The European Commission’s science and knowledge service

Joint Research Centre
Hub-dynos evaluation

- Hub-dynos are used by OEMs
- Objective: To assess hub-dynos whether can be introduced (permitted) in the regulation
Technical specifications

• Regulation technical specifications can be fulfilled (except roller)
• Needs to be understood how some definitions or requirements will be “translated” e.g. 3% wheel rotational inertia
• It has to be ensured that the vehicle behaves the same way with the two dyno concepts
• It has to be ensured that the emissions are the same at the two dyno concepts
Proposal for testing plan

• Tests at JRC: In the same chassis dynamometer (to have identical ambient conditions and measurement equipment)

• Vehicles to be covered: Small-large hybrid, manual-automatic, 2WD or 4WD etc.
  • Proposal: Small gasoline manual 2WD, Large diesel automatic 4WD
  • WLTC cold, hot, steady, dynamic cycles x 3 repetitions
  • Temperature 23°C, low temperature -7°C
Proposal for testing plan

• Testing plan:
  • Chassis: Car A, Car B
  • Hub: Car B, Car A
  • Chassis: Car A, Car B
• Emissions + ECU data
  • Involvement of OEM important
Any questions?