

Centre Hydraulic Power Supply Unit

University of Saskatchewan - Mechanical Engineering – Fluid Power and Controls

**Centre Hydraulic Power Supply and Test Bench Unit
(Middle of Room 1B19)**

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1. PURPOSE AND SCOPE

This SOP provides general instructions to operate the Centre hydraulic power supply and test bench unit. All general lab safety practices must be followed in addition to those cited in this SOP. This SOP applies to all parties using this equipment.

2. RESPONSIBILITIES AND PREQUALIFICATIONS

All workers must:

- Have completed the WESP Lab Safety Course and received a certificate.
- Received training from the Departmental Assistant in charge of the laboratory area.
- Read and understand this SOP prior to beginning the procedure.
- Signed the signatures of understanding page to verify they have read and understood this SOP and any relevant MSDS.
- Have read and understood the University of Saskatchewan **Laboratory Safety Manual**, which can be found with the MSDS binders in rooms 2C26 and OC17.
- This procedure is not to be started outside of regular business hours (unless special permission is given by the Departmental Assistant in charge of the laboratory space) and **MUST NOT** be conducted while working **ALONE**.

3. EQUIPMENT AND CONSUMABLES REQUIRED

The following Personal Protective Equipment (PPE) is required for this procedure:

- Closed toed shoes and long pants
- Safety glasses, goggles or Face Shield
- This SOP

4. DEFINITIONS AND ABBREVIATIONS

None applicable

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5. HAZARDS

5.1. Physical

- **THE HYDRAULIC POWER SUPPLY CANNOT BE LEFT UNATTENDED WHILE BEING OPERATED.**
- Slip hazard from oil spills or oil leaks on the floor. Clean up immediately
- Cut hazard due to pressurized oil jets from leaking pipes or hoses.
- Burn hazard due to hot pipes, hoses, valves or actuators. Avoid contact

5.2. Chemical and Toxicological

- Toxic hazard if oil jet penetrates the skin.

6. CHEMICAL SPILL/RELEASE & EMERGENCY RESPONSE PROCEDURES

Emergency Contact Information:

FIRE Pull an alarm station AND call 9-911 (just 911 from pay phone or cell)

CAMPUS SECURITY 966-5555 24 hours a day

AMBULANCE 9-911 (just 911 from pay phone or cell)

CHEMICAL SPILLS 966-8497 or 966-8493 (days)
966-5555 (evenings and weekends)

7. WASTE DISPOSAL PROCEDURES

All waste oil must be placed in drain bins for recycling.

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8. PROCEDURAL STEPS

Stage 1: Setting Up

1. Ensure that all lines are properly connected and unused ports are capped, plugged or closed
2. Ensure that all valves are closed and pressure control valve knobs are locked
3. Ensure level of fluid in the reservoir is adequate (check sight glass at back of unit)

Stage 2: Start Up Procedure

4. Press **Green** button to start up the pump
5. Open the Supply Flow valve
6. Release the lock nut on the Pressure Adjust valve and slowly increase the system pressure as required by the test
7. The system should now be up and running

Caution: * Do Not Exceed 60 C operating temperature
 * Do Not Exceed 3000 psi pressure

Stage 3: Shut Down Procedure

8. Release system pressure to minimum level with the Pressure Adjust valve and apply the lock nut to prevent valve from loosening
9. Close the Supply Valve
10. Stop Pump (press **Red** button)

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9. REFERENCES

University of Saskatchewan WSEP Documents:

Laboratory Safety Manual:

http://www.usask.ca/dhse/file_view/download.php/Laboratory_Safety_Manual.pdf?id=32&view=1

