

WE CLAIM:

1. A driving force control device of a vehicle that is configured to calculate a required braking force on the basis of an amount of pressure applied to a brake operating mechanism (16), which is operated for deceleration by a driver, and to control a braking force of a power plant (1), which includes a drive source generating an accelerating force and a braking force, and a braking force of a braking mechanism (15), which generates a braking force with the operation of the braking operating mechanism, in cooperation so that a total braking force of the vehicle as a whole becomes the required braking force, the driving force control device characterized in that

the driving force control device is configured to detect acceleration information including a lateral acceleration of the vehicle and to control the braking force of the power plant on the basis of the detected acceleration information when the brake operating mechanism is operated.

2. The driving force control device of the vehicle according to claim 1, wherein the power plant includes an electric motor, and

wherein the braking force of the power plant is generated by controlling a regenerative torque of the electric motor on the basis of the acceleration information.

3. The driving force control device of the vehicle according to claim 1 or 2, wherein a driving inclination of the driver is determined on the basis of the acceleration information.

4. The driving force control device of the vehicle according to any one of claims 1 to 3, wherein a rotation speed of the drive source is increased to a rotation speed at which acceleration responsiveness is excellent in a decelerating state after a driver's operation on the brake operating mechanism is released in preparation of acceleration after the

decelerating state ends.

5. The driving force control device of the vehicle according to claim 4, wherein the rotation speed at which the acceleration responsiveness is excellent is a first rotation speed of the drive source when the drive source generates a braking force in the decelerating state after a driver's operation on the brake operating mechanism is released or a second rotation speed obtained by correcting the first rotation speed.

6. The driving force control device of the vehicle according to any one of claims 1 to 5, wherein the acceleration information includes an acceleration that can be generated by the required braking force.

7. The driving force control device of the vehicle according to claim 3, wherein a rate of increase of the braking force of the power plant gradually decreases as the determined driving inclination has a stronger request for prompt behavior of the vehicle.

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