Kentucky CTE

Advanced Manufacturing: Industrial Maintenance Technology: Advanced Hydraulic Systems 470316 (2026–2027)

Practice and perform safe shop procedures at all times. 1	1 Practice and perform safe shop procedures at all times. 1
Apply the technical math required for employment opportunities in machining. 2	2 Apply the technical math required for employment opportunities in machining. 2
Perform all duties with emphasis on integrity, responsibility, quality, discipline and teamwork. 3	3 Perform all duties with emphasis on integrity, responsibility, quality, discipline and teamwork. 3
Describe the properties of hydraulic fluid. 4	4 Describe the properties of hydraulic fluid. 4
Describe how an accumulator performs in a circuit. 5	5 Describe how an accumulator performs in a circuit. 5
Install and operate an accumulator into a circuit. 6	6 Install and operate an accumulator into a circuit. 6
Ins pil valve. 7	nstall and operate a pilot-operated check valve. 7

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Install and operate a pressure-compensated flow control valve. 8

8 Install and operate a pressure-compensated flow control valve. 8

Install and operate a pilot-operated directional control valve. 9

9 Install and operate a pilot-operated directional control valve. 9

Install and operate a pressure port check valve. 10

10 Install and operate a pressure port check valve. 10

Install and operate a cam-operated valve. 11

11 Install and operate a cam-operated valve. 11

Hook up and operate unloading circuits. 12

12 Hook up and operate unloading circuits. 12

Install and operate by remote a pilot-operated pressure control valve. 13

13 Install and operate by remote a pilot-operated pressure control valve. 13

Describe transducers. 14

14 Describe transducers. 14

Describe electrohydraulic servo valve characteristics. 15

15 Describe electrohydraulic servo valve characteristics. 15

Operate an electrohydraulic servo valve. 16

16 Operate an electrohydraulic servo valve. 16

Install and align a hydraulic pump. 17

17 Install and align a hydraulic pump. 17

Repair a hydraulic cylinder. 18

18 Repair a hydraulic cylinder. 18

Choose a hydraulic cyl ap

19 Choose a hydraulic cylinder for a specific application. 19

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Interpret hydraulic schematics. 20

20 Interpret hydraulic schematics. 20

Troubleshoot a hydraulic circuit. 21

21 Troubleshoot a hydraulic circuit. 21

Design a hydraulic circuit. 22

22 Design a hydraulic circuit. 22

Repair valves. 23

23 Repair valves. 23