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(57) Abstract :
Accordingly, embodiments herein disclose an active air suspension system with adjustable ride height and load balancing. The active air suspension system comprises an air suspension including a multiple air spring assemblies that each includes a piston airbag and a primary airbag mounted over the piston airbag. The primary and piston airbags each have a variable volume that is controlled independently of the other for active suspension control. Further, the proposed system may include a trailer that always rides at the same height, whether lightly loaded or heavily loaded. The higher air bag pressure is associated with higher trailer loads automatically provides a stiffer suspension which is required for a smooth ride, and the lower air bag pressure is associated lightly loaded conditions automatically provides for a softer suspension, thus providing the same ride quality for all trailer loading conditions.

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