**Lafayette College: Electrical and Computer Engineering**

08

**Fall**

Tractive System Interface Verification: QA-TSI-01

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This document contains information about how to verify the electrical connections inside the TSI box.

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# Desired objectives

This test verifies all high voltage mechanical connections in the TSI circuit are electrically connected.

# Required Hardware

* TSI box
* Cables to
* Simulated load
* PPE per safety plan
* Danger zone per safety plan
* Current probe

# Required Software

None

# Hardware Setup

## TSI box

* Short W11 together so that HV+ is connected to HV-. Use a bolt for this
* Connect HV+ and HV- to a power supply that can be current limited.

# Software Setup

N/A

# Test

Suggestion: Run test at 20A.

## Desired data

It is desired to get the resistance between all connections. Use the picture in Appendix A.

Fill out attached excel document the box. All resistances should be at least under 100uOhms. Ideally they should be under 10uOhms.

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Witness/examiner signature Date Pass/Fail

# Appendix A: Wiring requirements

|  |  |
| --- | --- |
| Cable | Total count for full test |
| W12 | 1 |
| W13 | 1 |



# Appendix B: Measurement location images

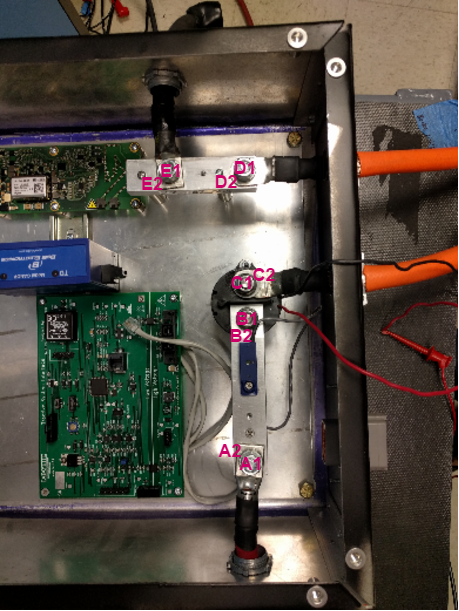
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Figure 1 Top of TSI box