.3.1. Vehicle type means the products of the same industrial owner, the same brand, design and specifications, manufactured in the same technological line. The vehicles do not differ on the following contents:

- The vehicle type;
- The vehicle band;
- The dimensions and mass of the vehicle itself (the deviation does not exceed the permissible error limits specified in the current regulations and standards
- The number of people it is allowed to carry;
- The shape, structure of the cabin, frame or body of the vehicle;
- The engine, transmission system;
- The type of fuel used;
- The structure, shape, dimensions and material of the tank;
- The position of the tank in the vehicle;
- The characteristics and siting of the fuel feed system (pump, filters, etc.) in the vehicle;
- The characteristics and siting of the electrical installation system in the vehicle.
- Braking system: Drive type, brake mechanism;
- Steering system: Type of steering mechanism;
- Suspension system: Suspension type, structure type of flexible parts;
- Movement system: Type of rigid axle;
- Special structure (if any).

1.3.2. Passenger compartment means the space for seating of the passengers in the vehicle, limited by roofs, ceilings, walls, doors, windows, front bulkheads and rear bulkhead surface or rear seat backrest of vehicle.

1.3.3. Fuel tank means containers designed for holding liquid fuel, used primarily for vehicle power.

1.3.4. Capacity of the fuel tank means volume of fuel tanks according to the regulation of the production facilities.

1.3.5. Liquid fuel means fuel at liquid state under normal temperature and pressure conditions.

1.3.6. Transverse plane means a vertical plane, perpendicular to the vertical median plane of the vehicle.

1.3.7. Unladen mass means the weight of a vehicle in running order, not carrying any passengers and goods but complete with fuel, coolant, lubricants, washer fluid, tools and spare wheel (if specified by the vehicle manufacturer).

1.3.8. Production, Import facility: Means an enterprise producing and importing components and enterprise producing, assembling and importing motor vehicles that meet all the conditions according to current regulations.

2. TECHNICAL PROVISIONS

2.1. Regulations for fuel tanks

2.1.1. General requirements for fuel tanks

2.1.1.1. Tanks must be made so as to be corrosion-resistant of fuel.

2.1.1.2. The fuel tanks are normally attached to all their accessories, the leakage tests carried out according to provisions in section 2.1.2 of this Regulation.

Fuel tanks made of a plastic material are considered suitable if they meet the provisions in section 2.1.3 of this Regulation.

2.1.1.3. Any excess pressure or any pressure exceeding the working pressure must be compensated automatically by suitable devices (vents, safety valves, etc.)

2.1.1.4. The vents must be designed so that the fuel vapor escapes from the hole must not be able to fly into the passenger compartment or high temperature places such as the engine, exhaust system. Especially when the fuel tank is filled up with fuel, the leakage fuel must not fall on the exhaust system but shall be channeled to the ground.

2.1.1.5. The tank(s) must not be situated in, or from, a surface (floor, wall, and bulkhead) of the passenger compartment or other compartment integral with it.

2.1.1.6. The fuel must not escape through the tank top or through the devices provided to compensate excess pressure when vehicle is operating.

2.1.1.6.1. The filler cap should be fixed to the filler tube.

The stipulations in section 2.1.1.6.1 of this Regulation will be deemed to be satisfied if provision is made to prevent excess evaporative emissions and fuel spillage caused by a missing fuel filler cap.

This may be achieved using one of the following:

- A fuel filler cap is automatically opened, closed and non-removable;

- Design features which avoid excess evaporative emissions and fuel spillage in the case of missing the fuel filler cap;

- Any other provision which has the same effect. Examples may include, but are not limited to, a tether filler cap, a chained filler cap or one utilizing the same locking key for the filler cap and for the vehicle's ignition. In this case, the key shall be removable from the filler cap only in the locked condition. However, the use of tethered or chained filler cap by itself is not sufficient for vehicles other than cars and trucks with a total mass not exceeding 3.5 tons.

2.1.1.6.2. The lock between the cap and the filler pipe must be retained securely in place. The cap must latch securely in place against the lock of filler pipe when closed.

2.1.1.7. The fuel tank(s) shall be made of a fire-resistant metallic material. The tanks may be made of plastic material in accordance with section 2.1.3 of this Regulation.

2.1.2. Requirement of the Tests for fuel tanks

The fuel tank must be tested according to Appendix A of this Regulation.

2.1.2.1. Requirement for leak testing by fluid

After testing in accordance with article A.1 in Appendix A of this Regulation, the fuel tank cover shall not be broken or leaked; however, tanks can be permanently deformed.

2.1.2. Requirement for leak when overturning

The rate-of leakage of the tank must not exceed 30g/min when tested in accordance with article A.2 in Appendix A of this Regulation.

2.1.3. Test for fuel tanks made of plastic

For fuel tanks made of plastic, outside of provisions in section 2.1.2, shall be tested in accordance with Appendix B of this Regulation

2.1.3.1. Collision resistance

After testing in accordance with section B.1 of Appendix B of this Regulation, the fuel tank must not leak.

2.1.3.2. Mechanical strength

After testing in accordance with section B.2 of Appendix B of this Regulation, the fuel tank and its accessories must not crack or leak; however, it may be permanently deformed.

2.1.3.3. Fuel permeability

When testing in accordance with section B.3.3 of Appendix B of this Regulation, the maximum permissible average loss of fuel is 20g per 24 hours of testing time.

When testing in accordance with section B.3.4 of Appendix B of this Regulation, The loss so measured shall not exceed 10g per 24 hours.

2.1.3.4. Resistance to fuel

After testing in accordance with section B.3 of Appendix B of this Regulation, the fuel tank must still meet the requirements in section 2.1.3.1 and 2.1.3.2 of this Regulation.

2.1.3.5. Resistance to fire

After testing in accordance with section B.4 of Appendix B of this Regulation, there must be no leakage of liquid fuel from the tank

2.1.3.6. Resistance to high temperature

After testing in accordance with section B.5 of Appendix B of this Regulation, the tank is not leaking or seriously deformed.

2.1.3.7. Markings on the fuel tank

The trade name or mark must be affixed to the tank; it must be indelible and clearly legible on the tank when the latter is installed on the vehicle.

2.2. General provisions on the installation of fuel systems on the vehicles

2.2.1. Fuel system installation components

2.2.1.1. Fuel tank must comply with the provisions in section 2.1 of this Regulation,

2.2.1.2. The components of the fuel installation shall be adequately protected by parts of the frame or bodywork against contact with possible obstacles on the ground. Such protection shall not be required if the components beneath the vehicle are further from the ground than the part of the frame or bodywork in front of them.

2.2.1.3. The pipes and all other parts of the fuel installation shall be accommodated on the vehicle at sites protected to the fullest possible extent. Twisting and bending movements, and vibrations of the vehicle's structure or drive unit, shall not subject the components of the fuel installation to friction, compression or any other abnormal stress.

2.2.1.4. The connections of pliable or flexible pipes with rigid parts of components of the fuel installation shall be so designed and constructed as to remain leak-proof under the various conditions of use of the vehicle, despite twisting and bending movements and despite vibrations of the vehicle's structure or drive unit.

2.2.1.5. If the filler hole is situated on the side of the vehicle, the filler cap shall not, when closed, project beyond the adjacent surfaces of the bodywork.

2.2.2. Electrical installation parts

2.2.2.1. Electric wires other than wires accommodated in hollow components shall be attached to the vehicle's structure or walls or partitions near which they lead. The points at which they pass through walls or partitions shall be satisfactorily protected to prevent cutting of the insulation.

2.2.2.2. The electrical installation shall be so designed, constructed and fitted that its components are able to resist the corrosion phenomena to which they are exposed.

2.2.3. A partition must be provided to separate the tank(s) from the occupant compartment. The partition may contain apertures (to accommodate cables) provided they are so arranged that fuel cannot flow freely from the tank(s) into the occupant compartment or other compartment integral with it during normal conditions of use.

2.2.4. Every tank must be securely fixed and so placed as to ensure that any fuel leaking from the tank or its accessories will escape to the ground and not into the occupant compartment during normal conditions of use. The installing position of fuel tank must be kept away from fire sources such as electric wires, exhaust pipes, in cases it must be mounted near by the exhaust pipes, must have shield bulkhead.

2.2.5. The filler hole must not be situated in the occupant compartment, in the luggage compartment or in the engine compartment.

2.2.6. Tanks must be installed in such a way as to be protected from the consequences of a collision to the front or the rear of the vehicle; there shall be no protruding parts, sharp edges, etc. near the tank.

2.2.7. The fuel tank and filler tube neck must be designed and installed in the vehicle to avoid static electricity on the entire surface of the tank. If there is charge on the surface of the tank, this charge must be released into the metal structure of the chassis or a large metal mass via a good conductor.

3. MANAGEMENT PROVISIONS

3.1. Testing, inspecting method

Vehicles and/or fuel tanks are produced and production, assemble or import facilities must be inspected and tested in accordance with regulations in the Circulars of the Minister of Communications and Transport: Circular No. 30/2011 / TT-BGTVT dated April 15, 2011 "*Regulations on the environment protection and technical safety quality inspection in motor vehicle production and assembly*" and Circular No. 31/2011 / TT –BGTVT dated April 15, 2011 "*Regulating the inspection of quality on technical safety and environment protection for imported motor vehicles*".

3.2. Technical documents and samples

When there is a need for testing, facilities producing, assembling, importing vehicles, facilities producing, importing fuel tanks must provide testing establishments with technical documents and samples as required in section 3.2.1 and 3.2.2 of this Regulation.

3.2.1. Technical document requirements

The technical document must contain the following information:

- A detailed description of the vehicle type according to the items specified in the article in which the numbers and/or symbols identifying the engine type and the vehicle type must be specified.

- Technical drawings of the fuel tank: drawing(s) showing the characteristics of the fuel tank and specifying the material from which it is made;

- A diagram of the entire fuel feed system and electrical system that determine their location and installation method on the vehicle.

- Location and installation method of fuel tank on the vehicle.

3.2.2. Sample requirements

The number of samples for each product type that requires testing includes:

- 02 fuel tanks with their accessories (in case of the fuel tanks are made of metal) for testing according to Appendix A of this Regulation; Or 07 fuel tanks and full accessories (in case to the fuel tanks are made of plastic material) for testing according to Appendix B of this Regulation.

- 01 complete vehicle for inspecting the installation of fuel system on vehicles according to section 2.2 of this Regulation.

3.3. Test reports

The test establishment must prepare a test result report containing the items specified in this Regulation corresponding to each fuel tank type and vehicle type is intended.

3.4. Apply provisions

In cases referred documents, literatures of this Regulation are changed, amended or replaced, the provisions of the new document shall be applied.

For the fuel tank types that have been tested, inspected according to section 3.1 and have had a suitable application file, must be issued a Test report according to section 3.3 of this Regulation.

4. IMPLEMENTATION ORGANIZATION

DỊCH THUẬT SMS
Dich thuật tiếng Anh | Dịch thuật tiếng Hoa | Dịch thuật tiếng Nhật
Dich thuật tiếng Hàn | Dịch thuật website | Dịch tài liệu kỹ thuật
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