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U.S. Patent No. 12,026,984 entitled “Tire Damage Detection System and Method” issued July 2, 2024 to Bridgestone Europe NV/SA of Zaventem, Belgium. Invented by Marco Pascucci and Lorenzo Alleva both of Roma, Italy. Abstract: The invention concerns a tire damage detection system (1,1A) that includes an acquisition device (11), a processing system (12,12A) and a notification device (13,13A). The acquisition device (11) is installed on board a motor vehicle (2) equipped with two or more wheels fitted with tires, is coupled to a vehicle bus (20) of the motor vehicle (2), and is configured to acquire, from the vehicle bus (20), signals indicative of speeds of the motor vehicle (2) and of a wheel of said motor vehicle (2) and output quantities indicative of the speeds of the motor vehicle (2) and of the wheel thereof. The processing system (12,12A) is configured to store a predefined tire damage model and to receive, from the acquisition device (11), the quantities indicative of the speeds of the motor vehicle (2) and of the wheel of said motor vehicle (2), and is programmed to compute, based on the quantities indicative of the speeds of the motor vehicle (2) and of the wheel of said motor vehicle (2), a normalized wheel speed indicative of a ratio of the wheel speed to the motor vehicle speed, and detect a potential damage to a tire of the wheel of the motor vehicle (2) based on the predefined tire damage model and on the normalized wheel speed. The notification device (13,13A) is configured to, if a potential damage to the tire of the wheel of the motor vehicle (2) is detected by the processing system (12,12A), signal the detected potential damage to a user (3) associated with the motor vehicle (2). In particular, according to the present invention, the processing system (12) is a cloud computing system (12A) that is wirelessly and remotely connected to the acquisition device (11), while the notification device (13) is an electronic communication device (13A) associated with the user (3) and remotely connected to the cloud computing system (12A) via one or more wired and/or wireless networks.

U.S. Patent No. 12,024,620 entitled “Compound for Body Ply Skim” issued July 2, 2024 to Bridgestone Europe NV/SA of Zaventem, Belgium. Invented by Paolo Fiorenza of Roma, Italy. Abstract: A rubber compound for body ply skim comprising: —a mix of rubber consisting of (i) Epoxidized Natural Rubber acting as polymer base with a cross-

linkable unsaturated chain; (ii) Natural Rubber acting as polymer base with a cross-linkable unsaturated chain; (iii) Polyepihalohydrin rubber, —a filler material, and—a vulcanization system; The compound comprises: 70 to 90 phr of said Polyepihalohydrin rubber; 5 to 25 phr of said Epoxidized Natural Rubber (E-NR); and 5 to 25 phr of said Natural Rubber (NR); the phr ratio between E-NR and NR ranging from 0.2 to 5.0.

U.S. Patent No. 12,024,173 entitled “System and Method for Work State Estimation and Control of Self-propelled Work Vehicles” issued July 2, 2024 to Deere & Company of Moline, Illinois. Invented by Dipankar D. Dongare of Dombivali, India; Dnyaneshwar Jagtap of Walchandnagar, India; Rushikesh Jadhav of Parbhani, India; Lance R. Sherlock of Asbury, Iowa; Mahesh Sorate of Baramati, India; Sanket Pawar of Pune, India and Vaibhav Bhutad of Paratwada, India. Abstract: A self-propelled work vehicle is provided with work state estimation and associated control techniques. The work vehicle comprises ground engaging units, a work implement configured for controllably working terrain, and various onboard sensors. A controller is functionally linked to at least the one or more onboard sensors and configured to ascertain a first parameter or operation of the work vehicle, determine a work state of the work vehicle, based at least in part on respective input signals from one or more onboard sensors, and generate a control signal for controlling at least a second parameter or operation of the work vehicle, responsive to the ascertained first parameter or operation and the determined work state. The control signals may be provided for proactive adjustments to engine speed, movements of the work implement, movements of the work vehicle itself, etc.

U.S. Patent No. 12,024,010 entitled “Self-propelled Earth Working Machine Including Combined Heat Exchanger Cooling and Engine Compartment Ventilation” issued July 2, 2024 to Wirtgen GmbH of Windhagen, Germany. Invented by Tobias Stinner of Nister, Germany; Viktor Stremel of Neunkirchen-Seelscheid, Germany; Axel Mahlberg of Hennef, Germany and Rolf David Pancho Yanza of Bonn, Germany. Abstract: A self-propelled earth working machine includes a traveling gear, a machine frame supported by the traveling gear, a power source accommodated on the machine frame for providing power for a travel operation and/or for an earth working operation, a working apparatus accommodated on the machine frame for earth working, and a cooling device for cooling a functional device of the earth working machine. The cooling device includes at least one heat exchanger system for transferring heat from a cooling medium to air, and a ventilator system, which is on the one hand designed and situated to produce a cooling air flow passing the heat exchanger system and which is on the other hand designed and situated to produce in the area of the power source a ventilation air flow flowing away from the power source. The heat exchanger system and a ventilation volume, in which the ventilation air flow flows away from the power source, are situated on the suction side of the ventilator system, the ventilation volume being situated downstream of the heat exchanger system relative to the cooling air flow, so that the ventilation air flow generated by the ventilator system meets the



cooling air flow downstream of the heat exchanger system and upstream of the ventilator system.