RDW

GFV 29-06

29TH INFORMAL GROUP ON GASEOUS FUELLED VEHICLES (GFV) MEETING

PROCESS OF THE GFV HDDF RETROFIT TASK-FORCE ACTIVITY

André Rijnders
3 December 2013

Shell Headquarters, The Hague,
Netherlands
3-4 December 2013

HDDF TASK-FORCE ACTIVITY

Status UNECE R.49 concerning Dual-Fuel

- The adoption of ECE/TRANS/WP.29/2013/111 in WP.29 in November 2013 (amendments to rev.5 Regulation 49 (EURO V) with the introduction of Dual-Fuel).
- Rev.6 Regulation 49 (Euro VI) →Supplement 1 to the 06 series of amendments – Date of entry into force: 15 July 2013

Status of European Regulation 582/2011 (Euro VI) concerning Dual-Fuel.

- 3rd round Comitology adopted in July 2013. Publication expected soon.

Status of Retrofit Regulation concerning Dual-Fuel.

- Decision 66th GRPE endorsed the GFV proposal to develop a new UN Regulation for heavy-duty dual-fuel retrofit.
- 28th GFV in Brussels
  - progress will rely on a first draft of a structure, considering some of the basic principles already discussed (and for future discussion),
  - ACEA/OICA suggesting to come with an appropriate text. (that also might take advantage of some of the AEGPL work that already has been done)
  - At the next meeting of the HDDF TF we will start the writing of the new document, possibly considering useful elements of what already has been produced.

HDDF TASK-FORCE ACTIVITY

Timing:

- January 68° GRPE 2014: no document.
- June 69° GRPE 2014: informal document (if available)
- January 70° GRPE 2015: formal document (if available)
- June WP.29 2015: adoption

Organisation:

- GFV HDDF activity of fundamentals & principles & proces
- Task Force activity technical implementation and drafting activity
- Chair to be choosen → neutral position in the discussion
- Secretariat → NGV Global (Jeff Seisler)
- Meeting HDDF TF → to be decided by the TF (or GFV)

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Discussed/agreed issues

- **Scope**
  - **First Euro IV / V**
    Possibly later Euro VI, after MVEG discussion
  - **Only type B**
    No distinction between types 1, 2 and 3

- **Families**
  - **Parent engine: emission test compliant with EL**

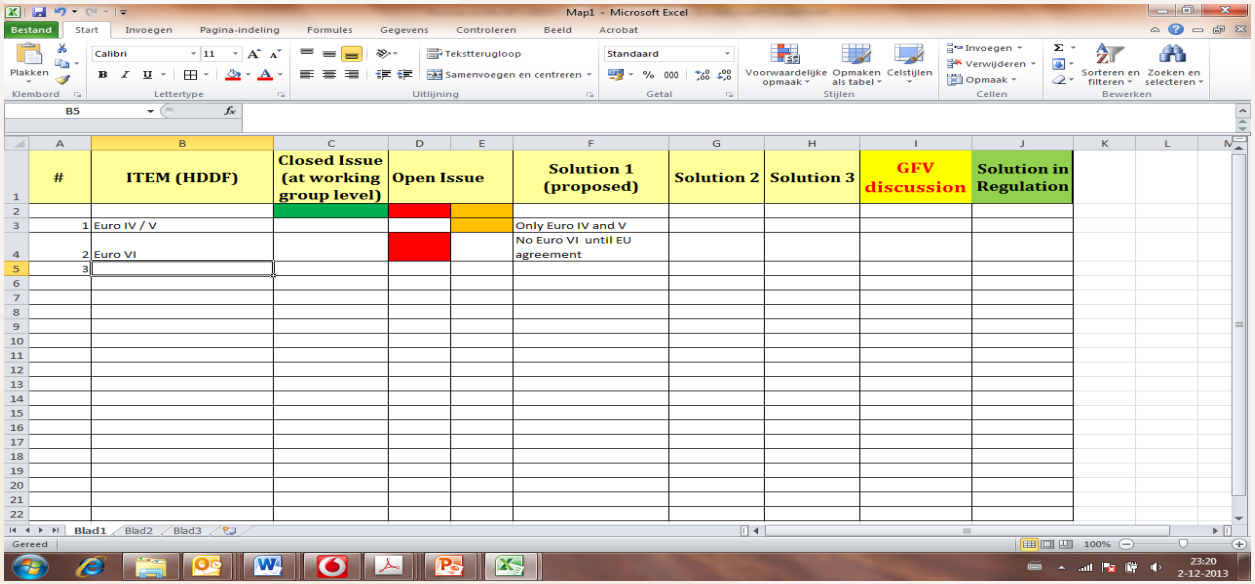
- **Approval**
  - **Retrofit system**
  - **Retrofit engine**

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

- **ISC**
  - **Tbd**
- **Others**

Excel sheet with

“ Open Issue List”



#	ITEM (HDDF)	Closed Issue (at working group level)	Open Issue		Solution 1 (proposed)	Solution 2	Solution 3	GFV discussion	Solution in Regulation
1	Euro IV / V				Only Euro IV and V				
2	Euro VI				No Euro VI until EU agreement				
3									

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Fundamental issues

Purpose retrofit

- OICA (GFV 29-03)
  - Retrofit vs Conversion
  - 3 use-cases
    1) engine conversion converter (definition)
       - » converter becomes the new engine manufacturer
    2) vehicle retrofit
       - » retrofitter has the full responsibility of the actual retrofit
       - » converter becomes the new engine manufacturer
    3) installation engine
       - » an approved new or converted dual-fuel engine on an approved dual-fuel vehicle

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Fundamental issues

Purpose retrofit

AEGPL (GFV 29-02)

- **harmonized method for the classification, evaluation and approval of:**
  - dual fuel retrofit **systems** to be fitted in heavy duty road vehicles;
  - dual fuel retrofitted **engines** to be fitted in heavy duty road vehicles;
  - **retrofitted vehicle** type with an approved dual fuel retrofitted engine;

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Fundamental issues

AECC comments (GFV 29-05rev1)

- With regard to GFV 29-03, we have a significant concern on the OICA definition of retrofit as “fitting new elements of design to an approved engine system without substantially modifying its emission strategies (e.g. fitting a particulate filter)”. Whilst we understand what OICA is trying to achieve with this definition, it seems to us that fitment of an SCR system (to meet Retrofit Class III of the recently-agreed retrofit Reg.) or a combined DPF & de-NOx system (to meet Retrofit Class IV) meet be seen as not meeting this criterion.

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Fundamental issues

CLEPA Comments (GFV 29-08)

- Is it very wise to develop, as suggested by OICA & AEGPL, technical requirements for the conversion of heavy-duty on-road vehicles and engines?
- United Nations' Vehicle Type Approval System, Contracting Parties adopt/amend Regulations to Type Approve/Certify NEW Vehicles Types or Components.
- Vehicle Type Approval is owned by the Original Equipment Manufacturer (OEM)
- What's not covered by the Type Approval documentation is forbidden unless authorized by the OEM
- Product modifications might invalidate the Type Approval and the Certificate of Conformity
- considering UN R. 49, 67 and 110 is a very limited approach.
  - Other Regulations might also be impacted e.g. Braking, Steering, Noise; Tell-tales;
  - It is the case for market vehicles with drop-center chassis; or, addition of an extra axle; … .

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT

Fundamental issues

CLEPA Comments (GFV 29-0x)

- the CONVERTER of a Vehicle or Engine, already in use, shall become and OEM-like person or body; and, shall bear all the liabilities the situation implies.
  - Provide a new Vehicle Identification Number, VIN, as the original VIN is owned by the OEM having produced the vehicle or engine.
  - E.g. “ESTEPE (NL); TERBERG (NL), BOMBARDIER (CDN/BE); WESTPORT (CDN/FR); VAN HOOL (BE); VDL Group (NL); etc. branded product.
- Should the amendments of Euro IV & V Type Approval Certificates and Documents of Heavy-Duty Vehicles & Engines still be possible, proceeding with individual European exemption forms could partly solve the problems; for Euro III it’s another challenge to consider .
- Access to information is another issue to address.
- Euro V and VI include access to repair and maintenance information provisions.

RDW

TECHNICAL REQUIREMENTS –STRUCTURE OF HDDF-RETROFIT

- **OICA (GFV 29-04)**
  - It contains a modular structure, where:
    - (a) module A is a "generic" module containing specifications applicable to all types of engine and vehicle conversion
    - (b) other modules are "specific" modules containing additional or supplementing requirements that are limited to specific conversion types.
  - This Regulation describes the responsibilities of the person of body in charge of an engine or vehicle conversion
- **AEGPL (GFV 29-02)**
  - Regular approach of UNECE regulation

RDW

TECHNICAL REQUIREMENTS –STRUCTURE OF HDDF-RETROFIT

- AEGPL (GFV 29-02)
  - Text proposal
  - Technical comments/improvements
    - AECC (GFV 29-05 rev1)
    - Others

FUNDAMENTALS & PRINCIPLES OF HDDF-RETROFIT