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Off-road handling of a mini baja vehicle

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Title: Off-road Handling of a Mini Baja

The following list of corrections suggested by examiner 1 and examiner 2 have been completed.

Examiner 1:

1. The literature review is far too long.

   Shortened literature review to only include studies and information which is relevant to topic of research.

2. The actual events of the baja competition have been omitted.

   The actual events have not been tested and have been omitted to avoid misleading the reader.

3. Inclusion of more figures in background section.

   Figures have been included to aid the description of the relevant theory and testing methods. Sections 2.1.to 2.5 all have accompanying diagrams.

4. Reference to the calibration of the instruments.

   The calibration of the accelerometers relative to gravity has been included.

5. Inclusion of the data processing method.

   The formulae used and uncertainty of the measurements have been included in the Data Processing section.

6. Images of the road conditions selected.

   Images taken in person of the selected testing grounds have been included to better show differences in road surface.

7. Data processing and uncertainty analysis.

   The data processing methods use have been included. The method for calculating the total uncertainty of the experiment have also been included.

8. Answers to the “Unanswered questions” in the Results and Discussion section have been included.

   The effect of the driver learning to anticipate the manoeuvre affected the results (see section 5.3).

The grass resulted in better handling due to the change of the local cornering stiffness of the tires (see section 5.1).

The driver learning to anticipate the handling affected the variability of the dirt track surface tests (see section 5.3).

The significance of "tire saturation" has been better explained in the discussion.

Examiner 2:

9. Reference to more background theory related to vehicle dynamics.

   The inclusion of the fundamentals of vehicle cornering, tire loadings and steering behaviour have been included.

10. Reference to the calibration of the instruments.

    The calibration of the accelerometers relative to gravity has been included.

11. Inclusion of time history data.

    Time-history data has been included to show how the points in the DLC test were determined.

12. Error in the yaw rate gain repeatability.

    The yaw rate gain repeatability was incorrectly calculated and has been corrected. The value of "less than 1%" has been corrected to 3.2%.

13. Question as to how the speed was maintained constant.

    The procedure of how the vehicle was maintained at a constant speed during cornering manoeuvres has been addressed in the Experimentation section.

14. Question as to how many tests were performed.

    The procedure of the number of tests for each manoeuvre has been addressed in the Experimentation section.

15. Inclusion of recommendations for future work.

    A Recommendations section has been included which details future investigations to build upon the current research.