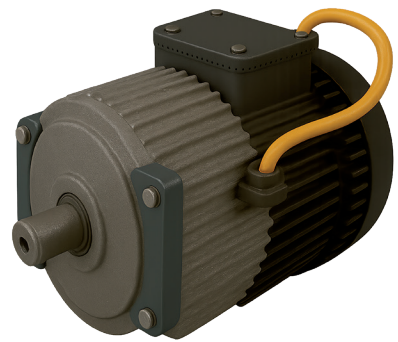


Parts of an Electric Vehicle

Electric vehicles are transforming the way we think about transportation. Unlike traditional vehicles, they rely on advanced components such as powerful batteries, electric motors, and charging systems to move efficiently and cleanly. Each part plays a vital role in making electric cars a key step toward a more sustainable future.



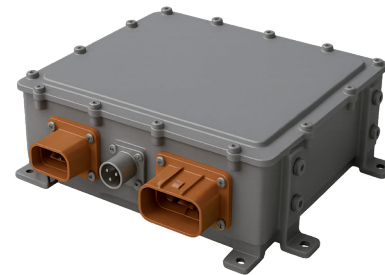
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ELECTRIC TRACTION MOTOR

Converts electrical energy from the battery into mechanical energy to drive the wheels.

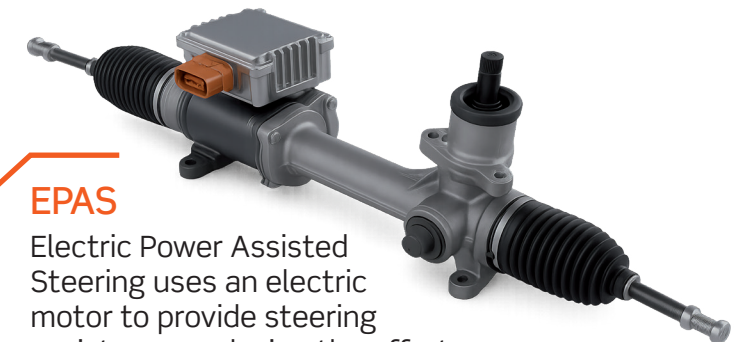
By reversing their operation, they can also perform regenerative braking, feeding energy back into the battery.



ON-BOARD AC CHARGER

Converts alternating current from a home or public AC outlet into direct current (DC) to charge the high-voltage battery.

It manages charging speed while protecting the battery through precise voltage and current control.



EPAS

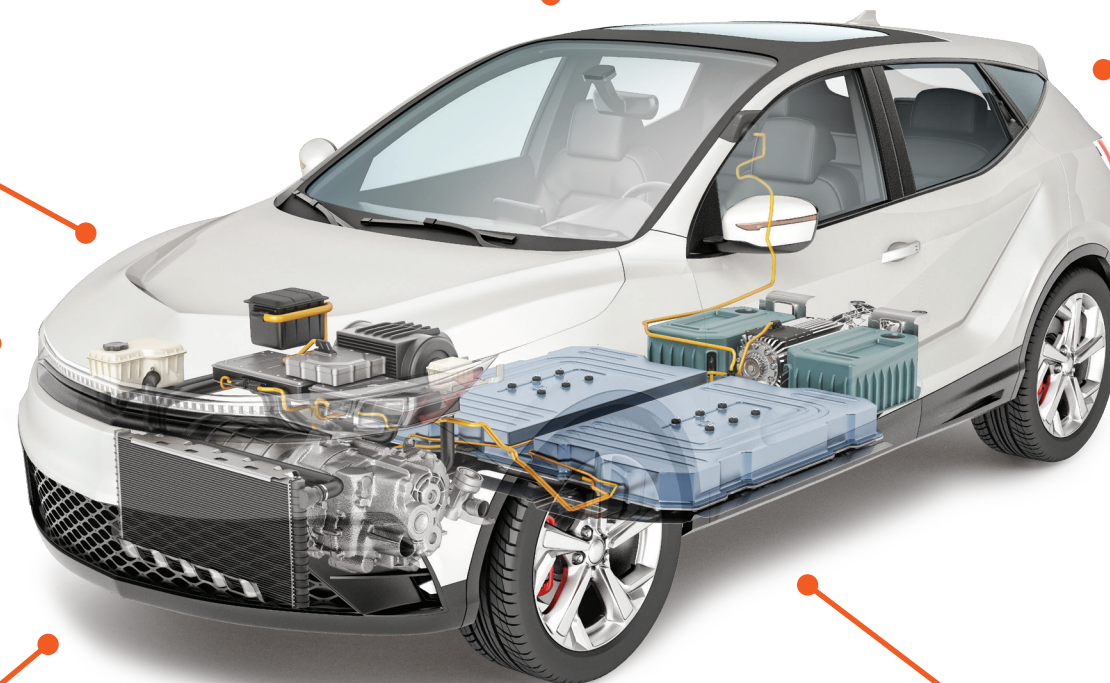
Electric Power Assisted Steering uses an electric motor to provide steering assistance, reducing the effort needed to turn the wheel.



POWER ELECTRONICS MODULE

Control and convert electrical power between the battery, motor, and auxiliary systems.

It manages functions like inverting DC battery power to AC for the traction motor.



CHARGE PORT

A physical interface where an external power source connects to supply electricity to the vehicle's battery.

Depending on the vehicle's design, it can support AC and/or DC charging.

DC-DC CONVERTER

Steps down the high-voltage battery power to lower voltages to charge the auxiliary battery.

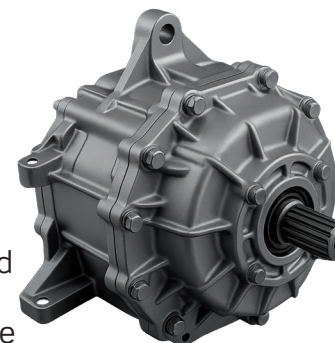
This ensures a stable and efficient power supply for all low-voltage electronics systems such as lights, infotainment, and control modules.



TRANSMISSION

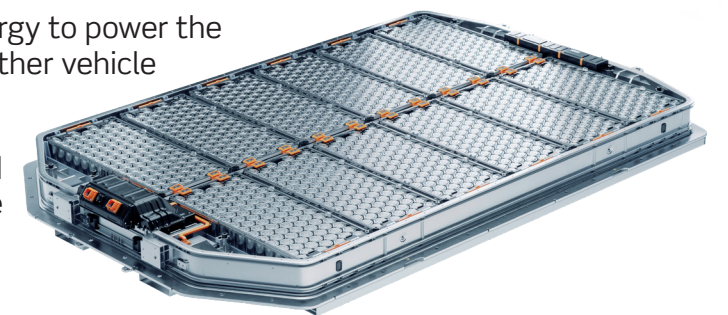
Transfers power from the electric motor to the drive wheels, optimising torque and speed.

Most EVs use a single-speed reduction gear, as electric motors deliver a wide torque range without the need for multiple gears.



TRACTION BATTERY PACK

Stores electrical energy to power the traction motor and other vehicle systems. It delivers high-voltage DC power for driving and enables regenerative braking by capturing and storing recovered energy.



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