TSI Errata

Box

* Hole on front panel not needed if no key being used.
* Make panels able to detach from box with connectors still on.
* PCB Mounting holes slightly off.
* Mounting plate uses 6-32 screws and all others are 8-32. Make everything us 8-32.
* 8-Pin connector cutout not made correctly. Only 2 holes can be used to screw in now.
* One of the 8-Pin connectors needs to be a 12-Pin.
* Use banana jacks that can be secured to panels for TSMP.
* Change ceramic standoffs to new type that is still electrically insulated.
* Box the MEs made has hole for High Voltage return from motor controller too high.
* Din Rail for CAN Isolator too long and extends under PCB. Make this shorter.
* If possible, push things closer to back wall to allow more space for din rail connections.
* High voltage wall has thin connection points and broke already. Make this more structurally sound and secured in box.

PCB

* Tied +24\_RTN & CH\_GND
  + Consider using 2nd DC/DC for 10V, or use DC/DC w/ two outputs (5/12)
* Fix footprint outlines for header pins (currently plastic goes outside silkscreen.
* R58 replaced w/ 15kohm (orig. 24.9k). This was due to incorrect gain calculations on isolation circuits.
* Drive Button needed a pull-up. Now using Drive Button pin w/ internal pull-up, and a spare/open GND pin.
* Tied Pins 19 & 20 together for +24V to Brake Overtravel/Brake Pressed
* Replaced R33 w/ 2k resistor to get roughly 17% plausibility window.
  + This was for testing purposes and concern over the accuracy of the potentiometers/method of mounting them.
  + The 500 ohm resistor in original design is incorrect. This will result in 5% window, not 10%. Needs fixed.
  + Another location a pot may be useful is R33 to the plausibility window may be changed.
* Replaced R25 w/ 4.75k resistor to match APPS2 on car pedal cluster.
* Replaced R26 w/ 4.99k resistor to match APPS1 on car pedal cluster.
  + The datasheet for the pots was incorrect, saying 2k, instead of 5k.
  + One suggestion would be to add trimmer pots as R25, R26, that way there may be adjustment depending on the actual potentiometer values.
* Serial Number mask is incorrect. Currently exposes GND plane.
* Board as is installed on the car currently bypasses Throttle Plausibility directly to jumper.
  + Still allows for Drive Button control.
* The HVPL circuit seems burnt out. Traced back to buck converter, seems to go bad there.
* Current Motor Controller cable is incorrect. +5V from Motor Controller does not come as intended, had to splice into +5V being supplied to encoder.

Entire package

* Add Throttle measuring point to TSI subsystem
* Label TSMPs
* Housing around TSMPs
* Implement overcurrent logic, reduce throttle when over current (maybe add LED too)