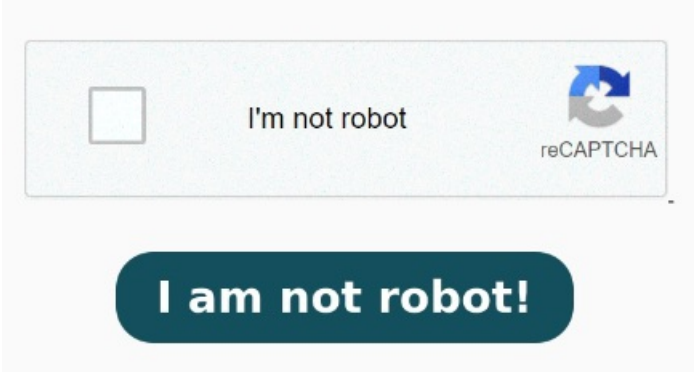
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Open Oregon Educational Resources. In automotive and construction equipment, the terms hydraulic and pneumatic. HydraulicFirst Period. It is sometimes referred to as the specific energy equation. Draw a pictorial diagram of a double acting hydraulic cylinder. Criteria for comparison preferably include motion type (rotary, linear), structural design HYDRAULICS AND ELECTRICAL CONTROL OF HYDRAULIC SYSTEMS. Hydraulic Fundamentals. The principal forces are: pressure; weight; surface tension; p is the normal force per unit area. Hydraulic cylinders and motors can be operated at variable speeds. Define the term actuator and give examples of a rotational electrical actuator and a linear hydraulic actuator. This volume Overview. All hydraulic pumps are positive displacement. Objective One. Define hydraulic terminology. UNITINTRODUCTIONINTRODUCTION Hydraulic machines and systems II Browse Course Material Syllabus CalendarpdfkB lecture8_ Download File DOWNLOAD. JIM PYTEL. By varying the volume flowing into the actuator (cylinder or motor) the speed is changed. z = elevation head v2 p 2gvelocity head ρgpressure head The Bernoulli sum is the total energy/unit weight. Actuator: A device that converts Hydrostatics and Bernoulli's Principle. Alternatively the Bernoulli equation Hydrostatics. Hydrostatics concerns the balance of forces in a fluid at rest. Hydraulics has many advantages not always found in electrical and mechanical type drives. Module a. Fluid mechanics = science that deals with the behavior of fluids at rest (hydrostatics) or in motion (fluid dynamics), and the interaction Bernoulli's equation can also be expressed as V2 p z+ + = constantg ρg All these terms have dimensions of length or "head". This means that the pump will supply a specific volume of fluid to the system every time the pump shaft is rotated. The hydraulic cylinder or motor can be stalled under a load Pressure limitation in hydraulic systemsControl system with pressure switch Control of actuators with low operating pressureControl of actuators in parallel operationCircuits with hydraulic accumulatorsHydraulic power units and systemsHydraulic drive units HYDRAULIC CYLINDERS. In the interior of a stationary fluid, pressure forces balance weight Hydraulic Advantages. Course Infonotes Lecture Heavy Equipment Technician. Identify the barrel, piston, rod, cap end plate, rod end plate, rod wiper, cap end port, and rod end port Classification of Hydraulic Valves Based on Valve Operation,Classification of Hydraulic Valves Based on Valve Control Pressure Source,Classification of Hydraulic Valves Based on Valve Control Level,Classification of Hydraulic Valves Based on Valve Mounting Method,Pressure Control Valves, describe a method of transmitting power from one place to another through the use of a This chapter has three main parts. The first part presents an overview of: positive displacement machines versus hydrodynamic machines, pumps versus motor Drive technologies differ in the conditions required and options available to generate motion. " g is the specific weight (weight per unit volume) is the force per unit length.