



# Trans Asia V8 RACING

## THAILAND

[info@tav8racing.com](mailto:info@tav8racing.com)

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# TECHNICAL RULES 2020

## 1.0 Overview

“Trans Asia V8 Racing” will be referred to as “TAV8 Racing” for the duration of this document. TA2 Asia Racing Co Ltd is the owner of TAV8 Racing.

TAV8 Racing will be run under management of TAV8 Racing in Cooperation with Racing Spirit for 2020 events.

The following is to be used in conjunction with the relevant safety documents and guidelines as deemed appropriate by the track officials and/or governing body.

No pretence is made of having designed or written a fool proof set of rules. The spirit and intent of these rules is to give a level standard to what TAV8 Racing officials will rule on. Event officials will determine what constitutes a rule breach. Any dispute with that decision must be made in writing to TAV8 Racing within seven (7) days of meeting conclusion or rule breach notification if outside the confines of and official “TAV8 Racing” event.

**IF THIS RULE BOOK DOES NOT STATE YOU CAN SPECIFICALLY MODIFY A COMPONENT THEN AN ASSUMPTION MUST BE MADE THAT THE MODIFICATION WILL BE DEEMED A RULE BREACH.**

If you are unsure if a modification or repair you are about to perform is within the spirit of the rules please confirm with TAV8 Racing PRIOR to commencing that work to avoid embarrassing and possibly costly reversal of the modification or repair.

All rule clarifications, questions and enquiries must be made via email to a person with an interest in a recognized TAV8 Racing Car. No enquiries will be considered from a person without direct connection to a TAV8 Racing Car or anyone who DOES NOT hold an official position in a TAV8 Racing Team. [jono@tav8racing.com](mailto:jono@tav8racing.com)

These rules are to benefit the class of “TAV8 Racing” as a whole. Consideration will be given to individual circumstances, but the design is to keep the cars at an even mechanical level with no advantage to any one competitor, while keeping cost to a minimum for this level of Motorsport.

### 1.1 2020 TAV8 Racing Championship

Please refer to TAV8 Racing schedule. Points awarded for race finishing positions will be as per TSS points system. Best 4 rounds points will count towards overall championship points

### 1.2 Success Compensation time will be added after each race as follows:

<b>1<sup>st</sup></b>	<b>15 Seconds</b>
<b>2<sup>nd</sup></b>	<b>10 Seconds</b>
<b>3<sup>rd</sup></b>	<b>5 Seconds</b>

### 1.2.1 Compensation Times Driver Level

<b>Bronze – Single</b>	<b>8 Seconds</b>
<b>Bronze- Bronze</b>	<b>0 Seconds</b>
<b>Bronze-Silver/Gold/Plat</b>	<b>30 Seconds</b>
<b>Silver/Silver</b>	<b>52 Seconds</b>
<b>Silver Single</b>	<b>60 Seconds</b>

### 1.2.2 Bangsaen Race Specific Rules

#### Compensation Times Driver Level

<b>Bronze – Single</b>	<b>5 Seconds</b>
<b>Bronze- Bronze</b>	<b>0 Seconds</b>
<b>Bronze-Silver/Gold/Plat</b>	<b>20 Seconds</b>
<b>Silver/Silver</b>	<b>35 Seconds</b>
<b>Silver Single</b>	<b>40 Seconds</b>

- 1.3 Compulsory pitstop will be published via bulletin before start of the event
- 1.4 Where multiple language versions of these rules exist, the English Language Version shall be Primary, and final decisions shall be made by reference to the English Language Rules
- 1.5 Where multiple interpretations of a rule are possible, the rule shall be assumed to have a Plain English Meaning

## 2.0 General Specification

### 2.1 TAV8 Racing Race Vehicle Specifications

#### 2.1.1 Wheel Base

2640mm (+/- 25.4mm) (104")

#### 2.1.2 Overall maximum axle width – Front

2000mm (+/- 25.4mm) (Outside of tyre to outside of tyre at widest point)

#### 2.1.3 Overall maximum axle width – Rear

2000mm (+/- 25.4mm) (Outside of tyre to outside of tyre at widest point)

#### 2.1.4 Minimum Weight

1260kg at the end of the session (race/qualifying)

This includes everything used in the car during the session and Driver weight.  
– (means not dry Weight)

All Drivers will be weighed prior to Qualifying. This weight will be added to car weight after the race and Qualifying. (for a two-driver combination the mean driver weight will be added to the car weight at the end of the session)

#### 2.1.5 Minimum Front Ride Height

75mm with Tire pressure at min 1.5 bars without Driver

**2.1.6 Minimum Rear Ride Height**

75mm with Tire pressure at min 1.5 bars without Driver

**2.1.7 Engine and Transmission Location**

Engine and transmission location must remain un-modified. All engines must remain mounted to original mounting points in the chassis

**2.1.8 Driver Position**

Driver must sit to the left of the centre line. No portion of the driver's seat or restraint system can cross the centre line of the car

**2.1.9 Fuel Cell Size**

24Gal/ 91ltr Fuel: ETS Racing Fuel or TSS CONTROLLED FUEL 102 RACE FUEL ONLY

**2.2 Controlled Components**

**2.2.1** All components as supplied with the car from new, with exception to those listed below are controlled and **MUST BE PURCHASED** through TAV8 Racing.

**2.2.2** These components are vital to keeping the class of "TAV8 Racing" equal and the mechanical specifications of the cars as equal as possible

**2.2.2.1** Steering Wheel

**2.2.2.2** Driver Cooling System

**2.2.2.3** Race Seat

**2.2.2.4** Safety Harness

**2.2.2.5** Nuts/ Bolts/ Clamps in a Non-Performance enhancing application

**2.2.2.6** Fire Extinguisher system

**2.2.3** Any other items can be requested in writing prior to changing

**3.0 Chassis – Howe TAV8 Racing Spec only**

**3.1** Only cars purchased via TA2 Asia Racing/TAV8 Racing Series will be eligible to compete in sanctioned TAV8 Racing Events

**3.2** Strictly no modification to the chassis/frame or body parts under any circumstances

**3.2.1** All parts must fit to original dedicated mounting points

**3.2.2** No spacers or packers allowed

**3.3** Chassis must remain in good order provide the driver with protection in the case of an accident

**3.3.1** Damage to a major chassis member must be repaired or replaced to the highest standards and meet the satisfaction of the scrutineer

**3.3.2** Cars involved in a major accident may be subject to an extra-ordinary scrutineering prior to being allowed to compete at future sanctioned events

**3.4** Any modification to suspension pick up points or engine mounting points or mounting plates will be treated as deliberate cheating

- 3.4.1 The configuration of weight added to the vehicle shall remain unaltered for the duration of the race meeting. In exceptional cases where damage to the vehicle requires the weight configuration to be altered, such change must be approved by a scrutineer.
- 3.4.2 Weight must be attached via positive means to the satisfaction of the scrutineer (minimum M12 or ½" UNC Bolts with Lock Nuts)
- 3.4.3 Any TAV8 Racing car that has added weight fall off during a TAV8 Racing event will be subject to penalties that may include point's deduction

3.5 Added weight (additional to meet the minimum weight) must be in block form. No single block can weigh more than 20kg. Any weight used must be directly bolted to the chassis and located only at the mounting plates provided by the manufacturer

## **4.0 Body**

- 4.1 All replacement body panels must be supplied by TAV8 Racing and hold the TAV8 Racing part number
- 4.2 Repairs to body panels must not change the shape of the panels to aid in aerodynamic performance
- 4.3 Cowl panel (below windscreen) must remain unchanged – all engine intake air or cooling air must come through the front bumper grille section only
- 4.4 Grille
  - 4.4.1 Grille/bumper sections may not be modified
  - 4.4.2 Grilles must retain the original profile as viewed from the top, sides and front
- 4.5 Quarter panels must remain un-modified other than repairs to damage
- 4.6 Rear boot/trunk must remain un-modified other than repairs
  - 4.6.1 Rear wing mounts are to remain unmodified.
- 4.7 Hoods
  - 4.7.1 Hoods must remain unmodified
  - 4.7.2 Additional fasteners are allowed on the hood section
  - 4.7.3 No tape is allowed to be used for aero benefit
- 4.8 Internal tin-work should remain unchanged from original design that is, providing it affords the driver with safe insulation from the driveline and engine bay area. A positive fire wall is required on all four sides of the driver.  
The floor must remain minimum 3mm magnetic steel plate. Tin work must be of neat appearance and have no sharp edges
- 4.9 Windscreens must be fitted
  - 4.9.1 The front windscreen must be TAV8 Racing spec Clear sheet and have no holes other than the mounting holes. All replacement windscreens must be TAV8 Racing spec screen only
  - 4.9.2 The rear windscreens are to be fitted. TAV8 Racing Spec screen only
- 4.10 Aerodynamics
  - 4.10.1 Only factory supplied front splitter is permitted

#### **4.11 Rear Wing**

**4.11.1** TAV8 Racing Spec Rear Wing must be fitted

**4.11.2** TAV8 Racing Spec Rear Wing, hardware and mounts cannot be modified

**4.11.3** No packers or shims are allowed to alter the standard TAV8 Racing spec Wing

**4.12** Naca ducts or air inlet ducts may be fitted in the side window openings These may provide air to the driver or as a means of windscreen demisting.

The air MUST NOT be forced into the engine compartment. Ducts must in no way impede the drivers ability to remove them self in the case of an emergency

**4.13** Side mirrors must be fitted

**4.14** Internal rear view mirror is permitted

**4.15** Aerials and antennas may be fitted to roof of boot/ trunk

**4.16** Internal cameras are permitted;(with the exception of Vinfast Hanoi Grand Prix) these must be fastened securely to Roll Cage not direct vision of Driver and must be present and secure when vehicle is presented for scrutineering.

**4.17** TAV8 Racing Spec Front and rear tow straps must be fitted. Tow straps must be easily accessible and clearly marked as per TSS regulations (STEEL OR STRAP VERSION ACCEPTABLE)

### **5.0 Engine**

**5.1** TAV8 Racing spec supplied engines only. All engines must be purchased through the TAV8 Racing

**5.2** All engines come complete and are sealed and/or ECU locked for even performance, integrity and identification with TSS Seal

**5.3** No Modifications to the components of the Engine are permitted other than as mentioned in this rule section

**5.4** No replacement components those are not identical in their manufacturer and part number unless specific permission is granted, via writing from TAV8 Racing Management

**5.5** Complete fuel system with regulator and fuel pump supplied by TAV8 Racing

**5.6** The air cleaner element must be present and must be the filter as supplied by TAV8 Racing

**5.6.1** Original Airbox and Filter location must remain unchanged

**5.6.2** All engine intake air must pass by the inlet air filter and throttle body, no other inlet air to the engine is permitted

**5.7** Exhaust manifold (extractor header pipes are spec parts) and balance of exhaust parts. No modification to these parts is permitted

**5.8** Rocker cover type and design is free

**5.9** Water pump must be crankshaft belt driven

**5.10** An engine crankshaft belt driven alternator must be fitted, the alternator must be operational

**5.11** TAV8 Racing spec ECM/ECU units must be used. Strictly no modifications to this part will be tolerated

**Strict penalties apply to anyone competing in a TAV8 Racing event with a modified ECM/ECU. ECU will be Password locked. Software IP remains the property of TA2 Asia Racing Co Ltd.**

**5.12** The engine must be able to start under its own power at any time as requested by the TSS Racing scrutineer

**5.13** Starter motor position is fixed

**5.14** Radiator and oil cooler type and position are fixed.

Only TAV8 Racing Spec units purchased via TAV8 Racing are permissible

**5.15** The ECM/ECU Rev limiter must not be tampered with

**5.15.1** The Independent Motec Engineer can, at any time, check the operation of the rev limiter

**5.15.2** All ECM/ECU Rev limiters are set to 6384rpm.(any changes are at the discretion of TAV8 and all cars will be same)

**5.15.3** TAV8 Racing reserves the right to test all or any ECM/ECU at any race event

**5.15.4** A TAV8 Racing ECM/ECU Unit may be supplied to a competitor during these tests

**5.16** Engine repairs/ rebuilding will be done by TAV8 Racing ONLY

**5.16.1** Engine rebuilding will be at cost to the competitor and meet the maximum HP window set by TAV8 Racing

**5.17** Any engine found to have missing or broken TSS seals will be deemed illegal until the seal is replaced at the discretion of the approved TAV8 Racing/ TSS Racing scrutineer

**5.18** These engines rules are in place to protect the integrity and cost effectiveness of TAV8 Racing

**5.18.1** Any breach of the engine rules will be dealt with harshly and treated as deliberate cheating

**5.18.2** If you are unsure of a modification or wish to make a repair that requires the removal of an engine seal, check with your TAV8 Racing representative before attempting repairs.

**5.18.3** No repairs on engine internal components without approval from TAV8.

**5.19** A TAV8 Racing Sump guard protector must be run at all times

## **6.0 Driveline**

**6.1** Transmission (Only TAV8 Racing sealed transmissions are eligible)

TAV8 Racing Spec HGT 6 Speed Sequential Transmission or TTI 6 speed sequential with TSS Seal

**6.1.1** Transmissions must always retain an operational reverse gear

**6.1.2** Transmission cooler is permitted





## **8.0 Suspension and Steering**

### **8.1 Suspension: Front**

- 8.1.1** No modification that changes the geometry or action of any suspension component or a modification that changes the arc or motion ratio is permitted. Adjustments may be made using existing adjustment
- 8.1.2** Upper Control arms must remain un-modified and TAV8 Racing spec only
- 8.1.3** Upright (stub axle) must remain un-modified
- 8.1.4** Lower control arms must remain un-modified
- 8.1.5** Caster Bar (Radius Rod) must remain un-modified
- 8.1.6** All chassis mounts must fit within the original measurements (10mm tolerance)
- 8.1.7** Any shims are permissible on the top arm to facilitate desired wheel alignment specifications
- 8.1.8** Shock absorbers double adjustable and approved component by TAV8 Racing
- 8.1.9** Re-valving of the shock absorber is Not Permitted, and could be checked via a shock dyno at any time.
- 8.1.10** Coil spring must remain in original location and be hypercoil only, purchased via TAV8 Racing
- 8.1.11** Coil spring range. Front 550lb only, Rear 250lb
- 8.1.12** One spring plus one helper spring per wheel. Helper spring optional. Only 1 helper spring as per part number TAV8 Racing
- 8.1.13** Springs can be tested and must be within 10% of rating shown on spring
- 8.1.14** Spring packers may be utilised.
- 8.1.15** Front Swaybar measuring 2.25"

### **8.2 Suspension: Rear**

- 8.2.1** No modification to the differential mounts location or chassis to differential mounts location is permitted. Any modification to the position of these mounts or pick up points, or mounting holes in these mounts, will be dealt with harshly and considered deliberate cheating
- 8.2.2** All differential mounting points must match CAD drawings available from TAV8 Racing Management upon request
- 8.2.3** Upper and lower trailing arms must be steel. No aluminium or carbon allowed
- 8.2.4** Watts linkage are factory supplied only
- 8.2.5** Pinion angle is free
- 8.2.6** No remote adjusters for sway bars – watts link or rear end top link are permissible
- 8.2.7** Shock absorbers double adjustable and approved component by TAV8 Racing
- 8.2.8** Rear sway bar ¾" only

### **8.3 Steering**

- 8.3.1** TAV8 Racing spec Woodward 18.25" rack only. No Modifications are allowed
- 8.3.2** Steering column Must stay as fitted to Cars now

- 8.3.3** Side steering rods must be of high quality. No welding or joining. Must be of aluminium construction and be of equal or greater diameter to original fitment
- 8.3.4** Power steering lines and pump outlet fitting must Stay as fitted to Cars.  
Power steering pump P/N KRC 29116811
- 8.3.5** Power steering pump must remain belt driven from the front of the engine crankshaft
- 8.3.6** Power steering cooler may be fitted
- 8.3.7** No modification to the steering geometry is permitted. Any modification will be dealt with harshly and treated as deliberate cheating

## **9.0 Electrical and Data**

### **9.1 Electrical**

- 9.1.1** Battery must be a dry cell race type 12 volt. The battery must remain in the original location within 50mm in any direction
- 9.1.2** Factory and TAV8 Racing wiring looms only
- 9.1.3** Switch gear is free but ignition “on/off” and “Start” button must be clearly marked
- 9.1.4** Strictly no changes to wiring or ECU permitted

### **9.2 Data Collection**

- 9.2.1** Data Collection is allowed through Motec dash only

## **10.0 Wheels and Tyres**

### **10.1 Wheels**

- 10.1.1** 15' x 10' Bassett Steel wheels and Alloy TAV8 Racing LENS0 (no wheel spacers or alterations to offset permissible)
- 10.1.2** Wheels maybe coated, painted or chromed
- 10.1.3** Wheels must be in good condition
- 10.1.4** All wheel weights must be covered with race tape

### **10.2 Tyres**

- 10.2.1** Hankook Tyres are to be used. Available only from TAV8 Racing. Size 27.0/10.0-15
- 10.2.2** Tyres can be lined with latex internally to aid sealing
- 10.2.3** Hankook Wets only
- 10.2.4** No tyre grooving permitted
- 10.2.5** The use of any device that controls or regulates the pressure of the tyre during racing is not permitted
- 10.2.6** Tyre warming devices are prohibited

- 10.2.7 For Qual and Races Only 2 new Sets can be used. All tires bar code will be record by TSS
- 10.2.8 It is prohibited to apply any substance to the tyre which is intended to alter the chemical or friction properties of the tread rubber

## **11.0 Safety**

- 11.1 Driver must hold an International C or Thai National Racing Licence
- 11.2 All TAV8 Racing cars must be made available for safety scrutineering when requested by a scrutineer or an authorized member of the controlling body at any race venue
- 11.3 It is the DRIVERS responsibility to keep informed of any current regulations, or changes to those regulations, for the drivers own safety apparel
- 11.4 TAV8 Racing will, when possible, inform all nominated drivers of any updated or changes to the regulations
- 11.5 All drivers' restraints (safety harness) must meet or exceed FIA specifications.
- 11.6 Five Point Harnesses are a minimum requirement
  - 11.6.1 The safety harness must be presented within the required "date" as marked on the harness by the manufacturer
  - 11.6.2 Safety harness must be in perfect structural condition and work faultlessly when tested
  - 11.6.3 Safety harness must be mounted using the correct and approved mounting hardware and be within the manufacturer's guidelines
- 11.7 Drivers Safety and Racewear must comply with TSS 2019 Technical Regulation
- 11.8 Fire bombs are mandatory at all official TAV8 Racing Events
  - 11.8.1 Fire bombs must be approved style and type and meet all current guidelines as required by the governing body for the event
  - 11.8.2 Fire bomb activation must be clearly marked
  - 11.8.3 Read your owner's manual so you know exactly how this system works
- 11.9 Car must have sign on Door pointing to door handle
- 11.10 All drivers must supply their own camera for front recording during practice/qualifying and racing
  - 11.10.1 Camera housing must firmly be fixed to frame or part of car out of the direct view of driver (refer to TSS rule further details)
- 11.11 All safety equipment must be kept in excellent condition and fitted to meet or exceed the manufacturer's requirements
- 11.12 The scrutineer of the event will have final say on any safety item issues, regardless of that being personal driver apparel or a TAV8 Racing car fitted item

**No compromises will be accepted for any of the above rules**

## **12.0 Bolts and Fasteners**

- 12.1** All major component bolts must be 'GRADE 5' or 'GRADE 8' High tensile or equivalent. No "torque to yield" bolts permissible
- 12.2** Any bolt that could have an effect on steering or braking must not be modified in anyway. Any damaged or bent bolts or nuts must be replaced. No lightening or any of these fasteners
- 12.3** Pop Rivets, where used, may be replaced with another fastening means. Rivets may be coloured
- 12.4** Dzus fasteners may be replaced or up graded
- 12.5** No quick release fasteners to be used on driver's protection firewalls, front, sides or back
- 12.6** All seat belt and seat fasteners to be of the highest quality
- 12.7** Race tape or similar may be used in the case of on track damage but the prolonged use of race tape is discouraged

## **13.0 Identifications and Markings**

**Must comply with TSS requirements and TAV8 Racing below**

- 13.1** Race numbers will be assigned, you may request a certain race number, every effort will be made to allow the usage of that number but no guarantee is implied
- 13.2** An area on sides of car, front and rear of car must be made available for TAV8 Racing Championship sponsor logos
- 13.3** The top of windscreen must be left available for TAV8 Racing Series Sponsor signage as required
- 13.4** Drivers race suits must display TAV8 Racing logos on front left side (Logos will be supplied for attaching to race suit)

## **14.0 Performance Upgrades and Rule Updates**

- 14.1** TAV8 Racing recognizes the need for a process that allows the class to constantly move forward. Sometimes in that process a performance or component upgrade may be sought. This upgrade might be due to a component being no longer available, a change in safety regulations or maybe a weakness in the design has been uncovered and replacement or strengthened part is mandated. TAV8 Racing will liaise with the Factory before any changes are published

## **15.0 Rule Changes**

- 15.1** above is subject to change. Any changes are at the Discretion of TAV8 Racing and approved TSS. Cannot change during the race season, all have to be approve by TSS , Applicable only on the next years .

## **16.0 TSS Sporting Regulations 2018**

**16.1** All Competitors must follow TSS Sporting Regulations

