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(57) Abstract :

The present disclosure provides a system and a method for regulating air pressure inside one or more tires of a vehicle. The system include a housing (102) configured with a rim of the one or more tires of the vehicle wheel. The system further include an inflation unit (104) disposed within the housing (102). The system may include a plurality of sensors (106) operatively coupled with the inflation unit (104), wherein the plurality of sensors (106) are configured to measure air pressure inside the tires. The method further involves receiving, by a controller 108 (108), via a plurality of sensors (106) integrated with the housing (102), an air pressure measured inside the one or more tires; receiving, by the controller 108 (108), a user-defined threshold air pressure from a user; comparing, by the controller 108 (108), the measured air pressure with user-defined threshold air pressure; transmitting, by the controller 108 (108), an actuation signal to an inflation unit (104) in an event that the measured air pressure falls outside the range of the user-defined threshold value.

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