Principals of Operation

- Workers will be trained on university and lab procedures, including principals outlined in "Guidelines for Research Lab Use During the COVID-19 Pandemic"
- All work must be scheduled and approved ahead of time
- Common areas are closed (meeting rooms, lunch area, lobby seating, etc)
- Labs will be divided into workstations
- Each workstation area will be marked with tape on the floor
- Workstation seating locations will be a minimum of two metres (six feet) from adjacent workstation seating locations
- Each worker scheduled will be assigned a workstation, typically in one-week increments
- Only the assigned individual may work in the designated workstation area during the scheduled time
- Use of common tools, equipment, and work surfaces will be minimized
- Common tools, equipment, and work surfaces will be sanitized after each use
- Researchers must sign and return “CERC at MARC Acceptance and Acknowledgement Form” indicating their understanding of the SOP and their agreement to follow the procedures
- SOP will be posted on the double doors entering the lab area by room 115

Contents

Principals of Operation ........................................................................................................................................... 1

1 Purpose .................................................................................................................................................................... 3

2 Appropriate Work .................................................................................................................................................. 3

3 Lab Signage and Wayfinding ................................................................................................................................ 3
4  Scheduling Work ......................................................................................................................... 3
5  Workstations ............................................................................................................................... 4
6  Activities for a Typical Workday ................................................................................................ 9
7  Coming to Work ........................................................................................................................... 9
   7.1  Resources ............................................................................................................................... 9
   7.2  Self Assessment of Health and Preparedness ........................................................................ 10
   7.3  Check In ................................................................................................................................ 10
   7.4  Travelling to Work and On Campus ..................................................................................... 10
   7.5  Preparedness .......................................................................................................................... 10
8  Working in the CERC@MARC ...................................................................................................... 10
   8.1  PPE, Hand Washing, and Cleaning Supplies ....................................................................... 10
   8.2  Hand Washing and Sanitizing ............................................................................................... 11
   8.3  Face Coverings ....................................................................................................................... 11
   8.4  Physical Distancing ............................................................................................................... 11
   8.5  Personal Protective Equipment (PPE) Requirements ............................................................... 11
   8.6  Food and Drink ...................................................................................................................... 11
   8.7  Lab Hours ................................................................................................................................ 12
   8.8  Working Alone ....................................................................................................................... 12
   8.9  Workstation Usage and Cleaning ......................................................................................... 12
   8.10 Shared Tools .......................................................................................................................... 12
   8.11 Equipment ............................................................................................................................ 13
   8.12 Shared Lab Workspaces ........................................................................................................ 13
   8.13 MARCdrive Driving Simulator – Vehicle Cabin ................................................................. 13
   8.14 EcoCAR – Vehicle Cabin........................................................................................................ 14
   8.15 IT Services ............................................................................................................................. 14
   8.16 Cleaning Labs ....................................................................................................................... 14
   8.17 Chemical Handling .............................................................................................................. 15
9  Feeling Ill at Work ....................................................................................................................... 15
10 In the Case of an Emergency ..................................................................................................... 15
11 Failure to comply with COVID-19 Procedures and Guidelines .................................................. 15
1 Purpose
To outline the policies, procedures, and guidelines, specific to working safely during COVID-19 Phase I reopening at the facilities of the Canada Excellence Research Chair (CERC) Laureate in Hybrid Powertrain Program located at the McMaster Automotive Resource Centre (MARC) in McMaster Innovation Park (CERC@MARC Laboratories).

2 Appropriate Work
The approval process for appropriate work at CERC@MARC labs is posted here: PDF, PowerPoint

To maintain an appropriate number of students/researchers/staff/faculty within the CERC@MARC labs, and to maintain physical distancing, work is limited to:

• Industry sponsored projects
• Thesis projects
• COVID-19 projects
• Other activities that cannot be performed from home

All work in the labs will be approved by Dr. Ali Emadi, as well as the Associate Dean of Research at the Faculty of Engineering.

3 Lab Signage and Wayfinding

• When working at MARC, follow all signs posted in common areas and laboratories
• Signs will be posted regarding physical distancing, appropriate hand hygiene, and self screening
• Signs may dictate direction of traffic flow through hallways, doors, and stairwells, closure of rooms, and max occupancy of spaces
• The University will post signage in all common areas of the building
• Signage in laboratories, offices, and other non-common areas will be posted by MARC staff and lab leaders
• In each laboratory:
  o Each workspace in a lab will be marked with tape on the floor, only the individual assigned to the workspace should work in the marked area
  o Signs will be posted on the doors outlining contact emails and phone numbers for the lab leaders (see appendix 1) and providing a map of workstations in the room (section 5)
• Available University signage is shown here. Floor tape and additional signage can be provided by Theresa Mitchell (mitchth@mcmaster.ca)

4 Scheduling Work

• All projects must be planned in advance with the Lab Leader for each respective lab as follows - (see Appendix 1 for the emails and phone numbers of lab leaders):
  1. MARC 115 (Hybrid Powertrain and FCA Lab) – Peter Azer and Phil Kollmeyer
  2. MARC 117 and 118 (MARCdrive - 4 Wheel Dyno and Driving Simulator Lab) – Joel Roeleveld and Lucas Bruck
  3. MARC 120 (High Bay Space) – Phil Kollmeyer and Joel Roeleveld
  4. MARC 121 (Eaton Lab) – Alan Callegaro
  5. MARC 122 (BorgWarner Lab) – Silvio Rotilli Filho and Alan Callegaro
6. MARC 123 (A&D Dyno Lab) – Phil Kollmeyer and Joel Roeleveld
7. MARC 127, 130, 131, and 132 (Battery Lab and AVL High Speed Dyno Lab) – Cam Fisher and Phil Kollmeyer
8. MARC 149 (Workshop) – Contact Cam Fisher to request use of lab

- While MARC 127, 130, 131, 132, and 149 are listed for reference because they are commonly used by the CERC@MARC group. These rooms are part of the Centre for Mechatronics and Hybrid Technologies (CMHT) though, please see CMHT SOP. When entering CMHT, individuals are expected to follow all of the requirements for both CERC and CMHT.
- To maintain effective 2 metre (6 foot) distancing and individual workspace use, each lab has a set number of defined workstations (minimum 2 metre radius around each workstation) as follows:

<table>
<thead>
<tr>
<th>Room #</th>
<th>Lab Name</th>
<th>Dimensions (m)</th>
<th>Square Feet</th>
<th># of Workstations</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>Hybrid Powertrain and FCA Lab</td>
<td>10 x 18</td>
<td>1,743</td>
<td>7</td>
</tr>
<tr>
<td>117</td>
<td>4 Wheel Dyno &amp; Driving Simulator (MARCdrive) Control Room</td>
<td>10 x 3</td>
<td>323</td>
<td>2</td>
</tr>
<tr>
<td>118</td>
<td>4 Wheel Dyno and Driving Simulator (MARCdrive)</td>
<td>18 x 10</td>
<td>1,937</td>
<td>1</td>
</tr>
<tr>
<td>120</td>
<td>High Bay Space</td>
<td>21 x 23</td>
<td>5,199</td>
<td>6</td>
</tr>
<tr>
<td>121</td>
<td>Eaton Lab</td>
<td>10 x 9</td>
<td>969</td>
<td>4</td>
</tr>
<tr>
<td>122</td>
<td>BorgWarner Lab</td>
<td>10 x 5</td>
<td>538</td>
<td>3</td>
</tr>
<tr>
<td>123</td>
<td>A&amp;D Dyno Lab</td>
<td>10 x 9</td>
<td>969</td>
<td>2</td>
</tr>
<tr>
<td>127</td>
<td>Battery Lab and Engine Dyno Control Room¹</td>
<td>4 x 13</td>
<td>560</td>
<td>1</td>
</tr>
<tr>
<td>130</td>
<td>Battery Lab¹</td>
<td>4 x 7</td>
<td>301</td>
<td>N/A</td>
</tr>
<tr>
<td>131</td>
<td>AVL High Speed Dyno Control Room¹</td>
<td>4 x 4</td>
<td>172</td>
<td>2</td>
</tr>
<tr>
<td>132</td>
<td>AVL High Speed Dyno¹</td>
<td>4 x 7</td>
<td>301</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1. Rooms 127, 130, 131, and 132 are located in the Centre for Mechatronics and Hybrid Technologies (CMHT) and must follow the SOP for CMHT.

- Individuals must work with leaders from individual labs to schedule their work and to request lab equipment
- If requests are not submitted and approved, individuals will not be permitted in the CERC@MARC labs
- All work must be scheduled using the CERC@MARC approval and scheduling method (see Section 2 and 4)

5 Workstations

- An individual will be assigned a workstation in accordance with the experimental work they will be performing
- Workstation assignments will be tracked in the master lab schedule
- Each workstation is defined, named, and marked off on the floor with tape
- No one other than the person assigned shall enter a workstation unless the assignee requests another lab member to review their work or provide assistance. Exception: Two people who live together and are in a relationship may occupy a workstation at the same time and do not need to follow physical distancing guidelines.
- If a person must pass through a workstation to reach another area of the lab, they must alert anyone present in the workstation area and maintain 2 metre (6 foot) physical distancing.
- Only one person shall be present in a workspace at a time, unless a job absolutely requires two people (such as assembling a heavy piece of equipment), then appropriate PPE is required (see section 8.5).
- Workspaces are defined in the following maps for each lab:

<table>
<thead>
<tr>
<th>Room #</th>
<th>Lab Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>Hybrid Powertrain and FCA Lab</td>
</tr>
<tr>
<td>117 and 118</td>
<td>4 Wheel Dyno &amp; Driving Simulator Facility (MARCdrive)</td>
</tr>
</tbody>
</table>

CERC@MARC Laboratories COVID-19 Procedures and Guidelines 2020/06/11 Rev 3.2
127 and 130  Battery Lab and Control Room (for reference only, refer to CMHT SOP)

131 and 132  AVL High Speed Dyno
6 Activities for a Typical Workday

a) Before leaving home
   i. Complete self assessment of health and preparedness (section 7.2)
   ii. Indicate on phone app (if available) hours work will be performed on campus (section 7.3)

b) Travel to work following physical distancing guidelines (section 7.4)

c) Wash hands (section 8.2)

d) Go to office, drop off personal items and any food or drink

e) Go to lab workstation (section 5)

f) Work only during specified lab hours (section 8.7)

g) If working alone, follow guidelines for working alone (section 8.8)

h) Follow guidelines for washing or sanitizing hands, tools and equipment as follows:
   i. Hands (section 8.2)
   ii. Shared tools (section 8.10)
   iii. Equipment (section 8.11)
   iv. Shared lab workspaces (section 8.12)
   v. MARCdrive simulator (section 8.13)

i) If a task cannot be performed without coming within 2m of another individual, utilize appropriate PPE (section 8.5)

j) When eating or drinking, follow guidelines (section 8.6)

k) Return tools and clean workstation at end of day (section 8.16)

7 Coming to Work

7.1 Resources
    • Stay informed on the local COVID-19 situation.
7.2 Self Assessment of Health and Preparedness

- The McMaster University Workplace COVID-19 Employee/Researcher Checklist must be completed each day before coming to MARC to complete scheduled work.
  - Link to checklist
  - A phone app is under development for self assessment and check in to the workspace, the SOP will be updated to require use of the app when it is available
- Individuals are expected to keep a record of their own daily response to the checklist

7.3 Check In

- Attendance at the lab will initially be tracked via the scheduling tool and may be used to inform others if there is a probable COVID-19 case at the lab
- A phone app is under development for self assessment and check in to the workspace, the SOP will be updated to require use of the app when it is available

7.4 Travelling to Work and On Campus

- Follow physical distancing guidelines while traveling to and from work and navigating the McMaster campus.
  - Follow McMaster “Guidelines for Travelling on Campus (use of paths, sidewalks, parking lots, hallways/corridors) during the COVID-19 Pandemic”

7.5 Preparedness

- Each person needs to be ready at the end of each day to not come back to the lab, personal workspace must therefore be left clean and any shared tools or equipment must be put away at the end of each day

8 Working in the CERC@MARC

8.1 PPE, Hand Washing, and Cleaning Supplies

- The following supplies will be stocked in a cabinet located in the High Bay space in order to replenish cleaning stations (includes initial quantity purchased, for reference):
  - Supplies ordered by CERC@MARC
    - Disposable face masks (quantity 300)
    - Washable face masks (90)
    - Small bottles of hand sanitizer (15)
    - 500ml bottles of hand sanitizer (80% Ethyl Alcohol) (48)
    - Face shields (50)
  - Supplies ordered by CMHT – can be provided to CERC@MARC as needed
    - 1L spray bottles of disinfectant cleaner (the cleaner is listed on the health Canada list for Covid 19) (12)
    - 4L jugs of the same disinfectant cleaner (to refill the 1L bottles) (4)
    - 20L Pail of hand sanitizer (to refill the smaller bottles) (1)
    - Disposable face masks (200)
- If additional cleaning supplies or PPE, such as surgical masks, are needed contact Theresa Mitchell (mitchth@mcmaster.ca)
8.2 Hand Washing and Sanitizing
- Must be completed upon
  - Before an individual enters a lab (use sink in bathrooms or in CERC@MARC or CMHT high bay labs)
  - Before an individual leaves their assigned workstations (hand sanitizer may be used from cleaning stations provided in the labs)
  - After sneezing or touching one’s face (hand sanitizer may also be used then)
- When washing or sanitizing hands follow the posted procedure (McMaster handwashing video)

8.3 Face Coverings
- While in the lab, researchers are recommended to wear a face covering that covers the mouth and nose. The face covering can be a medical mask or a cloth face covering or mask.
- If the student has a preferred face covering, they can choose to wear that. Face coverings are also provided in the lab (section 8.1)
- As discussed in section 8.5, if for any reason, two researchers are within 6 ft of each other for a short time (i.e., moving equipment, etc.), then a surgical face mask must be worn for this time duration.

8.4 Physical Distancing
- 2m or 6ft will be kept between workstations.
- 2m or 6ft of space will always be maintained between individuals working in the CERC@MARC Labs
- If a task requires more than one person in a 2m (6ft) radius, such as changing a machine on a dyno, then appropriate PPE is required, including a surgical face mask as described in section 8.5.

8.5 Personal Protective Equipment (PPE) Requirements
The PPE listed below must be worn for tasks in which a 2 metre (6 foot) distance cannot be kept from others:
- Surgical face mask
  - See “Guidelines/Protocols for Face Coverings and Masks During COVID-19 Pandemic”
  - Non-medical facemasks, such as cloth facemasks, are not PPE but may be worn at any time other than when a facemask is required for PPE

8.6 Food and Drink
- Individuals will not be permitted to eat or drink in the CERC@MARC labs or keep any personal belongings at their workstation
- No refrigeration will be available to keep food cold, nor will a microwave be available; all lounge locations are closed
- Food and belongings will be kept at each individual’s office desk (offices are on the second floor of MARC, and are separate from the labs discussed in the SOP)
- Common areas are closed (meeting rooms, lunch area, lobby seating, etc)
- Any food may be eaten at each individual’s office space or outside of the building
8.7 Lab Hours
- The CERC@MARC labs will be open Monday through Friday for scheduled work from 8:00am – 8:00pm. If access or use of the labs on the weekend is required, please discuss with Dr. Emadi.
- All work must stop by 7:30pm so individuals can clean their assigned workspace, which will commence in the last 30 minutes of their work.

8.8 Working Alone
- Typically, work should only be performed when more than one person is present at the lab.
- University working alone policy expressly prohibits working on equipment with exposed voltages of 300V or more without a second person directly observing the work (*i.e. applies to any power electrics or electric machines hardware which utilizes voltages of 300V or greater and is not finger safe, properly grounded, and approved as a safe setup by lab staff*).
- If any work must be done alone, or the lab must be visited alone, a Safe Operating Procedure must be developed with the individual’s supervisor for performing the relevant work, please see the university “Working Alone Program” policy.

8.9 Workstation Usage and Cleaning
- Individuals are expected to gather all tools and equipment required for their work before said work begins.
- Individuals are expected to remain in their workspace unless they require a tool or another piece of equipment that they do not have access to in their workspace:
  - If an individual needs to leave the workspace for any reason, physical distancing rules must be obeyed.
  - If an individual needs to leave their workspace, they must wash or sanitize their hands immediately before getting a tool, another piece of equipment, or leaving the lab.
  - Individuals are not to enter or visit any other labs unless approval is granted by the lab leader.
- Every workstation must be completely sanitized as described in section 8.16 and everything must be put away at the end of every day regardless if the individual is scheduled to work the following day.

8.10 Shared Tools
- At the present, each lab only contains a single set of tools.
- The tool sets are not complete either, so tools may need to be taken from another lab.
- Whenever shared tools (*i.e. any tools stored outside of your workstation and used by anyone other than yourself*) are used, the following procedure must be followed:
  1. Wash or sanitize hands upon leaving the assigned workspace.
  2. Collect the tools which will be used from the relevant toolboxes.
  3. Bring the tools back to the individual’s assigned workspace.
  4. When the work is complete, bring the tools to the respective toolbox cleaning station.
  5. Place the tools on the “Not Cleaned” side (see image below).
  6. Sanitize hands with the hand sanitizer.
  7. Use an appropriate disinfectant for the tools and place on the clean side. **DO NOT spray the cleaning solution directly on any electrical equipment.** For electrical equipment, spray on the paper towels and then wipe the equipment.
8. Put tools away in toolbox
   9. Following the sanitization of tools, wash or sanitize hands again
      • A printable version of the procedure is provided in appendix 2 and will be posted at each tool cleaning station
      • If tools outside of the individual’s assigned lab are needed, contact the relevant Lab Leader for permission to enter and borrow tools

8.11 Equipment
   • The lab contains many pieces of shared equipment, including multimeters, oscilloscopes, power supplies, etc.
   • Equipment will typically be assigned to a workspace for an entire week period
   • At the start of a work week, the assigned equipment should be brought to the workspace by the individual using the equipment
   • The equipment should be sanitized by spraying sanitizing solution on a paper towel and wiping it with the paper towel. Use a sanitizing solution which will not damage the equipment
   • At the end of a work week, the equipment should be sanitized again and returned to its respective storage area or to a common area in the lab
   • For equipment which must be used by multiple individuals during a week, the equipment must be cleaned before and after transferring between individuals

8.12 Shared Lab Workspaces
   • Any workspace not assigned to an individual is considered a shared workspace
   • Shared workspaces may include for example solder stations, work benches, thermal chambers, dyno test stands, and the vehicle simulator
   • Wash or sanitize hands prior to and following use of a shared workspace
   • When using a shared workspace, the area must be sanitized after use
   • For equipment prone to rust, such as dyno motors, apply a thin coat of oil following sanitization

8.13 MARCdrive Driving Simulator – Vehicle Cabin
   • When running an experiment from inside the cabin of the driving simulator, the user should follow the applicable hygiene recommendations for using vehicles, outlined in the “Guidelines for Fieldwork During the COVIDP-19 Pandemic”
• Each week, only one designated driver will be allowed in the cabin. This person will conduct the tests during the whole week
• It is the responsibility of the designated driver to maintain the cleanliness of the cabin according to the guidelines
• At the end of the week the designated driver must fully clean the cabin

8.14 EcoCAR – Vehicle Cabin
• When working on the vehicle from inside the cabin of the Blazer, the individual should follow the applicable hygiene recommendations for using vehicles, outlined in the “Guidelines for Fieldwork During the COVID-19 Pandemic”.
• Each week, only one individual will be assigned to work inside the cabin. This person will be assigned to workstation 2 and will be the only person allowed to go in the vehicle.
• The individual will use the equipment that is assigned to workstation 2 for an entire week period.
• It is the responsibility of the individual to maintain the cleanliness of the cabin according to the guidelines.
• At the end of the week the designated individual must fully clean the cabin.
• Some tasks require two individuals to be in contact with the vehicle at once. Individuals will always maintain a 2m distance from one another. To facilitate this, the individual not in the vehicle cabin will be limited to one of the two following locations, and must adhere to Section 8.12 Shared Workspaces:
  o The front of the vehicle (Engine Bay)
  o The rear of the vehicle (Rear Hatch/Trunk)
• For tasks in which a 2 metre (6 foot) distance cannot be kept from each other, the guidelines in Section 8.5 regarding PPE must be followed.

8.15 IT Services
• There are many PCs in the labs which require services from the IT group (help@hybrid.mcmaster.ca)
• To help minimize the onsite IT work required, IT issues should be approached as follows, starting with Level 0 and escalating level by level as needed:
  o Level 0 - consult https://wiki.hybrid.mcmaster.ca for solution
  o Level 1 - e-mail help@hybrid.mcmaster.ca to open a ticket
  o Level 2 - chat on Microsoft Teams and coordinate diagnostics via Teams Screen Share or Windows 10 Quick Support
  o Level 3 - physical intervention outside of normal hours with approval of lab manager or project lead
  o Level 4 - physical intervention wearing PPE with IT specialist
• When a laptop or PC is to be transferred from IT to a lab member, IT will designate a space for the device to be picked up and they will sanitize the hardware prior to leaving it for pickup

8.16 Cleaning Labs
Individuals are responsible for cleaning their own workspace at the end of every day or when they are finished their work.
• Each workstation will be supplied with sanitizing solution in a spray bottle, a roll of paper towel, and a bottle of coating oil if required.
• To clean surfaces and other equipment, spray the sanitizing solution onto some paper towel then use the paper towel to lightly wipe down the equipment.
• For metal surfaces that are prone to oxidation, such as T-slot tables, a thin film of oil must be applied after disinfecting the surface with the sanitizing solution.
• Dispose of used cleaning supplies in the garbage cans provided.
• When a garbage can is full, please tie the garbage bag shut, place in the hallway, and put a new bag in the can.

General workspace clean-up instructions:
1. At the end of the day or after completing their work, individuals must tidy away their personal devices into their backpack/briefcase to take home.
   o Personal items may not be left in the lab overnight.
   o It is highly recommended individuals clean their personal equipment with sanitizing solution before putting it away to take home.
2. Once finished working, individuals must clean all hand tools (section 8.10) and put them away.
   o Tools may not be left out overnight.
3. After all tools and personal items are cleaned and put away, all work surfaces and frequently used objects must be cleaned with the sanitizing solution. This includes but is not limited to machine keyboards, monitors, equipment, chairs, desks, and any toolboxes used.

8.17 Chemical Handling
• For any chemicals required please follow SOP’s for material handling.
• Ensure containers are disinfected with sanitizing solution after use.

9 Feeling Ill at Work
If at any point an individual starts feeling ill at work, they must inform their supervisor and immediately go home to self-isolate. The lab supervisor will inform all other students working in the lab that said individual has left because they started to feel ill. Everyone is expected to leave the lab and begin monitoring their condition. The lab supervisor will determine the best course of action to disinfect the lab. Work may continue once the lab is deemed safe to use.

10 In the Case of an Emergency
• In the case of an emergency dial 911 (cell) or 9-911 (building phone) and have someone go to the front of the building to meet emergency responders since the building will remained locked even during regular business hours.
• In the case of a fire alarm or another type of emergency on campus/McMaster Innovation Park, McMaster University’s SOPs will apply. Please try to adhere to physical distancing guidelines if an evacuation is necessary.

11 Failure to comply with COVID-19 Procedures and Guidelines
Failure to comply with the above procedures will result in a loss of lab privileges.
### Appendix 1

**Contact Info for CERC and CMHT Labs at MARC**

<table>
<thead>
<tr>
<th>Room #</th>
<th>Lab Name</th>
<th>Contact(s)</th>
<th>Phone #</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>Hybrid Powertrain and FCA Lab</td>
<td>Peter Azer, Phillip Kollmeyer</td>
<td>(289) 489-0900, (608) 512-5327</td>
<td><a href="mailto:eliap@mcmaster.ca">eliap@mcmaster.ca</a>, <a href="mailto:kollmeyp@mcmaster.ca">kollmeyp@mcmaster.ca</a></td>
</tr>
<tr>
<td>117 and 118</td>
<td>MARCdrive, 4 Wheel Dyno and Driving Sim.</td>
<td>Joel Roeleveld, Lucas Bruck, Phillip Kollmeyer</td>
<td>(905) 570-2082, (289) 887 9103</td>
<td><a href="mailto:roelej@mcmaster.ca">roelej@mcmaster.ca</a>, <a href="mailto:bruckl@mcmaster.ca">bruckl@mcmaster.ca</a></td>
</tr>
<tr>
<td>120</td>
<td>High Bay Space</td>
<td>Phillip Kollmeyer, Joel Roeleveld, Shiva Ghasemi Dehkordi</td>
<td>(608) 512-5327, (905) 570-2082, (416) 893-9030</td>
<td><a href="mailto:kollmeyp@mcmaster.ca">kollmeyp@mcmaster.ca</a>, <a href="mailto:roelej@mcmaster.ca">roelej@mcmaster.ca</a>, <a href="mailto:ghases4@mcmaster.ca">ghases4@mcmaster.ca</a></td>
</tr>
<tr>
<td>121</td>
<td>Eaton Lab</td>
<td>Alan Callegaro</td>
<td>(289) 308-7597</td>
<td><a href="mailto:dornelea@mcmaster.ca">dornelea@mcmaster.ca</a></td>
</tr>
<tr>
<td>122</td>
<td>BorgWarner Lab</td>
<td>Silvio Rotilli, Alan Callegaro</td>
<td>(289) 659-9820, (289) 308-7597</td>
<td><a href="mailto:rotillis@mcmaster.ca">rotillis@mcmaster.ca</a>, <a href="mailto:dornelea@mcmaster.ca">dornelea@mcmaster.ca</a></td>
</tr>
<tr>
<td>123</td>
<td>A&amp;D Dyno Lab</td>
<td>Phillip Kollmeyer</td>
<td>(608) 512-5327</td>
<td><a href="mailto:kollmeyp@mcmaster.ca">kollmeyp@mcmaster.ca</a></td>
</tr>
<tr>
<td>127 and 130</td>
<td>Battery Lab and Control Room</td>
<td>Cam Fisher, Phillip Kollmeyer</td>
<td>(608) 512-5327</td>
<td><a href="mailto:cfisher@mcmaster.ca">cfisher@mcmaster.ca</a>, <a href="mailto:kollmeyp@mcmaster.ca">kollmeyp@mcmaster.ca</a></td>
</tr>
<tr>
<td>131 and 132</td>
<td>AVL High Speed Dyno</td>
<td>Cam Fisher, Phillip Kollmeyer</td>
<td>(608) 512-5327</td>
<td><a href="mailto:cfisher@mcmaster.ca">cfisher@mcmaster.ca</a>, <a href="mailto:kollmeyp@mcmaster.ca">kollmeyp@mcmaster.ca</a></td>
</tr>
</tbody>
</table>
Appendix 2 (Print and place at tool cleaning stations)

Instructions for Cleaning Tools Prior to Returning them to the Toolbox

1. Place the tools on the “Not Cleaned” side (see image below)

2. Sanitize hands with the hand sanitizer

3. Use an appropriate disinfectant for the tools and place on the clean side. **DO NOT spray the cleaning solution directly on any electrical equipment.** For electrical equipment, spray on the paper towels and then wipe the equipment.

4. Put tools away in toolbox