

### **For handling editor**

*In addition to the points raised by the referee, it would be good to carefully check the use of the language in the paper. After that, the paper can be published.*

The authors are grateful to the handling editor to consider our manuscript as publication. Manuscript has been carefully checked by all co-authors with the improvements pointed out by the referee. I would like the editor to confirm that corresponding author will change the affiliation from coming April 2021 and thus, two contact e-mail addresses (before and after April) are noted in the correspondence part. Thank you for the consideration.

### **For Referee**

*The paper needs some minor corrections in terms of language and technical terms. Please go through the document and elaborate the text. Other than that it was good to see that various issues have been addressed. The paper describes in detail the experimental process and highlights several issues that could be useful in the field of heavy-duty vehicle testing. This especially useful as various regions in the world are setting respective emission targets. One important aspect of the study is the divergence of the driving profile from the WHVC, which could be a basis for future research.*

The authors are grateful to the referees to check manuscript as well as suggesting us the valuable modifications. The minor corrections were taken into account based on the following opinions.

*There is a series of mostly minor issues to be corrected:*

*Line 16: “The constructed tables well replicated...”, please elaborate sentence to “The constructed tables replicated well...”*

The order of words was improved based on the suggestion.

*Line 23 – 25: “Global warming... (Saito, 2010).” This sentence is quite long and a bit difficult to follow. Please elaborate and consider splitting it into two.*

Thank you for pointing out the difficulty of the sentence. The sentence was split into two sentences as following.

[Lines 26-29: “Climate change continues to occur, with the global temperature increasing annually. It has been reported that ...”](#)

*Line 25: “photochemical oxidant”, please consider using the term in plural or as “photochemical oxidant compounds”.*

We modified the term as plural, “photochemical oxidants”, thank you for pointing out mistake.

*Line 88: “two times” consider replacing it with “twice”.*

According to the suggestion, the words “two times” were substituted by “twice”.

*Line 94: “The vehicle acceleration (km/s<sup>2</sup>) was...”, please check the units, there seems to be a mistake. I would expect to see m/s<sup>2</sup>.*

The unit of acceleration data monitored by PEMS measurements was km/s<sup>2</sup>, on the other hand, the unit treated by data analysis was converted to m/s<sup>2</sup>. Each unit is defined in both lines 124 and 151. The conversion method is relevant (just multiplying 1000 to km/s<sup>2</sup>), so this is not mentioned in the manuscript.

*Line 142: Please correct the term “inside the engine room” with a more suitable term such as “combustion chamber”, otherwise it conveys the wrong message. Apply this to all other relative cases.*

Thank you for the suggestion. All terms were modified.

*Line 176: “the engine is cooled”, it is not clear whether the engine is cold or it is cooled down explicitly for the purposes of the experiment. Same applies in line 178 “vehicle body is also cooled”.*

Thank you for the suggestion. The terms “over several parking durations” were added after “the engine is cooled” and “vehicle body is also cooled” to make the sentences clearer.

*Line 203: “detoxification system” is an uncommon term and it could be a bit misleading. Please change to after-treatment systems.*

Thank you for clarification. All the terms were modified to “after-treatment systems”.