

Press Release

DEKRA experts contribute to ITC conference in Geneva

Sustainable transport: the problem of SCR system manipulation and what could be done

- Technical demonstration for high-level officials
- Nitrogen oxides pose health hazards and can add to global warming
- Manipulated Euro VI truck produces 40 times its normal NO_x emissions

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The Inland Transport Committee, the highest decision-making body of the United Nations Economic Commission for Europe on transport, has gathered in Geneva. The central topic of the 85th session are actions of the inland transport sector to reduce harmful and climate-damaging emissions. Global expert organization DEKRA is contributing to the event again, focusing on the problem of manipulated SCR catalyzer systems. Transport ministers, state secretaries and ambassadors from more than 50 countries were invited to a technical demonstration explaining the problem and outlining possible counteractive measures.

Exhaust emission requirements in type approval regulations for road vehicles are high. Among other things, vehicle manufacturers must implement measures to reduce the highly toxic nitrogen oxides (NO_x). For heavy vehicles in particular, SCR catalyzers are the most effective technical solution and are therefore installed in practically every modern commercial vehicle as well as in most modern passenger cars. They use AdBlue liquid, which needs to be refueled in addition to diesel oil.

“Too many users manipulate the systems to reduce operating costs, rendering the pollutant emission control system ineffective”, says Christoph Nolte, Head of DEKRA’s Service Division Vehicle Inspection. “Manipulation kits, including software and hardware solutions, are easily available online for all common commercial vehicles.”

In the technical demonstration, DEKRA experts shared findings from their research, showing that a manipulated Euro VI truck produces about 40 times the NO_x emissions it normally would. This is in line with results of investigations by the Danish Road Traffic Authority (Færdselsstyrelsen). Studies from different countries found up to 20 per cent of heavy-duty vehicles to be manipulated in this way. “With very little effort in terms of cost and time, the highly effective SCR systems, which normally remove more than 90 per cent of nitrogen oxide

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emissions from the exhaust gas, can be deactivated”, says Nolte. “Put simply, a manipulated Euro VI truck becomes a Euro II Truck. This is unacceptable and needs to be countered.”

Currently, neither on-board diagnostic systems nor vehicle inspection PTI can prove such manipulation kits being installed beyond doubt. That is why, from DEKRA’s point of view, protective measures and extended standardized diagnostic options are necessary. Experts from DEKRA and Færdselsstyrelsen explained the problem to ITC participants, showing how SCR systems are often bypassed and outlining possible counteractive measures that could be taken. “These could include modified vehicle type approval regulations to provide better protection, standardization of diagnostics to make detection possible in roadside and roadworthiness tests, as well as effective penalties to discourage manipulation”, says DEKRA expert Christoph Nolte.

Picture caption:

ITC 2023-1: Christoph Nolte, Executive Vice President of the DEKRA Group, and responsible for the Vehicle Inspection Service Division, addresses the ITC delegates.

ITC 2023-4: UNECE Executive Secretary Olga Algayerova (right) and Christoph Nolte, Executive Vice President of the DEKRA Group, at the technical demonstration.

ITC 2023-5: During the technical demonstration, DEKRA experts explained the problem of manipulated SCR exhaust gas cleaning systems to the ITC delegates.

About DEKRA

DEKRA has been active in the field of safety for almost 100 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world’s leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group’s operating business. In 2022, DEKRA generated preliminary sales totaling almost EUR 3.7 billion. The company currently employs over 48,000 people (as of 30.09.2022) in approximately 60 countries on all continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temporary work. The vision for the company’s 100th birthday in 2025 is that DEKRA will be the global partner for a safe, secure, and sustainable world. With a platinum rating from EcoVadis, DEKRA is now in the top one percent of sustainable businesses ranked.