

Ticket #1113

Ticket Status: Closed

Name: Philip Piper

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Create Date: 11/25/2015 10:26 pm

Phone: (713) 501-2744

Field of Study: Electrical Engineering

Subject: **Yale University**

11/25/2015 10:26 pm Philip Piper

This rules request is in regards to EV4.5.13.

Is "the frame" as referenced by EV4.5.13 the surface envelope as defined by Figure 24, the major structure of the frame as defined by T3.2(h), or something else entirely? I ask because we plan to use shielded #1 gauge cable between our motor controllers and the motor. But it traces the path as illustrated by the attached image which isn't completely surrounded by frame members, but remains well within the surface envelope of the frame.

Best,

Phil

HV Cable Path.pdf(66.2 kb)

11/27/2015 1:14 pm

Phil,

The frame referenced in EV4.5.13 is that which is defined in T3.2(h)

It is difficult to tell from your drawing, but assuming that the wire is not outside the vertical planes defined by the sides of the frame, then your location is acceptable for shielded cable.

Note that this may not comply with the strictest interpretation of the rule, so you should print a copy of this decision and carry it with you to tech inspection.

-Dougf

11/28/2015 10:17 pm Philip Piper

Doug,

Hopefully this very crudely drawn overlay shows you my intent. The cables will indeed remain within the vertical planes defined by the sides of the frame. All 6 cables will pass between the main roll hoop braces, then directly down to the motors (only one pictures in the attached top view).

Best,

Phil

HV Cable Path Top View.pdf(106.2 kb)

11/29/2015 9:16 am

Phil,

That looks reasonable. though the two outer wires should go underneath the roll hoop braces.

Keep in mind the intent of the rule. We are concerned about snagging a TSV wire during a mishap, which could result in the wire being pulled from its mooring thus exposing live TSV conductors.

Your wiring appears to be out of the way, but you might want to contact us again when you have some assembled hardware you could photograph.

Regards,

Doug F

03/13/2016 1:56 pm Philip Piper

Doug,

Here is a better image of the tractive system wiring, along with my understanding of the surface envelope. Just wanted to double check EV4.2.1 compliance with you.

Thanks!

Phil

Ev4.2.1 Image.jpeg(5.4 mb)

03/14/2016 11:58 am

Phil,

That looks OK to us. You're good to go.

-Doug

Please Wait!

Please wait... it will take a second!