

**MECHANICAL ENGINEERING UNDERGRADUATE LABROTORY  
STANDARD OPERATING PROCEDURE (SOP)**

<b>Name of SOP</b>	D7 Oscillation of a Mass Spring System
Effective Date	January 21, 2008
Author	Joe Verhaeghe
Reason for SOP	Operation of Undergraduate Laboratory
Approved by (supervisor)	Ron Lodewyks
Date reviewed by JHSC	February 13, 2008

**Definitions**

Terms	none
acronyms	RMM – Risk Management Manual JHSC - Joint Health and Safety Committee

**Requirements**

<b>Applicable OHSA regulations and / or codes of practice.</b>
<b>Training and competency.</b> Training provided by technical staff in the Mechanical Engineering Department. Competency is shown by the individual after training.

**Description of the Task**

<b>Location and time of work</b>	JHE314 during normal working hours
<b>Individuals and skills required</b>	Graduate Students, none
<b>Equipment and supplies required</b>	Tecquipment oscillation beam Oscilloscope 2 BNC cables
<b>Personal protective equipment required</b>	none
<b>Sequential steps to complete the work safely.</b>  Administrator user name: ntmsl Administrator password: nta104b  User name: 3m02 Password: (none, i.e. leave blank)  <ol style="list-style-type: none"> <li>1. Set toggle switch on speed control to <i>inhibit</i>.</li> <li>2. Turn power switch on gray control box on the rear of the unit to <i>on</i>.</li> <li>3. Set toggle switch on speed control to <i>enable</i>.</li> <li>4. Turn speed control knob to required speed.</li> <li>5. Adjustments to the crank on top of unit may be made while the motor is running.</li> <li>6. Stop motor to add or remove weights below the motor.</li> <li>7. Stop motor to make adjustments to the dash pot.</li> <li>8. Connect the oscilloscope to the displacement, speed and reference outputs of the speed control.</li> <li>9. When finished taking measurements set toggle switch to <i>inhibit</i>.</li> <li>10. Turn power switch on gray control box on the rear of the unit to <i>off</i>.</li> </ol>	

**Contingency Plan and Reporting**

<b>Accident / injury response</b> Report Injuries to Technical staff, room JHE205, ext. 24628.
<b>Spill response</b> If oil spill occurs contact Technical staff room JHE205, ext. 24628

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**Equipment shutdowns.**

1. Turn power switch OFF gray control box on the rear of the unit to *on*.
2. Set toggle switch on speed control to *disenable*.

**Environmental Responsibility**

**Waste disposal procedures**

No waste produced

**Building air quality**

Procedure does not affect air quality

**References** (OHSA/ regulations, EPA and Municipal environmental regulations, McMaster University Program/ Policy, Material Data Sheets (MSDS).

RMM #301 Standard Operating Procedure

RMM #502 Hazardous Waste Management

RMM #300 Safety Orientation and Training Program

**Distribution**

Operator

Technical Staff of Mechanical Engineering

Mechanical Engineering Chair

JHSC