



1. **Identify the components** of the assembly shown in the diagram. List them in the table below.
 2. **Describe the function** of each component.
 3. **Explain the assembly process** for this mechanism.
 4. **Discuss the advantages** of this design.

QUESTION

A photograph of a mechanical assembly with various parts labeled with letters A through J. The assembly appears to be a motor or actuator with a vertical shaft and various housing components.

Label	Component Name	Function
A	Motor Housing	Protects internal motor components
B	Shaft	Transmits mechanical power
C	Gear	Reduces speed and increases torque
D	Bearing	Supports the shaft and reduces friction
E	Bracket	Mounts the assembly to a surface
F	Cap Screw	Secures the housing cover
G	Washer	Provides a flat surface for the screw head
H	Lock Washer	Prevents the screw from loosening
I	Pin	Aligns and secures components
J	Key	Locks the gear to the shaft

The assembly is shown in a perspective view, highlighting its compact and functional design. The motor housing is a dark, cylindrical component that encloses the internal motor. The vertical shaft is supported by bearings and is connected to a gear. The entire assembly is mounted on a metal bracket, which is secured to a surface with a cap screw, washer, and lock washer. A pin is used to align the gear with the shaft, and a key is used to lock the gear to the shaft.