

Review of: "Design and analysis of hand-break release system with the help of accelerator of automobile vehicle"

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Potential competing interests: No potential competing interests to declare.

Review comments for the journal paper titled "Design and analysis of hand-break release system with the help of accelerator of automobile vehicle".

Review Comments:

1. The introduction needs to more clearly define the specific problem being addressed. While the risk of accidental handbrake engagement is mentioned, the unique aspect of your proposed solution—using the accelerator to release the handbrake—should be stated more explicitly.
2. The literature review is comprehensive, but it lacks critical analysis that situates your work within the broader context of existing research. Consider discussing how your design differs from or improves upon other systems (e.g., electro-mechanical systems, solenoid valve mechanisms).
3. There is not enough explanation regarding why a handbrake release system controlled by the accelerator is preferred over other automatic handbrake systems, such as those activated by seatbelts or ignition keys. Provide more technical justification for your design choice, considering factors like response time, reliability, cost, and ease of integration with existing vehicle designs.
4. Citation [6] is missing in the references list.
5. The force calculations in Section 2.1 and subsequent sections lack adequate context and explanation. It would be helpful to include a brief description of the assumptions made (such as friction coefficients and material properties).
6. Some formulas (e.g., torque calculations) lack detailed derivations or explanations of their variables. Make sure to clearly define all formulas and the significance of each variable used.
7. The section on motor and gearbox selection should provide a more detailed explanation of why a 0.17 HP motor and a gearbox with a 1:4 ratio were chosen. Discuss any constraints or considerations, such as power consumption, size, or cost, that influenced these choices.
8. Although the CAD model and fabrication details are provided, the paper does not explain the rationale behind the choice of materials for different components. Clarify why certain materials (e.g., mild steel for the frame) were selected and how they enhance the durability and performance of the system.
9. The paper lacks a thorough discussion of the manufacturing process. Detailing the steps involved, the challenges encountered, and potential improvements could add significant technical depth to the study.
10. The paper does not present any experimental results or validation data. Consider adding a section on the testing methodology, physical testing results, and comparisons with theoretical predictions to strengthen the case for your

system's effectiveness.

11. An in-depth comparison of your proposed system with existing solutions (such as cost analysis, performance metrics, and reliability) would help illustrate the practical advantages of your system over others available in the market.
12. Maintain consistent terminology throughout the paper. Terms like "handbrake," "parking brake," and "hand brake" are used interchangeably. Select one term and use it consistently.
13. The text contains several typographical and grammatical errors.
14. Ensure that all figures and tables are properly labeled and referred to within the text. The descriptions for Figures 1, 2, and others should be more detailed to enhance clarity.
15. Enhance the paper's technical depth by providing more detailed explanations, justifications, and analyses.