



We hereby inform that on 8<sup>th</sup> November 2013, the BOSMAL Automotive Research and Development Institute Ltd received the questions according to an open-tender procedure for the supply of equipment of a dynamic hybrid engine test bench.

Details as below:

#### **Ad §2.A.15**

This clause is specifying a vehicle, driver and road gradient/load simulation for Passenger Car / Light Duty Vehicles

The Article 15.5 specifies European and US passenger car emission cycles.

The specified dynamometer (§2.A.1.3) is a typical dyno for Heavy Duty engine testing. This is in contradiction to the requested passenger car test cycles.

Furthermore the dyno itself is specified under §2.A.3 to “cooperate with IC engines with a rotating moment of inertia > 0.4kgm<sup>2</sup>. This is also contracting to the passenger car test cycles.

**Question:** How does this fit to the requested testing of passenger car / light duty vehicle testing?

**Question:** Is a pure vehicle, driver and road gradient/load simulation sufficient or should the offered system enable simulation of real driving maneuvers such as cornering and so on.

**Answer 1:** We would also like to have the possibility to simulate the NEDC and FTP-75 emission cycles, because we think that some IC engines with a rotating moment of inertia around 0,4 kgm<sup>2</sup> can also be installed in light duty vehicles. For sure, it will only be a small part of the entire simulation software.

**Answer 2:** It should be a system which offers complete simulation of a vehicle, driver, road gradient/load and also real driving maneuvers like cornering, and so on.

#### **Ad §1.5**

The reference § 2 point 1.2 given in this clause seems to be wrong. Please clarify!

Yes it is a mistake. It should be as follows:

The items of order mentioned in §2 section B must be capable of communicating and working with the following automation systems (not in parallel):

- 1.1. AVL PUMA 1.5.3, AVL PUMA 1.5.1 and AVL PUMA 1.3.2.
- 1.2. HORIBA STARS.

**Ad §2.C.8**

In table 4 it is not clear who is responsible for the mechanical and electrical installation (cabling) of the entire scope of supply. Please clarify!

I think that only point 7 in table 4 is unclear. It should be as in point 6. We (BOSMAL) are responsible for mechanical and electrical installation (cabling), but we need support from the Contractor's side.

**Ad §2.A.9**

Is it acceptable that a possibility to write device drivers (as requested under point 11) is included in the quote or is it mandatory for the Contractor to write this interface driver? If the contractor should offer the driver, the AK protocol specification and functionality description is needed.

It is acceptable for us to have the possibility of writing devices' drivers, as requested in point 10.

