This LAP analyses: • The classification of hydrogen vehicles for type approval purposes, • The applicable types of type approvals, • The responsible approval authorities, and • The differences in type approval process of hydrogen vehicles compared to conventional vehicles.

How is a hydrogen vehicle classified? (as an electric/gas/hydrogen vehicle?)
a - cars (incl. taxis)
   a - Hydrogen powered motor vehicle (79/2009)

b - buses
   a - Hydrogen powered motor vehicle (79/2009)

c - trolleybuses
   c - not known = t.b.d.

d - trucks
   a - Hydrogen powered motor vehicle (79/2009)

What type of type-approval is applicable?
a - EU

b - National

b - national

c - Individual

Which is the responsible approval authority? a) for the type approval i. cars (incl. taxis) ii. buses iii. trolleybuses iv. trucks b) for individual vehicle registration i. cars (incl. taxis) ii. buses iii. trolleybuses iv. trucks

a) for the type approval i. cars (incl. taxis) ii. buses iii. trolleybuses iv. trucks – Transport Ministry – Administrative Division: “safety & vehicle emissions” – local / regional representation: DRIEE/DREAL is competent for the approval (DREAL = Direction Régionale de l’Environnement de l’Aménagement et du Logement / “Regional Direction for Environment, Public Space and Housing” DRIEE = same as DREAL but only for the Region around Paris) The UTAC ( L’Union technique de l’automobile, du motorcycle et du cycle – “Technical Union for Automobile, Motorcycle and Cycle”), is the technical service designated by the national administration for the technical tests needed for the approval. b) for individual vehicle registration i. cars (incl. taxis) ii. buses iii. trolleybuses iv. trucks – Transport Ministry – Administrative Division: “safety & vehicle emissions” – local / regional representation: DRIEE/DREAL.

Is there a difference in the type approval process for a hydrogen vehicle compared to a conventional vehicle? a - cars (incl. taxis)

a - No

b - buses

b - no

c - trolleybuses

c - no

d - trucks If yes, please specify, e.g. how long does the procedure take and what are the costs to obtain a type approval?

d - no

Is it a barrier?: Np

Assessment: The LAP is important for the identification of applicable regulations and technical specifications for type approval
of hydrogen vehicles.

National Legislation

- Arrêté du 4 mai 2009 relatif à la réception des véhicules à moteur, de leurs remorques et des systèmes et équipements destinés à ces véhicules en application de la directive 2007/46/CE (French ordinance on the type approval of motor vehicles, trailers and systems and equipments for these vehicles in application of the EU Directive 2007/46/CE)
EU Legislation

  Directive 2007/46 establishes a framework for the type approval of motor vehicles classes M (passenger cars and busses), N (trucks), O (trailers), and of systems and components intended for such vehicles
  Specific technical requirements concerning the construction and functioning of vehicles is laid down in subsequent regulatory acts, the exhaustive list of which is set out in Annex IV.

  This Regulation shall apply to hydrogen–powered vehicles of categories M and N, as defined in Section A of Annex II to Directive 2007/46/EC, including impact protection and the electric safety of such vehicles.
  Regulation 79/2009 lays down fundamental provisions on requirements for the type–approval of motor vehicles with regard to hydrogen propulsion, for the type–approval of hydrogen components and hydrogen systems and for the installation of such components and systems.

  Regulation 406/2010 contains detailed technical specifications and test procedures, including, but not limited to:
  • Administrative provisions for EC type-approval of a vehicle with regard to hydrogen propulsion (Article 2)
  • Administrative provisions for EC component type-approval of hydrogen components and systems (Article 3)
  • Requirements for the installation of hydrogen components and systems designed to use liquid hydrogen on hydrogen powered vehicles
  • Requirements for hydrogen containers designed to use compressed (gaseous) hydrogen
  • Vehicle identification requirements

  Regulation 692 / 2008 contains inter alia general requirements for type-approval and other provisions related to the application for EC type-approval of a vehicle with regard to emissions and access to vehicle repair and maintenance information
  Regulation 630/2012 extends the scope of Regulation (EC) No 692/2008 to hydrogen fuel cell vehicle

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  In view of the increasing introduction of electronic and telematics equipment in vehicles, the Annexes to Directive 1999/37/EC should be adapted to scientific and technical progress to allow Member States to issue vehicle registration documents in microprocessor smart card format instead of paper documents.

  The registration of vehicles in EU, irrespective on the power train or type of fuel is partly regulated by Council Directive 1999/37/EC on the registration documents of vehicles, amended with Directive 2003/127/EC. Both directives are transposed in partner countries and for registration documents applies mutual recognition. Vehicle registration requirements and procedures are subject to the national law. registration under their national legislation.

  This Directive establishes minimum requirements for a regime of periodic roadworthiness tests of vehicles used on public roads. This applies to vehicles with a design speed exceeding 25 km/h of the following categories: M1, M2 and M3 (passenger motor vehicles, N1, N2 and N3 (motor vehicles for the carriage of goods, O3 and O4 (trailers over 3,5 tonnes) L (two or three wheels over 125cm3).


- **Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information**
Glossary

Type approval & Individual vehicle registration - Process

Type approval means the procedure whereby a EU Member State certifies that a type of vehicle, system, component or separate technical unit satisfies the relevant administrative provisions and technical requirements. Motor vehicle registration is the registration of a motor vehicle with a government authority. The purpose of motor vehicle registration is to establish a link between a vehicle and an owner or user of the vehicle. While almost all motor vehicles are uniquely identified by a vehicle identification number, only registered vehicles display a vehicle registration plate and carry a vehicle registration certificate. Council Directive 1999/37/ EC on the registration documents for vehicle/. Registration means the administrative authorisation for the entry into service in road traffic of a vehicle, involving the identification of the latter and the issuing to it of a serial number, to be known as the registration number.

Cars, buses, trucks

A hydrogen vehicle is a vehicle that uses hydrogen as its on board fuel for motive power. The power plants of such vehicles convert the chemical energy of hydrogen to mechanical energy either by burning hydrogen in an internal combustion engine, or by reacting hydrogen with oxygen in a fuel cell to run electric motors or to feed electrical batteries that drive the vehicle.