

Response to Reviewer 1 Comments

Round 3

Dear Reviewer: At this time, we hope that our response clarify the topic mentioned for you and meet your expectations.

Comments and Suggestions for Authors

Point: The last response to the reviewers confirmed my suspicions about the bias in the prediction of fuel consumption as a function of longitudinal grade. If the test site is a single road section with constant longitudinal grade of 7%, it is not possible to predict fuel consumption for different longitudinal grades other than 7% from the results. Therefore, the study makes no sense anymore.

Response: Longitudinal slope on road section tested were 0.6%, 2.0%, 5.2% and 7.0%, as the tests were designed (see Table 1 and Table 2), slope 2% were tested for both 2^k and 3^k factorial design. Results obtained consider these slopes and they are shown in Table 3.

To clarify this topic, text has been included as follow:

"The level values for the defined factors are presented in Table 2. The road slopes were defined according to the geometric alignment of the road using ascending way, these slopes were 0.6%, 2.0%, 5.2% and 7.0% (2.0% were tested for both 2^k and 3^k factorial design); and the vehicle weights considering full capacity, medium, or empty. To obtain the max-imum operating speed, the trucks were tested at their maximum capacity weight on the higher-sloped road; besides, low speeds used in tests were selected considering that we must have at least two more values for them, according the methodology used in the re-search, other speeds of trucks observed on the road, and capability to maintain them at a controlled level.."

And othet section as follow:

"During each tour the fuel consumption were captured by the OnBoard Computer on all road sections and longitudinal slopes considered (0.6%, 2.0%, 5.2% and 7.0%), the speed data were captured by both Onboard Computer and GPS, and storaged in those devices"