

FORMULA HYBRID ELECTRICAL INSPECTION CHECK SHEET 2009

Team	Team #		Note	
Tester	Date		Time	
Title	Rule Ref	Complies	Test	Notes
Physical Examination				
No Exposed Connections	FH-2.2			
Wire	FH-2.3			Wire marked & rated for voltage and temperature
HV Insulation	FH-2.3			Rated for temperature, documented
Conductor Sizing	FH-2.3			
Strain Reliefs	FH-2.3			
Sharp Edges	FH-2.3			
Conduit	FH-2.3			Orange LNMP or equivalent
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Grounded Exposed Heat Sinks	FH-2.3			Test with Ohm Meter
		Complies	Test	
Brake Overtravel Switch	3.2.5.2			Check installation and (multiple) operation
		Complies	Test	
Master Switches:	3.4.9			Three required - 60mm diameter, latching type
Left Side				Check installation and operation
Right Side				(both engine and electric)
Instrument Panel				Check Driver Accessibility in Harness
		Complies		

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Maximum Voltage	FH-2			600V ac rms or dc maximum, any two points, operating or not
Max. Operating Voltage			Volts	High Voltage is defined as >30V
Running in Rain	5.2.1/FH-2.1	Complies	Test	
Physical Protection				Review all high voltage areas
30 second water spray				Top, front, sides, 30 seconds each. Not a stream.
High Voltage Isolation	FH-2.1	Complies		
Physical Segregation				Check segregation of HV and control circuits
				Examine PCB creepage distances if non-commercial
Ground Fault Detector	FH-2.1.1	Complies	Test	
Bender 486				Must be this model or approved alternate
Test OK	FH-2.1.2			Test multiple points to ground with 40K resistor box

Comments

Title	Rule Ref	Complies	Test	Notes
Accumulator		Complies	Test	
Approved Type	FH-2.5			Must be battery or capacitor
Manufacturer				
Part Number				
Official FH Capacity				
Quantity				
Total Capacity				W-Hrs
Manufacturer				
Part Number				
Official FH Capacity				
Quantity				
Total Capacity				W-Hrs
Normally Open Relays	FH-2.6			No voltage outside box when energized.
	Rating		V / A	
Fuse or Circuit Breaker	FH-2.6			Not Required per box (not as clear as it could be)
Multiple Containers	FH-2.6			Two relays OK if connected by conduit
Leakage Test Port	FH-2.6			
LED or analog meter	FH-2.6			
Voltage Decay	FH-2.6.4			Must decay to < 30V within 10 seconds
Mechanical Robustness	FH-2.7			
Fireproof Material	FH-2.7			Between driver and ESU
Live Part Insulation	FH-2.7			Nomex between live parts and conductive parts of container
High Voltage Label	FH-2.7			Required on each container
Hydrogen Venting	FH-2.7			Required if Accumulator vents H2 under normal charge

Title	Rule Ref	Complies	Test	Notes
Warning Strobe		Complies	Test	
Indicates vehicle is energized	FH-2.8			Mounted to highest point on roll bar
Low Voltage Circuits		Complies	Test	
Grounded to frame	FH-2.9			Visual or voltmeter
Properly Fused	FH-2.9			
Segregated and Isolated	FH-2.9			
Charging Equipment		Complies		
Safety Inspection	FH-2.10			No open connections
HV Stickers	FH-2.10			
Safety Equipment		Complies		
Cable Cutters	FH-3			
Gloves	FH-3			
Accumulator MSDS	FH-3			
Special Equipment	FH-3			If called for in MSDS
Safety Glasses	FH-3			
SAE-Required Fire Extinguishers	FH-3			Qty 2, 2 lb or 1.75 Liter (AFFF) 10BC or 1A 10BC, w/ pressure or charge gauge
Special Fire Extinguishers	FH-3			If identified. Two required
Chemical Spill Cleanup Kit	FH-3			Must have absorbent available
Comments				
Overall Acceptance		Signature		
OK to Run in Rain or on Wet Track		Signature		