THE RESULTS OF THE STATE SURVEILLANCE OF BUSES

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State surveillance is carried out to verify the compliance of mass-produced vehicles with the issued type approval documents. State surveillance involving destructive and non-destructive testing is carried out since 2017.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of objects</th>
<th>Budget (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017:</td>
<td>3 tests</td>
<td>≈ 70 000</td>
</tr>
<tr>
<td>2018:</td>
<td>3 tests</td>
<td>≈ 70 000</td>
</tr>
<tr>
<td>2019:</td>
<td>14 tests</td>
<td>≈ 210 000</td>
</tr>
<tr>
<td>2020 (plan):</td>
<td>18 tests</td>
<td>≈ 210 000</td>
</tr>
</tbody>
</table>

Verifiable bus requirements for 2019:

1. Braking system efficiency;
2. Safety-belt anchorages;
3. Equipment of motor vehicles with restraint systems;
4. Strength of the seats and their anchorages;
5. Equipment with safety glazing;
6. Equipment with devices for indirect vision;
7. Equipment with lighting and light-signalling devices;
8. Superstructure strength;
9. General safety requirements for passenger transport vehicles;
10. Equipment with e-call device.
Sanctions

In case of uncover at the state surveillance, non-conformity of production to the prescribed requirements, the following sanctions can be applied to manufacturers:

- Administrative fine;
- The order on temporary suspension of product release into circulation;
- The order on product recall;
- Withdrawal of the type approval and forced product recall;
- Administrative body informs about dangerous products presence at the market by media
Test methods stipulated in UN Regulation No. 66-02

Rollover test on representative body sections = Quasi-static calculations or computer simulations = Rollover test on a complete vehicle
A bus of M3 category, class III

A rollover test on a complete vehicle was performed in accordance with the provisions of Annex 5 to UN Regulation No. 66-02.

The objective of the test is to assess the compliance of the vehicle in terms of ensuring the integrity of the residual space that shall be kept in the passenger compartment, crew and driver compartment(s) to ensure a greater likelihood of survival of passengers, driver and crew in the event of a vehicle rollover.
Identified damage

- Intrusion of individual structural elements (luggage racks) into the residual space of the vehicle

- Detachment of passenger seats was identified *

* Not a subject to evaluation as part of the compliance assessment pursuant to UN Regulation No. 66-02
Identified damage

The emergency hatches were failed to open in accordance with the instructions marked on them *

* Not a subject to evaluation as part of the compliance assessment pursuant to UN Regulation No. 66-02
Conclusions

1) Rollover test on representative body sections and/or Quasi-static calculations or computer simulations stipulated in UN Regulation No. 66-02 not all cases can be considered as equivalent to the rollover test method on a complete vehicle:

$\begin{align*}
\text{Rollover test on} & \quad \neq \quad \text{Quasi-static} \\
\text{representative body} & \quad \neq \quad \text{calculations} \\
\text{sections} & \quad \neq \quad \text{or computer simulations} \\
& \quad \neq \quad \text{Rollover test on a} \\
& \quad \quad \quad \quad \text{complete vehicle}
\end{align*}$

2) At the load resulting from an M3 category vehicle overturning, detachment of passenger seats is possible. However, existing provisions of UN Regulations (not only No. 66) do not provide for the assessment of seat strength in this type of overloading.

3) UN Regulation № 66 does not correspond with UN Regulation № 107 in terms of emergency exits
Next steps

1. Investigate till the end of February 2020 what kind of measures would correspond to the conclusions made upon the results of bus safety tests.

2. During the mentioned period we will initiate in a due course development of amendments to the relevant UN Regulations in GRSG and GRSP Working groups. If our initiatives require the establish of informal working groups, we will be ready to lead such groups and provide our test results, as technical sponsor of the groups.
Congratulate with the world day of quality!

Thank you for your attention!