

ASME HPVC Rules and Score-Sheet Revisions Control

Updated on: April 30, 2019

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Approved by HPVC committee on: April 30, 2019

Change Document	Date	Change & pg #
Updated in 2020 Rules	4/30/2019	Pg 7 I.E Definitions section added
Updated in 2020 Rules	4/30/2019	Pg 12 III. Entry and Registration section moved before safety section
Updated in 2020 Rules	4/30/2019	Pg 17 IV.E- Details on functioning of safety harness updated
Updated in 2020 Rules	4/30/2019	Pg 18 IV.K- Safety Inspection and Demonstration procedure would require teams to flip their vehicle and vehicle must have the fairing on while inspection
Updated in 2020 Rules	4/30/2019	Pg 23 V.C- Design Report format requirements added
Updated in 2020 Rules	4/30/2019	Pg 34 VII.C- Optional Concurrent Event details added
Updated in 2020 Rules	4/30/2019	Pg 36 VII.G- Quick Turn obstacle removed
Updated in 2020 Rules	4/30/2019	Pg 37 VII.H.2- Steep Hill Climb challenge criteria updated
Updated in 2020 Rules	4/30/2019	Pg 39 VII.H.5- Parcel Pickup and Delivery challenge criteria updated
Updated in 2020 Rules	4/30/2019	Pg 43 VII.H.6-Bypass Challenge added to Venue Specific Challenges in Endurance Race
Updated in 2019 Rules	9/23/2018	Pg 7 I.E- Schedule and typical due dates moved up to this section
Updated in 2019 Rules	9/23/2018	Pg11 III.D- RPS must fully and continuously enclose driver, 3 point design explicitly disallowed
Updated in 2019 Rules	9/23/2018	Pg 14 III.E- Safety harnesses must include shoulder straps AKA 4 or 5 point harnesses. Lap belt nor shoulder straps alone are sufficient
Updated in 2019 Rules	9/23/2018	Pg14-III.L- Safety video details moved to Design Section
Updated in 2019 Rules	9/23/2018	Pg 22, 25 V.H, N- Late report penalty changed to 2.5% per day and final submission date 1 week before registration date
Updated in 2019 Rules	9/23/2018	pg 23- V.E.i- citation requirements added
Updated in 2019 Rules	9/23/2018	Pg23- V.F- Prior work section rewritten to explicitly allow for use of off the shelf components, but specify that design points will not be awarded for OTS or reused components
Updated in 2019 Rules	9/23/2018	Pg23- V.I- Safety information moved from presentation to safety video
Updated in 2019 Rules	9/23/2018	Pg23- V.J- Safety Video now includes vehicle safety information as well. Scoring of vehicle safety and features outlined.
Updated in 2019 Rules	9/23/2018	Pg24- V.I Innovation event removed and points redistributed to Design Event
Updated in 2019 Rules	9/23/2018	Pg 24- V.J Safety features listed in requirements for static judging
Updated in 2019 Rules	9/23/2018	Pg 32- V.D Minimum drag course set to 200m
Updated in 2019 Rules	9/23/2018	Pg 33- VII.A Sprint event description and details simplified
Updated in 2019 Rules	9/23/2018	Pg 36- VII.G.2 3 second hold time added to stop sign obstacle
Updated in 2019 Rules	9/23/2018	Pg 41- V.G.4 Slalom difficulty increased by increasing off center distance and reducing distance between cones
Updated in 2019 Rules	9/23/2018	Pg 45- VIII.H.5 Lock security challenge obstacle eliminated
Updated in 2019 Rules	9/23/2018	Pg 47- X.C Innovation event prizes removed
Updated in 2019 Rules	9/23/2018	Pg 53- XI.D Innovation special award added

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Updated in 2019 Rules	9/23/2018	Pg 63- Appendix 5- new appendix added with helpful reference material on HPV design and construction
Updated in 2019 Score-Sheet	9/23/2018	General- 3-View Drawing points reduced to 1 and Abstract points increased to 2
Updated in 2019 Score-Sheet	9/23/2018	Design- Alternatives and Evaluation points increased to 2, Design Criteria/PDS points decreased to 1
Updated in 2019 Score-Sheet	9/23/2018	Safety points now evaluated on video and inspection only
Updated in 2019 Score-Sheet	9/23/2018	Innovation scoring removed
2017 to 2018 Score-Sheet	9/10/2017	Product Energy/CO2 Life Cycle Analysis removed- points redistributed to cost and discretionary points
2017 to 2018 Score-Sheet	9/10/2017	Design and innovation descriptions updated to indicate which sections are scored by report, video and/or presentation
2017 to 2018 Rules	9/10/2017	Pg 8- II.J Report Publication now includes Innovation video
2017 to 2018 Rules	9/10/2017	Pg 8- II.K Feedback section added to rules- no action required from teams here
2017 to 2018 Rules	9/10/2017	Pg. 12- III.H Changed "closed toe shoes" to "fully enclosed shoes" to deter shoes that are open in the back
2017 to 2018 Rules	9/10/2017	Pg 13- III.L Section outlining performance safety video added
2017 to 2018 Rules	9/10/2017	Pg 18- V.B Design event requirements increased to include safety video
2017 to 2018 Rules	9/10/2017	Pg 18- V.C Design report maximum length reduced to 26 pages due to moving testing and safety content to presentation
2017 to 2018 Rules	9/10/2017	Pg 18-21 V.D RPS testing, performance testing, and safety removed from design report and moved to design presentation
2017 to 2018 Rules	9/10/2017	Pg 20- V.E.f Removed <i>Product Lifecycle Energy/CO₂ Analysis</i> section
2017 to 2018 Rules	9/10/2017	Pg 23- VI.B.2 Innovation presentation changed to video
2017 to 2018 Rules	9/10/2017	Pg 23- VII Presentation section removed and added to Design sections
2017 to 2018 Rules	9/10/2017	Pg 23- VII.M Up to 5% penalty added for not submitting dynamic safety video one week before competition
2017 to 2018 Rules	9/10/2017	Pg 25 XXX.M Penalty added for late submission of safety video
2017 to 2018 Rules	9/10/2017	Pg 27 VI.F Penalty for late to presentation changed to penalty for late video submission. Penalty added for video over time limit
2017 to 2018 Rules	9/10/2017	Pg 29- VII.B.c 10 minute rest period added for teams that need to race in back to back heats during the quarter finals or semifinals
2017 to 2018 Rules	9/10/2017	Pg 30- VII.B.d mirrored "rally track" option added to drag race
2017 to 2018 Rules	9/10/2017	Pg 34- VIII.G.1 Maximum height of constructed speedbump reduced to 5cm. Speed bumps present on course of typical size may go over this allotment.
2017 to 2018 Rules	9/10/2017	Pg 34- VIII.G.4.A Passing explicitly allowed in slalom, but safety concerns highlighted and penalties will be strictly enforced. Horn/bell must be used to alert team being passed.
2017 to 2018 Rules	9/10/2017	Pg 35- VIII.D.f Removal of option to hold single gender team at start line for 15mins. Single gender teams now simply receive the minimum lap requirement penalty (currently subtracting three laps)

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2017 to 2018 Rules	9/10/2017	Pg 39- VIII.H.5 Time allowed to lock up vehicle increased from 45 seconds to 1 minute and 15 seconds
2017 to 2018 Rules	9/10/2017	Pg 39- VIII.H.5 Car jack added to list of tools judges can utilize when trying to break lock
2017 to 2018 Rules	9/10/2017	Pg 43- VIII.P Damage to parcel penalty increased up to 1,500m deduction
2017 to 2018 Rules	9/10/2017	Pg 44 IX New section created outlining fouls and penalties of all racing events. Multiple penalties/fouls added or clarified.
2017 to 2018 Rules	9/10/2017	Pg 44- IX Note added specifying that the lap requirement penalty includes laps missed if only one gender raced
2017 to 2018 Rules	9/10/2017	Pg 47 XI.D Other awards will now be voted on by all teams and teams may be nominated for special awards by other teams
2017 to 2018 Rules	9/10/2017	Pg 48- XII Current Head Judges updated
2017 to 2018 Rules	9/10/2017	Pg 49- XIII Innovation video date added to deadlines list
2017 to 2018 Rules	9/10/2017	Pg 49- XIII Performance safety video submission date added to established deadlines list
2016 to 2017 Score-Sheet	10/2/2016	RPS Analysis must include description of load path from rider to ground
2016 to 2017 Score-Sheet	10/2/2016	Red and similar colored reflectors accepted for side reflector safety points
2016 to 2017 Score-Sheet	10/2/2016	Points adjusted to include points for adequate braking. Braking performance test must be passed in two or less attempts for full points
2016 to 2017 Score-Sheet	10/2/2016	Points increased for tail light and decreased for headlight
2016 to 2017 Rules	10/2/2016	Pg 6- I.C Additional ASME HPVC websites added
2016 to 2017 Rules	10/2/2016	Pg 7- II.I Energy storage definition rewritten to remove ambiguity
2016 to 2017 Rules	10/2/2016	Pg 8- III.C Added minimum of front brakes required
2016 to 2017 Rules	10/2/2016	Pg 9- III.D RPS Load path defined and importance of RPS system including structural frame, seat, and safety harness highlighted
2016 to 2017 Rules	10/2/2016	Pg 11- III.E Safety Harnesses must be attached to RPS and not a seat unless the seat is structurally integrated into the RPS
2016 to 2017 Rules	10/2/2016	Pg 14- IV.F & pg 47- XII.A1 Entry forms reduced and updated
2016 to 2017 Rules	10/2/2016	Pg 16- V.C Report font changed from Times New Roman to Calibri
2016 to 2017 Rules	10/2/2016	Pg 21- V.G Report due date changed to 45 days before the event
2016 to 2017 Rules	10/2/2016	Pg 25- VII Presentation section added and removed from Design/Innovation sections
2016 to 2017 Rules	10/2/2016	Pg 32- VIII.B.o Maximum non qualifying points changed to 6.0
2016 to 2017 Rules	10/2/2016	Pg 33- IX.E.c Standard pit stalls defined as 2.6m x 4.9m
2016 to 2017 Rules	10/2/2016	Pg 43- VIII.P 500m penalty added for improper entry/exit of HPV at parcel stop
2016 to 2017 Rules	10/2/2016	Pg 45- X.D Perseverance award added
2016 to 2017 Rules	10/2/2016	Pg 45- X.E Scoring review period added to allow judges final results review time in the event of an error/discrepancy discovered in results
2016 to 2017 Rules	10/2/2016	Pg 50- XVI.A4, XVI.A5 & XVII.A6 Protest Form, Safety Exemption Form, and ASME Cover page and vehicle description added to rules
2015 to 2016 Score-Sheet	9/21/2015	Cost analysis points reduced
2015 to 2016 Score-Sheet	9/21/2015	Product Lifecycle Energy/CO2 Analysis points added

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2015 to 2016 Score-Sheet	9/21/2015	Safety hazard point values modified
2015 to 2016 Score-Sheet	9/21/2015	Safety accessory point values modified
2015 to 2016 Score-Sheet	9/21/2015	Points for additional safety features and discretionary safety points added
2015 to 2016 Score-Sheet	9/21/2015	Innovation multiplier added and details to definition added
2015 to 2016 Score-Sheet	9/21/2015	Innovation bonus point removed
2015 to 2016 Rules	9/21/2015	Pg 7- II.D. Section rewritten for improved clarity
2015 to 2016 Rules	9/21/2015	Pg 9- II.J. New section added outlining report new publication/sharing policy
2015 to 2016 Rules	9/21/2015	Pg 9- III.K. New section added outlining readiness to compete
2015 to 2016 Rules	9/21/2015	Pg 10- III.C.1 RPS load reaction note added and bolded
2015 to 2016 Rules	9/21/2015	Pg 11- III.D. Safety harness requirements elaborated on
2015 to 2016 Rules	9/21/2015	Pg 12- III.J. On site safety inspection requirements made more stringent
2015 to 2016 Rules	9/21/2015	Pg 13- III.L. Unsafe vehicle definition expanded
2015 to 2016 Rules	9/21/2015	Pg 14- IV.B. Section rewritten to improve clarity and include eligibility for students of upcoming semesters/quarters of study
2015 to 2016 Rules	9/21/2015	Pg 21- V.E.f. Product Lifecycle Energy/CO ₂ Analysis added
2015 to 2016 Rules	9/21/2015	Pg 21- V.D.h. A mandatory additional unique safety feature added
2015 to 2016 Rules	9/21/2015	Pg 28- VII.D. Targeted innovation area and bonus point removed
2015 to 2016 Rules	9/21/2015	Pg 29- VII.E. Required presentation information updated
2015 to 2016 Rules	9/21/2015	Pg 32- VIII.G. Maximum speed bump height of 8cm specified
2015 to 2016 Rules	9/21/2015	Pg 35- VIII.H. Venue specific challenges/obstacles added to endurance race
2015 to 2016 Rules	9/21/2015	Pg 35- VIII.H. Parcel pickup and drop off added to venue specific challenges/obstacles
2015 to 2016 Rules	9/21/2015	Pg 43, 44- Update of Design and Innovation scoresheets
2014 to 2015 Score-Sheet	9/21/14	Definition of Prior Work and Background Research expanded
2014 to 2015 Score-Sheet	9/21/14	Updated scoring criteria for FEA PRS results
2014 to 2015 Score-Sheet	9/21/14	Updated safety scoring
2014 to 2015 Score-Sheet	9/21/14	Innovation scoring and descriptions updated
2014 to 2015 Rules	9/21/14	Stored energy information re-written to allow energy to be stored before race starts for use in non-drive systems - pg 8
2014 to 2015 Rules	9/21/14	Removed penalty for not including school name on vehicle- pg 8
2014 to 2015 Rules	9/21/14	Added safety requirement keeping hands away from drive train components and wheel spokes- pg 11
2014 to 2015 Rules	9/21/14	Removed aesthetic section from the design report- pg 16, 19
2014 to 2015 Rules	9/21/14	Definition of Prior Work and Background Research expanded- pg 17, 19
2014 to 2015 Rules	9/21/14	Examples of developmental and performance testing added- pg 18
2014 to 2015 Rules	9/21/14	List of required safety features added to rules- pg 19
2014 to 2015 Rules	9/21/14	Design and Innovation presentation time slots combined into a single, but longer time slot- pg 19, 28
2014 to 2015 Rules	9/21/14	Starting order, for each team's first run, of Sprint event switched to random order- pg 26
2014 to 2015 Rules	9/21/14	Description of innovation event updated- pg 27
2014 to 2015 Rules	9/21/14	Description of target innovation areas updated, target areas of innovation updated- pg 27
2014 to 2015 Rules	9/21/14	Innovation event outline updated- pg 28

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2014 to 2015 Rules	9/21/14	Parcel drop off and pick up procedure updated to include pulling into and backing out of designated parking spots- pg 34
2014 to 2015 Rules	9/21/14	Endurance scoring updated- pg 38

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