Ticket #1328

Ticket Status:	Closed	**Name:**	Philip Piper
Department:	Electrical	**Email:**	piper.m.philip@gmail.com
Create Date:	04/12/2016 9:45 pm	**Phone:**	(713) 501-2744
Field of Study:	Electrical Engineering		

Subject: **Yale University**
04/12/2016 9:45 pm Philip Piper

Hey,

I have a question about EV4.5. We have an aluminum scatter shield covering the top of our outrunner motors as shown in "Rear View.jpg." The motors without the scatter shield are shown in "Top View.jpg." We want to use the scatter shield as the top and back of an HV closeout for the six tractive system cables between the motor controllers and the motors (<8" long) such that we don't need to use conduit. Its such a short run that closing out the 0 AWG cable is much easier than trying to fit conduit while still keeping the wires flexible enough to bend and remove connectors. "Front View.jpg" gives a good view of where the cables would run through. The rear of the accumulator closes out all of the cables except for the connectors themselves (Amphenol PowerLok 3 conductor connectors). All exposed tractive system connections (lug son the motors) would be completely enclosed from the finger probe test by this design, however the 0 AWG cable directly leaving the PowerLok connectors would be exposed (insulated 0 AWG cable of course).

Would this design fulfill EV4.5? The only reason we would ever remove the scatter shield would be to work on the motors, in which case we would want the TS lugs exposed. Servicing the powertrain itself (planetary gearboxes and axles) can be done with the scatter shield installed. I'm pointing this out because EV4.5.2 specifically says closeout can not be done by "body panels," which this clearly is not.

Best,

Phil
Front View.jpg*(3.5 mb)* Rear View.jpg*(3.1 mb)* Side View.jpg*(2.9 mb)* Top View.jpg*(3.8 mb)*

04/15/2016 1:30 pm

Phil,

The electrical tech inspectors discussed your housings/covers etc. this noon and felt that your approach is sound and that you are not violating any rules.

Regards,

-Doug F

Please Wait!

Please wait... it will take a second!