

Lafayette College | Electrical and Computer Engineering

# Motor Controller Cooling System Errata

ECE 492 Spring 2017

## Table of Contents

<b>Software</b>	<b>3</b>
<b>Hardware</b>	<b>3</b>

## Software

1. Check the digital pins whether they are being used by the CAN Bus Shield or not, not all the pins are tested altogether at the same time, especially digital pins 11-13.
2. We didn't have time to put everything together because Arduino Uno was broken due to the amount of current was too big (the limit for the whole board is 200mA), so make sure to not exceed this limit.
3. The *SafetyLoopController()* function is currently only controlled by temperature, more complex algorithm should be used.
4. The fan RPM reading function *FanReader()* can be improved.

## Hardware

5. Take down the fans from the radiator, and connect the rest pins to the connector following the "Cooling ICD External" file.
6. Connect the pins to the connector of 4 sensors following the "Cooling ICD External" file. Then, add them to the water flow loop shown as "water flow block diagram".
7. Connect the power of 24V, 12V and 5V to the board from arduino board and dc to dc convertor and connect the board with arduino board following the schematic diagram.
8. Connect the board to the connector on the panel on the box without changing the existing connection.