Motor and Generator Differences in Physics Import Concepts Must to Know

Question. Difference Between Motor and Generator.

Answer:

Differentiating Property	Motor	Generator
Definition	Electric motors convert electrical energy into mechanical energy.	Generators convert mechanical energy into electrical energy.
Law	Fleming's left-hand rule is followed to know the direction of motion.	Fleming's right-hand rule is followed to know the direction of produced electricity.
Source of energy	Power grids, electrical supply.	Steam turbines, water turbines, internal combustion engines.
Current	In motors, the current has to supply to armature windings.	In generators armature windings produce current.
EMF	The electric motor gives outback emf	The generator gives emf to the

	to the circuit.	load connected.
Types	DC Brushed Motors, DC Brushless Motors, AC Brushless Motors, Direct Drive, Linear Motors, Servo Motors, Stepper Motors.	Three main types of generators: portable, inverter, and standby.
Principle	The working principle of a motor is based on the current-carrying conductor that experiences a force when it is kept in the magnetic field.	The working principle of generator is based on electromagnetic induction.
Driving force for shaft	The shaft of an electric motor is driven by a magnetic force which is developed between the armature and field.	The shaft of an electric generator is connected to the rotor which is driven by a mechanical force.
Use	Automobiles, elevators, fans, pumps, etc.	In power supply chains in industries, testing purposes in the laboratory, general lighting, powering of batteries, etc.
Example	Ceiling fans, cars, etc. are all examples of motor.	In power stations, generator is used to generate electricity.

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