





Update of MAC Pilot Test Phase

Informal meeting of MACTP working group at 64th GRPE

June 5th 2012 Geneva

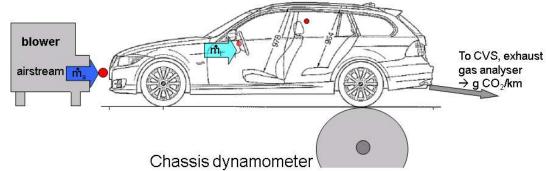
Consortium of:

TNO: Willar Vonk

TUG: Stefan Hausberger

LAT: Zissis Samaras

Savas Geivanidis



Assigned by EC DG Entr: Nikolaus Steininger

This presentation will be made available on the UNECE website









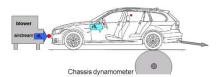
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Agenda:

MAC Pilot Test Phase:

- Introduction
- Short description
- Topics addressed in test Phase A
- Preliminary results of test Phase A
- Outlook



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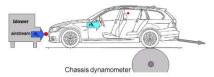






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Create technical annex to the Regulation

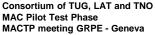
A draft type approval test procedure for MAC energy efficiency assessment was developed by Consortium of TUG, LAT, KTI and TNO.

Pilot Test Phase is defined to:

- Cover open issues and options for settings and data processing
- Check repeatability and sensitivity of the test procedure
- Follow-up to the MAC test procedure a technical annex to the Regulation

During Pilot Phase, labs also gain experience with the procedure











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MAC Pilot Test Phase contains two test phases:

• Programme definition, preparation Presentation of phase-A • Identify procedure improvement possibilities results and adjustment of **WP100** • Prepare simple test elaboration tool phase-B on 11th June Process comments from stakeholder meeting stakeholder meeting in Brussels Multi-lab Pilot test phase-A WP210 (improve procedure and cover open issues) ~ 11 labs Phase A Stakeholder comments and learning Data review points WP310 Current status Procedure evaluation to draft final • Multi-lab Round Robin test phase-B with "golden vehicle" WP230 (reproducibility, sensitivity and repeatability) ~ 4 labs Phase B Stakeholder comments and learning Data review points **WP310** • Procedure evaluation to final procedure **WP400** Write technical annex to regulation (incl. reviews)



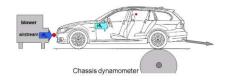




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Participation in pilot Phase-A



Participant	Expressed interest	Performed measurements	Vehicles tested	Measurements submitted
Α	YES	YES	2	4
В	YES	YES	3	25
С	YES			
D	YES	YES	2	11
E	YES	YES	2	3
F	YES			
G	YES			
Н	YES	YES	4	36
1	YES			
J	YES	YES	2	5
K	YES			
L	YES			
М	YES	YES	1	1
N	YES	YES	1	4
Total:	14	8	17	89





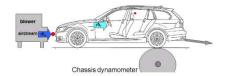




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Topics that have been addressed in pilot phase-A



- Sensitivity of the procedure for different:
- MAC technologies (as far as possible)
 - Engine size and fuel types
- Vehicle sizes and classes
 - Sensitivity of the procedure for variations in:
- Ambient temperature and humidity (test at low and high)
- GSI versus fixed gear shift strategy
 - Soaking temperatures (between 20°C and 30°C)
- V Drive cycle at minimum and maximum speed (dyno power)
- V Blower on/off in MAC off phase of the test
- Solar load simulation during the test in (one lab)









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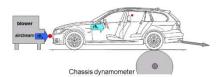
Preliminary Results

(without insight into actual data)





- Some details still need discussion:
 - Ranges of Humidity and Temperature
 - Number of repetitions for TA
 - Allow bag measurements yes or no
 - Different vehicle sizes in relation to HVAC mass flow setting
 - Blower on/off during MAC-off phase





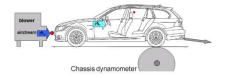




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Outlook of activities



- Stakeholder meeting on 11th of June
- Fine tuning of the procedure
- Round Robin testing (July October)
- > Procedure finalization
- Develop technical annex to regulation





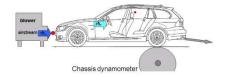




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Time Schedule of the Pilot Test Phase



Project started 16 August 2011

	2					2012									2	2013		
Montl VP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Definition, preparation	•	•	•	•														
Phase A pilot testing				•	•	•	•	•										
Phase B round-robin												•	•	•				
Procedure review					•	•	•	•	•	•	•				•			
400 Annex compilation									_						•	•	•	•
500 Management	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•

Current status



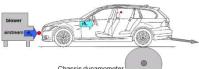




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Thank you very much for your attention!



Questions?



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