**Manufacturing Engineering**

**Hydraulic and Pneumatic Systems**

Matching Terms and Definitions Answer Key

**F. Control valve:** used to direct fluid to the proper component, like an actuator,gauge, output line, etc.

**C. Compressor:** a key component in a pneumatic system and is used to pressurizeair for transport through the system

**A. Actuators:** converts the hydraulic pressure (energy) to mechanical energy tooperate the load; (cylinder) - converts hydraulic energy to linear energy to operate piston rods; (hydraulic motor) - converts hydraulic energy to rotational energy to rotate a shaft

**D. Gauges:** provides an analog or digital indication of system pressure

**E. Pressure relief valves:** placed in specific locations in a hydraulic system torelieve excess pressure to prevent system overload, which would result in leaks, damaged components, etc.

**J. Tubes / Hoses:** stainless steel or rubber connecting lines that connect systemcomponents and are used for fluid transfer

**B. Pump:** provides a pressurized fluid supply to the hydraulic system to operatethe actuators; pressure may be 5000 pounds per square inch (psi), or more

**G. Filter:** a critical component used to trap particles (usually metal or dirt) thatcould clog and damage system components

**I. Hydraulic fluid:** liquid used to circulate through a hydraulic system to transferenergy between components and to the load; the fluid provides cooling and transfers particles (contaminants) to the filter

**K. Fittings / connections:** threaded or clamped connections that are used toconnect the tubes and hoses to system components; must be of proper size and orientation to prevent leaks

**H. Reservoir: s**erves as a storage container for hydraulic fluid