Portable Hydraulic Power Supply Units

University of Saskatchewan - Mechanical Engineering – Fluid Power and Controls

EHA System (Room 1B15)

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1. PURPOSE AND SCOPE

This SOP provides general instructions to operate the portable hydraulic power supply units. 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 Campus 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
- Safety glasses, goggles or Face Shield
- This SOP

4. DEFINITIONS AND ABBREVIATIONS

None applicable

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.
- Cut hazard due to pressurized oil jets from leaking pipes or hoses.
- Burn hazard due to hot pipes, hoses, valves or actuators.

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 containers for recycling.

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 there are no objects in the path of the actuator.
3. Check circuit pressure at pressure gauge. If pressure is below 40 psi, it must be recharged.
4. To recharge circuit pressure, first ensure that the level of fluid in the auxiliary reservoir is adequate. Next open the needle valve (small round knob). Then using the hand pump, slowly pump fluid into the circuit until the pressure is 50 psi. Finally close the needle valve.

Stage 2: Start Up Procedure

5. Plug in power cord to turn on the Power Supply fan.
6. Turn on the 3 circuit breaker switches labeled 38, 40, 42 in Panel LP-IM
7. The electric motor should now be turning slowly.
8. Run user supplied software to control electric motor.

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

Stage 3: Shut Down Procedure

9. Turn off the 3 circuit breaker switches labeled 38, 40, 42 in Panel LP-IM
10. Unplug Power Supply fan cord.

9. REFERENCES

University of Saskatchewan DHSE Documents:

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

10. SIGNATURES OF UNDERSTANDING

By signing this form I acknowledge that I have read and understand this SOP, as well as the applicable MSDS's and that I will conduct myself in accordance with this SOP and the general laboratory rules.

NOTE: ALL SIGNATURES MUST BE PRESENT ON THE SOP LOCATED IN ROOM 1B19, other SOP's are made available for convenience only.

Name (Print)	Signature