

Motor Vehicle Regulations and Approvals

Regulations and approval of
vehicles, systems, components
and separate technical units
intended for such vehicles

Training items

- Why to type-approve a vehicle or a component?
- Regulation context
- How to approve a vehicle ?
- Vehicle and component Regulations

Why a vehicle or component approval ?

To ensure and certify that a vehicle or a component:

- Brand new
- Or in service but deeply transformed
- Or without national registration

meets the Technical requirements of National and European regulations.

Whose benefits

The benefits of vehicle or component approval are:

- Road safety
- Health and environment protection
- Common internal market

Regulation context

- Europe (EU):
 - Since 1970, European regulation took into account each national regulation in order to obtain common rules.
 - This regulation is implemented in French law by « national transposition application law»
 - Compatibility with French « Code de la Route »

Type-approval principle

1. Define categories of vehicles or components to apply framework-directive (WVTA : Whole Vehicle Type Approval)
2. Select a technical service (laboratory) and approval authority.
3. Test or examine the vehicle or component
4. Present information folder (technical file)
5. Certification or quality assessment of manufacturing plant (annex 10 of EC/2007/46 Directive)
6. Manufacturer control plan verified by technical service
7. Test report
8. EU or ECE Type-Approval Certificate

Type-approval principle

9. Conformity of production assessment (conformity of tests results and conformity to type-approved type)
10. Study by approval authority and transversal folders
11. Vehicle Presentation to approval authority who checks some points on vehicle (entity approval marking for example)
12. Apply for the global vehicle information folder
13. Grant WVTA Certificate
14. WVTA Certificate Transmission to different approval authorities who inform local registration authorities to allow single vehicle registration
15. Follow up of the type-approval

Vehicle Type Approval

- For vehicles of categories M, N, O, the approval scheme is fully described in the relevant Framework directive (2007/46).
- These Framework directives stipulate:
 - List of regulatory acts to comply
 - The nature of the folder to structure
 - Type-approval process details to follow

Regulatory Acts type approval

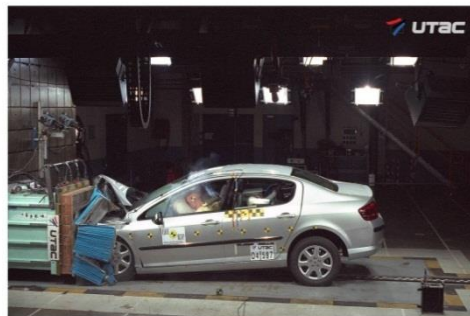
- The Framework directive, specifies the rules that components, systems or vehicle shall comply :
- For example :
 - tyres
 - braking system
 - engine power
 - windscreen ...

Whole Vehicle Type Approval (WVTA) is the sum of Regulatory Acts approvals.

Approval Tests

Systems, components, separate technical units and their installations are tested by a Technical Service (France : **UTAC**)

Active Safety



Passive Safety

Electromagnetic compatibility



Environment



And others...

Sound level



Regulatory Acts type approval

- There is 3 kinds of mandatory texts allowed for type-approval :

National regulation

EU regulation

(Brussels directive or regulation
e2*76/115*2005/41*XXXXX*XX)

UN-ECE regulation

(Geneva regulation E2 14R – 072439)

Regulatory Acts type approval

EU Regulation (Brussels) :

- Based on Rome Treaty
- Proposed by a member state to the Commission who, if agreed, constitutes a Working-Group (Motor-Vehicle Working Group- MVWG)
- Text is adopted by member states majority
- Then the Project is transmitted to Council for European Parliament approbation

Regulatory Acts type approval

EU Regulation (Brussels)

2 kind of texts :

➤ **EU Regulation :**

When approved, regulation is directly applicable to all members states.

This is a supranational law.

➤ **EU Directive :**

Less stringent than regulation, it is not imperative. Each member state must introduce national legal law in order to apply directive in its country.

UN Regulation

Geneva Regulation (UN-ECE)

ECE Regulations come from 1958 agreement to facilitate economical exchanges between signatory countries.

When a country adopt an ECE regulation, this regulation is recognized in the signatory country without national administrative procedure.

Generally, there is an equivalence between ECE regulations and EU directives.

Vehicle regulation

Geneva regulation (UN-ECE)

6 working groups :

- GRPE : Emissions and Energy
- GRE : Lighting and Signalling
- GRRF : Rolling and Braking
- GRSP : Passive Safety
- GRB : Noise
- GRSG : General safety layout

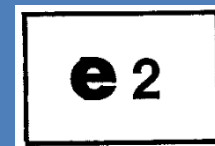
European mandatory texts to be applied

UN-ECE Regulation



- [Regulation N°117R02 Supplement 7 to the 02 series of amendments](#)

EU Regulation



- [661/2009 \(rev: \(EU\) no. 2015/166\)](#)

CONFORMITY OF PRODUCTION

Conformity Of Production - COP

- An annex to the regulation deals with exact tests to be done during the product life.
- These verifications are mandatory to show the conformity of products.
- The manufacturer has to follow the test sequences,
- The authority who grant the approval must verify that the manufacturer do the verification.

Conformity Of Production - COP

- Frequency of COP tests
- Results

Control Plan - Surveillance

- Quality process of the manufacturer
- Minimizing process and product variation
- Actions required at each phase of process
- Assure that the all outputs are in a state of control
- Monitoring and control methods
- Used throughout the product life cycle
- Documents to be updated at each technical evolution of the product

Description