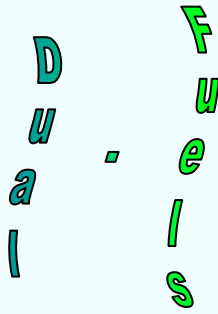


GFV Task Force Heavy Duty Dual Fuel vehicles (HDDF TF)

GRPE 63 – 19 January 2012

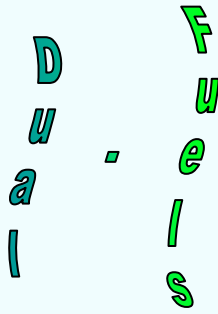
Heavy-Duty dual-fuel engines and vehicles progress since GRPE62



- 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

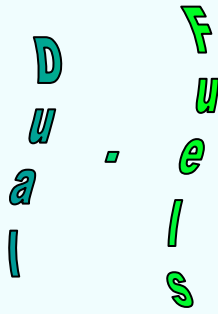
Summary of the proposal (1)



- 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

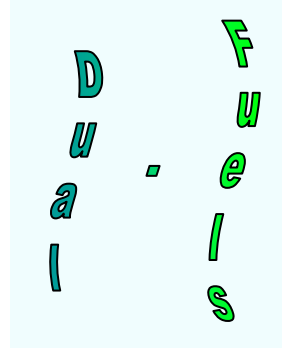
Summary of the proposal (2)



- 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_{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

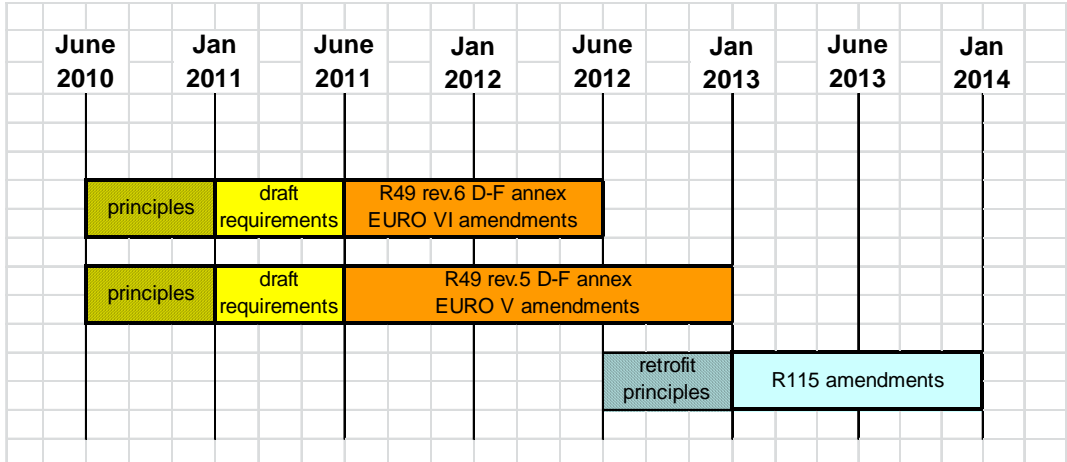
Summary of the proposal (3)



- 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 HDDDF specific requirements
 - Emission limits applicable to HDDDF 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 !