The Tassie Energy HPV Challenge

Scrutineering Checklist

Team Name: Car No.

1 Check - Dimensions
   a Max length 2700 mm
   b Max width 1100 mm
   c Max height 1200 mm
   d Wheel track min 600 mm
   e Wheel bas Min 1000 mm
   f Head RRPS
      i Min 300 mm wide at 150 mm from top
      ii Min 50 mm above canopy
      iii 20 mm foam above rider if closed vehicle
      iv Bracing angle includes vertical line
   g Shoulder region 500 mm wide and integral
   h Shoulder belt mounts or guides Max 200 mm centres
   i Room for number panel 360 mm high X 460 mm long

2 Check - General
   a Single seat recumbent, HP drive to rear wheel(s)
   b No original bike, Go-Kart or motorbike frames
   c Min of three full time load bearing wheels all with adj. brakes
   d Two independent brake systems, mounted securely
   e Brake controls away from moving parts and road
   f No brake friction applied to tyres & no rope or cable steering
   g Steering lock limitation over central travel, linkage damage,
      tyre or wheel contact with vehicle parts (jamming avoidance)
   h Speedo clearly visible to rider and operational
      i Warning Device ii Electric, in front of feet
      iii Momentary switch, sound going loud
      iv Air contact to get sound out of vehicle
   j Batteries mounted securely - No liquid acid
   k Floor pan able to stop rider's feet, legs, hands hitting road
   l Mirrors
      i One each side
      ii Flat or mildly convex with similar reflections
   m Min area 18 cm2 (nom 5 cm diam) or Zefal Spy
   n Vehicle has no dangerous protrusions or features
   o Vehicle construction robust, strong and durable
   p Signage not offensive nor of illegal substances, alcohol, tobacco
   q Axle end recessed, flush, covered or shielded
   r Four strap seat belt harness with Certicate Label showing
   s Frontal design prevents easy penetration of another vehicle

3 Construction
   a Vehicle construction robust, strong and durable
   b Frame joints/mountings competently welded or attached
   c Composite materials fully cured, no unbounded fibres
   d Cockpit overhead protection
      i capable of deflecting vehicle
         ii Min of two bars - no negative bends
         iii Suitable effective width and no rear hinging
         iv Hard shell vehicles minimum two layers
         v Open cell foam as needed on bars or panels
         vi Moveable bars, body panels suitable locking system
         vii No hooks - No velcro as sole fastening system
      e i Body/COP catches operable from inside and outside
         ii Δ As per appendix to mark non obvious catches
         iii Team demonstrates body sections shutting with click
   f Seat Belts
      i Not modified, mounted as intended
         ii Belt in good condition - not frayed, cut or restriched
         iii Each point of harness mounted separately to chassis
         iv Bolts/fittings as supplied or min Grafe 5 X 8 mm
         v 2-3 threads showing above nuts [Nylon or spring washer]
         vi Bolts mounted through the frame tags or sleeved tube
         vii Seat or sub frame carrying belt mounts is attached to chassis
            with strength equivalent to belt bolts

4 Rider Rollover Protection Structures (RRPS)
   a General
      i Integral to chassis/frame/shell H = Head; F = Front
         ii Properly attached, suitable material, robust for purpose
      iii Hoop configuration, right angles to centre line
      iv Comers minum 50 mm radius
   b Head RRPS
      i Long braced to chassis from highest point
      ii Removable bracing attached appropriately
      iii Hard shell without external roll bar strong enough
   c Front RRPS
      i Covers rider's knees
      ii Will protect rider's feet, knees, legs if inverted or on side
      iii Stabilised to prevent longitudinal collapse
      iv If bar braced: longitudinal at 10° min. inc. vert. line
   d Side impact protection from T-bone collision
      i Bars - panels - wheels forming enclosed cockpit
      ii Protection for shoulders, torso, hips, legs to knees
      iii Structure anchored to not move sideways
      iv Capable of protecting rider from vehicle entry
      v Rider will not contact road surface [especially elbows]
   e Forward Protection
      i Will protect legs/feet in a collision, braced, integral to design
   f Bodywork
      i Cockpit free of projections [eg cable tie ends]
      ii inherently safe, allows ventilation and sufficient visibility
   g Chain Ring
      i Discs [covering teeth] both sides
      ii Chain tension side covered [channel, tube] from under seat
      iii Max 3 mm clarence from discs to channel/tube
   h Rider safe from moving parts i.e. Clothing entanglement
      i Hands protected from tyres and spokes
   j All guarding secure and safe

5 Dynamic Brake and Steering Test
   a Rider able to move steering from lock to lock freely
   b Steering controls and wheels do not expose rider to injury
   c Rider able to exit vehicle unassisted
   d Good cockpit vision and rider can see ground 5 metres ahead
   e Shoulder strap mounts or guides level with shoulders
   f Straps will stay on shoulders
   g Seat belt and buckle positioning conforms with ADR
   h Lap belt mounts not too far back
   i Excessive seat padding not used
   j Head RRPS min 100 mm above helmet for open top vehicle
   k Rider can fully turn head right and left
   l Helmet not compressing overhead foam
   m Head restraint check
   n Rider entirely within roll over protection from front and rear
   o Side impact protection includes rider's shoulders
   p Steering structure, frame, body min 300 mm to rider's face
   q Cycle helmet AS/NZS 2063:2088
   r Full face helmet if needed [with AS label]
   s Vehicle able to negotiate prescribed course
   t Vehicle stops within prescribed distance in controlled manner

I, team manager have personally checked the HPV mentioned above and do claim that all points have been checked and the HPV meets the standards as outlined above.

Signed:

Date: / / 20