

(12) **United States Patent**
Yamamoto et al.

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(54) **BRAKE SYSTEM**

(56) **References Cited**

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(57) **ABSTRACT**

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A brake, system includes a hydraulic brake that supplies a hydraulic pressure to a cylinder provided correspondingly to each wheel mounted on a vehicle, thereby pressing friction members against the wheels and applying a hydraulic braking force; an electric brake that is mounted on at least one wheel from among the wheels and applies a braking force to the wheel by drive of an electric actuator; and a controller that executes control of supply of hydraulic pressure to each wheel cylinder by the hydraulic brake and operation control of the electric brake, regardless of a braking request by a driver, and causes a transition from hydraulic braking force control of all of the wheels to hydraulic braking force control of the wheel on which the electric brake has been mounted, when a speed of the vehicle satisfies a condition during the hydraulic braking force control of all of the wheels.

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(52) **U.S. Cl.**

CPC **B60T 7/12** (2013.01); **B60T 8/4872** (2013.01); **B60T 13/588** (2013.01)

(58) **Field of Classification Search**

USPC 701/70

See application file for complete search history.

13 Claims, 20 Drawing Sheets

