



Working Paper No. HDH-11-06e  
(11th HDH meeting, 10 to 12 October 2012)

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# **11th Heavy Duty Hybrid (HDH) meeting**

## **10-12 Oct 2012, Ottawa**

# HILS Validation program

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- OICA and members will support the validation test program with the required inputs for the interface signal list and the component list.
- Minimum two vehicles will be available for validation test program 2 (March 2013)
  - ➔ One serial hybrid plus one parallel hybrid.

## Possible Options for Creating the Cycle for HILS simulation (from WHVC or WHTC)

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- In general both vehicle speed curve (WHVC) and engine torque and rpm curve (WHTC) need to be filtered to remove artifacts due to gear shifting that is not representative for a hybrid vehicle and not suitable for vehicle simulation.
- WHVC (original HILS approach)
  - ➔ Power transients at the last highway phase should be added/transferred to road slope. Otherwise, highway part of the WHVC could be seen as a flat road.
- WHTC (TUG proposal for a vehicle independent powertrain approach)
  - ➔ The vehicle speed will probably be needed for the hybrid logic (either from WHVC or calculated backwards), that might cause a over determined system. *A mismatch could be a concern.*
  - ➔ Will other vehicle signals be needed?