

Heat Engine

What is a heat engine?

Answer: A cyclic device that receives heat from a source, converts some of it to work, and rejects the rest to a sink.

Explanation: Heat engines are cyclic devices that receive heat from a source, convert some of it to work, and reject the rest to a sink (for example, steam power plants, gas turbines, combustion engines, Stirling engine). Not all cyclic devices are heat engines. There are also cyclic devices that transfer heat from a lower temperature to a higher temperature source (refrigeration and heat pump cycles) (answer d). A heat engine cannot convert all received heat into work. A device used for heating is a heater of radiator, not a heat engine, a heat engine produces work.