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(57) Abstract :
 Electric vehicles operate solely on electric power, meaning they lack the mechanical brakes found on traditional automobiles. Braking force in electric vehicles is created through the vehicle's electricity components. When braking is commanded by the driver, the vehicle's controller monitors the speed of the vehicle's rotation and applies electric resistance to the motor which acts to slow the vehicle. This braking process provides significantly stronger stopping force than mechanical brakes due to the increased torque created by electric motors. Because of this, electric vehicles require less braking force to reduce speed, which conserves the vehicle's energy resources. Electric vehicles also possess regenerative braking, which captures the kinetic energy generated from braking and recharges the vehicle's battery. This further conserves energy and lowers the vehicle's range and power requirements. Although there are notable advantages of electric vehicle braking compared to mechanical brakes, the lack of mechanical support also creates maintenance and operational risks which need to be managed.

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