

Name: _____

Robotic Applications Assignment

SPH4C

Student Success Criteria: I can analyze some of the social and economic consequences of the use of hydraulic and pneumatic robotic systems for different kinds of operations.

Refer to pages 258 – 259 to answer the following questions.

1. What is the definition of a robot? Give an example.

2. What are two advantages of using robots for industrial purposes?

3. What are two disadvantages of using robots for industrial purposes?

4. What are two advantages of using hydraulically operated robots?

5. What is one disadvantage of using hydraulically operated robots?

6. What are two advantages of using pneumatically operated robots?

7. What is one disadvantage of using pneumatically operated robots?

In the space below, copy the fluid circuit diagram for a robotic press with a double-acting cylinder as an actuator shown at the top of page 260.

Label each of the components (refer to Figure 5 on page 259).

The diagram above shows the robotic press during the power stroke. How would the diagram change during the refill cycle, in which the liquid is flowing in the opposite direction?