GFV Task Force
Heavy Duty Dual Fuel vehicles (HDDF TF)

GRPE 63 – 19 January 2012
Heavy-Duty dual-fuel engines and vehicles progress since GRPE62

• Amendments to rev.6 of Regulation 49 (EURO VI)
  – An informal document has been drafted and submitted to GRPE
    o Some sections and appendices will be finalised in the course of Q1/2012
  – A formal document is intended to be ready for submission to GRPE64 in June 2012

• Amendments to rev.5 of Regulation 49 (EURO V)
  – The drafting status related to (EURO V) is not yet at a stage permitting the submission of an informal document to GRPE
  – GFV proposal: 6 months delay
    o Informal document to be submitted to June 2012 GRPE
    o Formal document to be submitted to January 2013 GRPE
    o Final amendments to be submitted to June 2013 WP29
Amendments to rev.6 of Regulation 49
Summary of the proposal (1)

• Amendments to the main body of Regulation 49 (rev.6)
  – Definitions of dual-fuel engines and vehicles and of their operating modes
  – Obligation for HDDF to comply with Annex 15
  – Allowance of a fuel specific type-approval in case of engines fuelled with liquefied natural gas / liquefied biomethane (LNG)
  – Labelling of dual-fuel engines and vehicles
  – Installation requirements in case of HDDF engines approved as separate technical units
  – Extension to include a new engine system into an engine-family
  – Summary of the approval process in case of HDDF

• Amendments to the existing Annexes of Regulation 49 (rev.6)

• Introduction of the dual-fuel dedicated Annex 15 of Regulation 49 (rev.6)
Amendments to rev.6 of Regulation 49
Summary of the proposal (2)

- Amendments to the main body of Regulation 49 (rev.6)

- Amendments to the existing Annexes of Regulation 49 (rev.6)
  - Annex 1: adaptation of the information documents to HDDF
  - Annexes 2A and 2C: adaptation of the communication sheets to HDDF
  - Annex 3: extension of the approval marks
  - Annex 5: introduction of $G_{20}$ as reference fuel
  - Annex 9B: consideration of HDDF specific OBD issues

- Introduction of the dual-fuel dedicated Annex 15 of Regulation 49 (rev.6)
Amendments to rev.6 of Regulation 49
Summary of the proposal (3)

- Amendments to the main body of Regulation 49 (rev.6)
- Amendments to the existing Annexes of Regulation 49 (rev.6)

- Introduction of the dual-fuel dedicated Annex 15 of Regulation 49 (rev.6)
  - Dual-fuel specific definitions
  - Dual-fuel engine family
  - Requirements to operate dual-fuel vehicles
  - Dual-fuel specific indicators and warnings
  - Retrievable torque in case of dual-fuel vehicles
  - OCE and in-use HDDF specific requirements
  - Emission limits applicable to HDDF engines and vehicles
  - Dual-fuel specific OBD and NOx control requirements
  - Additional calculation requirements for emission measurement (laboratory test)
  - Additional calculation requirements for emission measurement (PEMS test)
Draft time-plan – on time for EURO VI

- GRPE June 2011: agreement on the major principles amendments to R85 (informal document)
- GRPE Jan 2012: amendments to rev.6 of R49 (informal Document)
- Jan – June 2012: drafting of amendments to rev.5 of R49
- GRPE June 2012: approval of the amendments to R49 rev.6
- GRPE June 2012: approval of the amendments to R85
- GRPE June 2012: amendments to rev.5 of R49 (informal Document)
- WP29 Nov 2012: approval of the amendments to R49 rev.6 & R85
- GRPE Jan 2013: approval of the amendments to R49 rev.5
  guidance for retrofit specifications
- WP29 June 2013: approval of the amendments to R49 rev.5

difficulties regarding amendments to R49 rev. 5
DELAY necessary!