



INTRODUCTION:

Some time has passed since my postings under the TTXGP Subject regarding Electrical Safety, particularly as related to the imminent TTXGP. I have endeavoured to highlight the dangers of higher voltages/current in Racing, I have also referred to published data from both Toyota (Prius) and Honda (Civic Hybrid) regarding Hybrid Vehicle Crash Risk Assessment etc.

Formula 1 is currently trialling KERS, (Kinetic Energy Recovery System), basically during braking, electrical energy is generated and 'stored' for later use in short, (currently advised as six second bursts), F1 Commentators advise some 80 Horsepower (discharged from KERS) can be introduced into a KERS equipped F1 Car Drive Train to boost performance to assist passing etc. The shocking truth is an ELECTROCUTION has already happened on the 'Pit Apron' during Sauber BMW Testing in Spain, the car was intact, a reported significant Capacitive Discharge electrocuted a Mechanic, he was hospitalised and survived. PLEASE DO NOT overlook what I just posted here, the Electrocutation occurred on the 'Pit Apron' not as a result of a major F1 crash situation. Link to Electrocutation Video: <http://jalopnik.com/399510/heres-what-being-electrocuted-by-a-formula-one-race-car-ker-system-looks-like>

MARSHALL'S ISSUES:

I have repeatedly drawn attention to IOMTT Marshall's safety as it relates to a catastrophic crash of a TTXGP Bike/Rider, PLEASE read the following comment attributed to Aussie F1 Driver - Mark Webber, I believe he was quoted on behalf of the Grand Prix Drivers Association:

"GPDA hopes gloves don't hinder crash response

In the event of a crash that requires marshal intervention or medical assistance the drivers' representative body GPDA is concerned about trackside marshals having to wear heavy insulated gloves this year, to tackle the risk of electrocution from F1's new KERS systems. It was whispered at Albert Park on Friday that some of the trackside personnel in Australia, including medical aides, are not happy about being told to only touch cars and drivers while wearing the gloves. Mark Webber, a leading light of the Grand Prix Drivers' Association, admitted the body is concerned the situation may delay the implementation of emergency help, for example in the event of a crash that requires marshal intervention or medical assistance.

"Obviously if there is a large accident, and we need pretty good medical attention and very fast, it has been mentioned a while ago that we would like it to be addressed," the Australian driver told reporters in Melbourne.

The 32-year-old said the GPDA has been told that the type of gloves used will not hinder emergency response, but it is also true that less than half the field in Australia is not KERS-equipped.

Webber said: *"Hopefully they will have some common sense that they know that the cars with KERS, the cars without KERS, can be treated a bit differently in the case of a panic or an emergency."*

With the greatest respect to Mark Webber, the last sentence is simply absurd. In my opinion if 'some' KERS Equipped Cars are 'in the event' then ALL F1 Track Marshall's/Medical First Response must be equipped with appropriate Electrical Rescue Gloves/Boots, Rescue Hooks and have the Appropriate Training. Clearly there is no time to assess the type of Car configuration in an emergency, the worst case scenario must apply.

PLEASE just think how all this relates to the possibility of a 'worst case scenario' catastrophic crash of a Battery Powered TTXGP Bike/Rider, where the Battery Stack could be totally exposed and the Rider entangled in the machine.

UPDATE MAY 2009: FORMULA 1 - DRIVERS AND MARSHALL'S ISSUES:

Not long to go now, a revisit to TTXGP and Formula 1 KERS Electrical Safety only heightens my disappointment about all this. Very recent chatting to TT Marshalls gives me the impression that NO level of basic Electrical Safety Tuition has been offered 'yet', I would love to be corrected on that one, please somebody tell me I am wrong! Most importantly I do NOT want to read 'again' about how many Professionals are at the TTXGP Upper Echelon of Planning and how many Electrical Standards are in the TTXGP Rules, the issue NOW is the safety and direct tutoring of Riders, TT Marshalls and First Response Medical Personnel. Oh and MSDS Sheets to the Tower for each Entrant, I really wonder which Authority is taking Full Responsibility to ensure all this is DONE BEFORE the TTXGP Practice Days and Race Day.

As for Formula 1, yes we can all learn a lot from Electrical KERS goings on with regard to 'Drivers to Leap out of Formula 1 Cars' and 'Warning Lights and Insulated Gloves', all this from the closest 'Four Wheel version of TTXGP' follows, (copied from F1 Websites):

DRIVERS TO LEAP OUT OF FORMULA 1 KERS CARS: Formula 1 drivers have been given advice about how to dismount their cars as the controversial new energy re-use technology KERS is set to be introduced this season. It is unclear how many teams will actually deploy their systems in Melbourne late next month, but it is nonetheless obvious that meticulous preparations for the potentially dangerous technology has been used in the development and testing phase

At the winter test tracks, mechanics wear big rubber gloves to touch the cars, which bear 'high voltage' or other warning stickers and signs alongside the usual sponsor decals. The German newspaper Bild am Sonntag, meanwhile, claims that clothing manufacturers associated with F1, such as Puma, are developing special racing boots that would prevent the drivers from being shocked as one of their feet touches the ground and the other the KERS-equipped car.

The newspaper also asked Sebastian Vettel if fear of electrocution was the reason for his springboard-style leap from his new Red Bull after a breakdown at the recent Jerez test. Observers saw the German driver climb from his driving position onto the RB5's bulkhead before performing a huge two-footed jump onto the track

"I would rather jump too highly than not highly enough," the 21-year-old said.

WARNING LIGHTS, INSULATED GLOVES AND COLOUR CODING will help keep F1 marshals safe from the dangers of new KERS technology, Charlie Whiting told the media on Tuesday. The dangers posed to drivers and team personnel by the high-voltage systems has been often discussed, but also at risk are the trackside marshals, whose mainly voluntary job it is to recover stricken or crashed cars.

“It’s several hundred volts and the potential to be tens of amps, pretty lethal,” said Renault technical director Bob Bell recently. “And it’s DC, so if you hold it you cannot let go.”

A KERS Safety Working Group has been chaired by BMW, the team whose mechanic was electrically-shocked during early testing of the new energy re-use technology. FIA delegate Whiting said a document prepared by the Group will shortly be circulated to all race hosts, in order to educate the marshals and other workers who will be exposed to KERS systems in 2009.

“There will be things like the KERS status warning light that will be on all cars,” he said.

“If there’s a risk, it should be clear to a marshal who walks up to the car. He should approach the vehicle, look at the KERS status light and, if it is in the wrong state, he shouldn’t touch the car,” said Whiting. Another safety measure for marshals will be the colour-coding of potentially high-voltage parts, and the mandatory use of gloves “which are good for a thousand volts”, Whiting explained.

The above CAN be related directly to TTXGP Participants, for example TTXGP Riders will be straddling the sole power source, namely the Battery Stack (unlike KERS), further they cannot just jump off their machine, normally one hand at least would be on the bars as the Rider places a boot on the ground, any Electrical Issue at that point of time exposes the Riders trunk (body) to a discharge path to earth, that is the worst possible Electrical exposure scenario. I doubt any Motorcycle Boots/Gloves Manufacturer has developed 1000V Electrical Safety Apparel!!

Gloves, Colour Coding, Education of Marshalls, I will be at the TT from very early June and would be delighted to witness a high level of Electrical Safety for all, maybe to show up the Formula 1 lot, sadly I feel I will be disappointed!!

----- www.deejay51.com (2009) -----