

071605T4MCT

MECHATRONICS TECHNOLOGY LEVEL 5

ENG/OS/MC/CR/05/5/A

Operate Pneumatic and Hydraulic Systems

March/April 2025

**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICAL ASSESSMENT

RS

INSTRUCTIONS TO CANDIDATE:

1. *Figure 1* shows a pneumatic circuit with a solenoid valve, a pneumatic timer and button valve. *Figure 2* shows an electrically controlled hydraulic circuit. You are required to perform the following tasks;

TASK 1: Install the pneumatic circuit on a mounting rack.

- i. Power the circuit and long press the manually operated valve.
- ii. Record the Observations.
- iii. Adjust the timer delay valve and operate the manual valve again
- iv. Record the Observations.
- v. Disassemble the circuits after assessment.

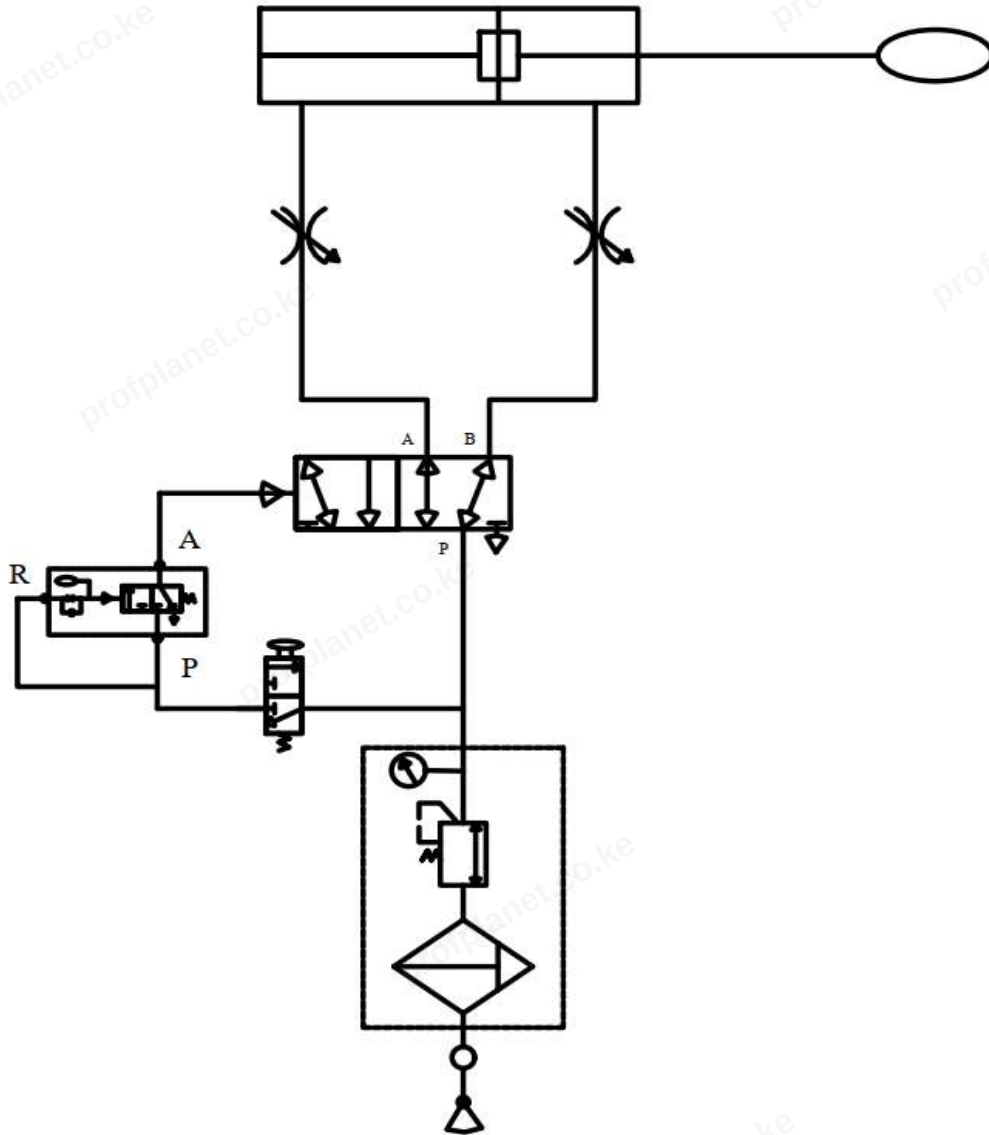


Figure 1

TASK 2: Install the circuits as indicated in *figure 2*.

- i. Power and operate the hydraulic system using the control buttons.
- ii. Record the Observations.
- iii. Disassemble the circuits after assessment.

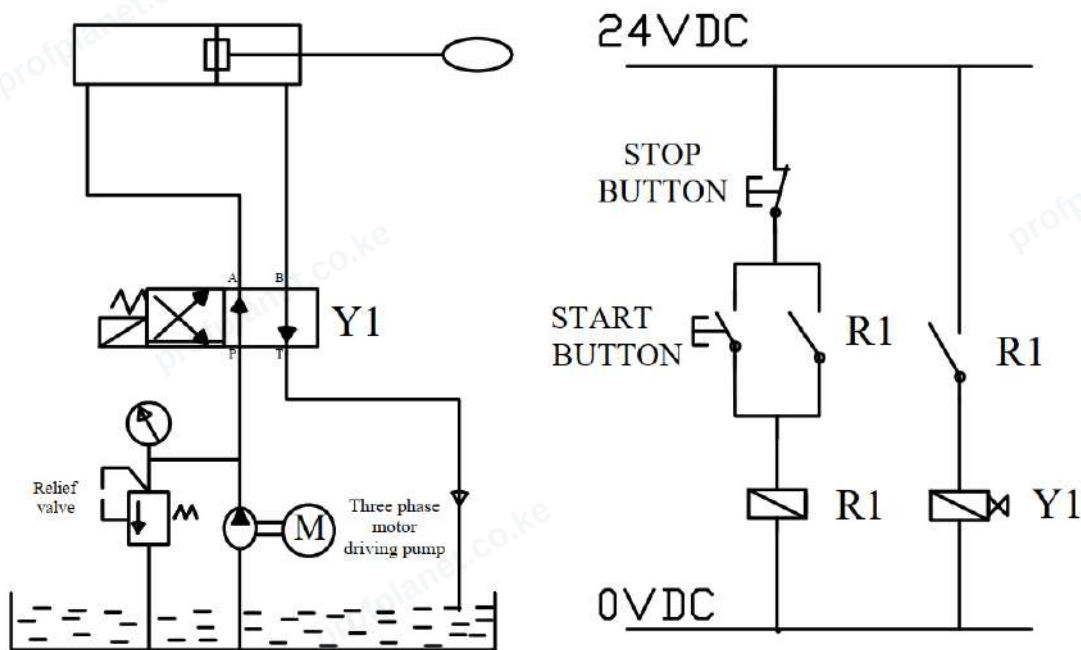


Figure 2

2. You have been provided with the following equipment for the practical tasks:
- 3/2 Push button spring return
 - Double acting pneumatic cylinder
 - Pneumatic throttle valves
 - Air Service unit
 - Manifold
 - Time delay valve
 - 4/2 air control valve
 - Air pipes
 - Electro pneumatic training system (DLQD-DP202)
 - Relay module
 - Switch button module
 - Wiring test lines
 - 24V dc power supply module
 - 4/2-way hydraulic single solenoid valve
 - Hydraulic hoses
 - Double acting hydraulic cylinder