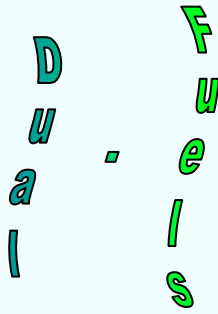


# GFV Task Force Heavy Duty Dual Fuel vehicles (HDDF TF)

GRPE 63 – 19 January 2012

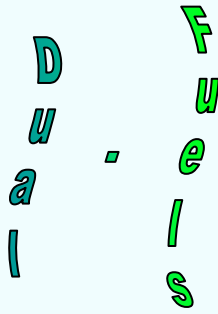
# Heavy-Duty dual-fuel engines and vehicles progress since GRPE62



- Amendments to rev.6 of Regulation 49 (EURO VI)
  - An informal document has been drafted and submitted to GRPE
    - 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
    - Informal document to be submitted to June 2012 GRPE
    - Formal document to be submitted to January 2013 GRPE
    - Final amendments to be submitted to June 2013 WP29

# Amendments to rev.6 of Regulation 49

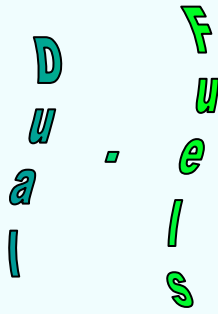
## Summary of the proposal (1)



- 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

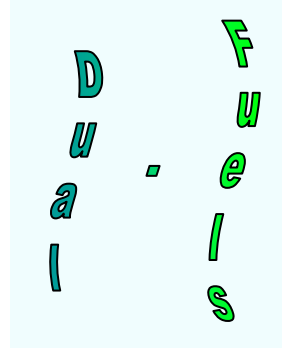
## Summary of the proposal (2)



- 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<sub>20</sub> 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

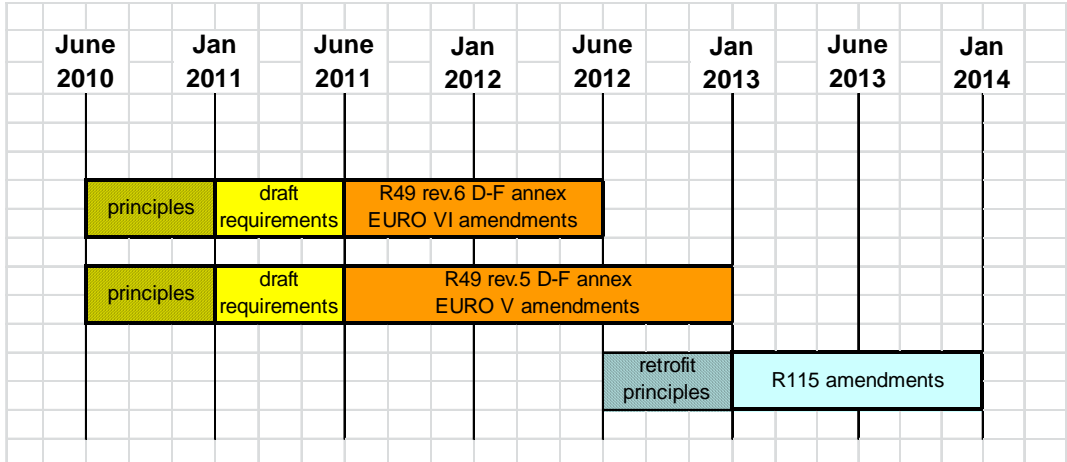
## Summary of the proposal (3)



- 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  
approval of the amendments to R85  
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 !**